EMCO Remote Installer 6

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Chapter 1: Introduction

Welcome to EMCO Remote Installer. This product allows you to distribute Windows software across a computer network quickly and easily. Using EMCO Remote Installer, you can audit software installed on remote Windows computers and deploy software remotely. You can install, uninstall and repair Windows software simultaneously on multiple computers across a network with just a few clicks.

EMCO Remote Installer simplifies software deployment tasks by offering advanced features that enable you to deploy software to dynamic groups of computers, perform conditional deployment (for example, deploy software only if it isn't installed), configure the program to run deployment operations on schedule and use other features that may be helpful in advanced cases. All these features are explained in this manual, where you can find detailed information on how to use them and when they should be used.
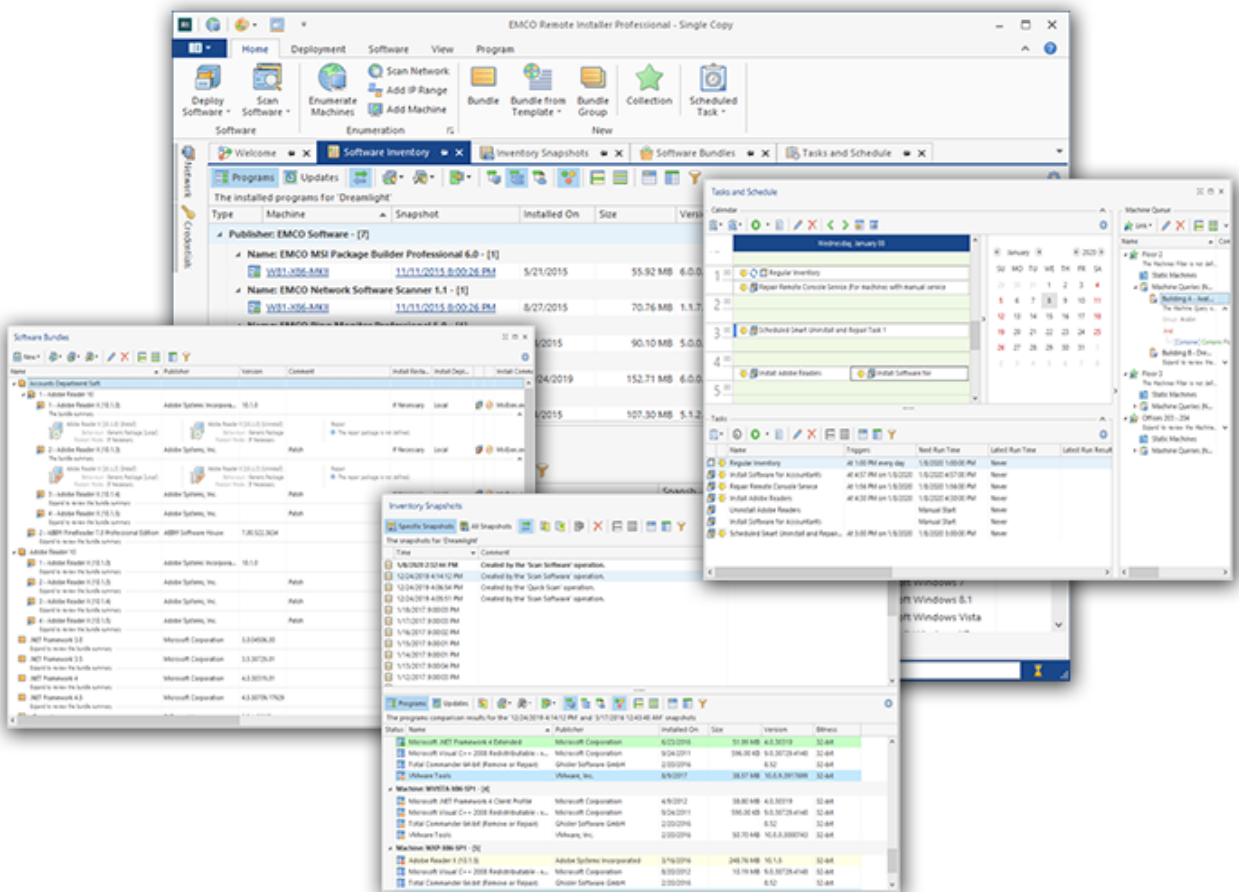
Configuring Your Network to Satisfy the Requirements

EMCO Remote Installer is an administrative program, so it should be used by network administrators who have administrative permissions on remote computers. The program uses the standard Windows networking services to operate remotely; therefore, you need to make sure that the corresponding services are started on remote PCs, the network ports aren't blocked by an antivirus/firewall, etc. You can find information on the technical requirements in the Requirements section of the document. In the Configuring Machines to allow remote access chapter, you can find instructions on how to configure your network and check that the applied settings are correct.

At the first start of the program, the program configuration wizard prompts you to use the administrative credentials. The entered credentials are stored securely and used to perform deployment operations that require administrative permissions on remote PCs. If you skip that step, the program cannot collect software inventory information and perform deployments remotely, so make sure to take the required actions.

Troubleshooting Problems and Getting Help

If a remote software audit or deployment operation doesn't function properly, you have to check the **Execution Results** view. Expand the execution entry in this view to see the statuses reported for every remote PC involved. In case of a problem, you can see an error message including the problem cause and troubleshooting instructions. In most cases, remote operations fail if the network isn't configured properly and the program requirements aren't satisfied. Follow the requirements from the previous chapter to configure your network. Make sure the program uses correct administrative credentials, which should be specified in the **Credentials** view.

In case of a problem with a specific installation, make sure you configured it correctly to run silently. Test the specified silent deployment options by running the installation manually to make sure it works without interacting with a user from start to end. If the installation requires a user to select deployment options interactively, it will hang if you deploy it remotely through a program. Find the correct silent deployment options for the installation in the Internet or contact the software vendor to get them.

To get help with any problems with EMCO Remote Installer, you can contact the support team. Provide the support team with all the available information regarding the problem to speed up the problem reproduction and troubleshooting.

Chapter 2: Getting Started

EMCO Remote Installer is a software deployment tool that can be used to distribute Windows software remotely to computers connected to a LAN/WAN. Using EMCO Remote Installer, you can avoid managing software installations manually on every PC. Instead, you can install, uninstall and repair the required software remotely in the automatic mode. All deployment operations can be executed simultaneously on multiple remote computers, so distributing new software across a network takes just a few moments.
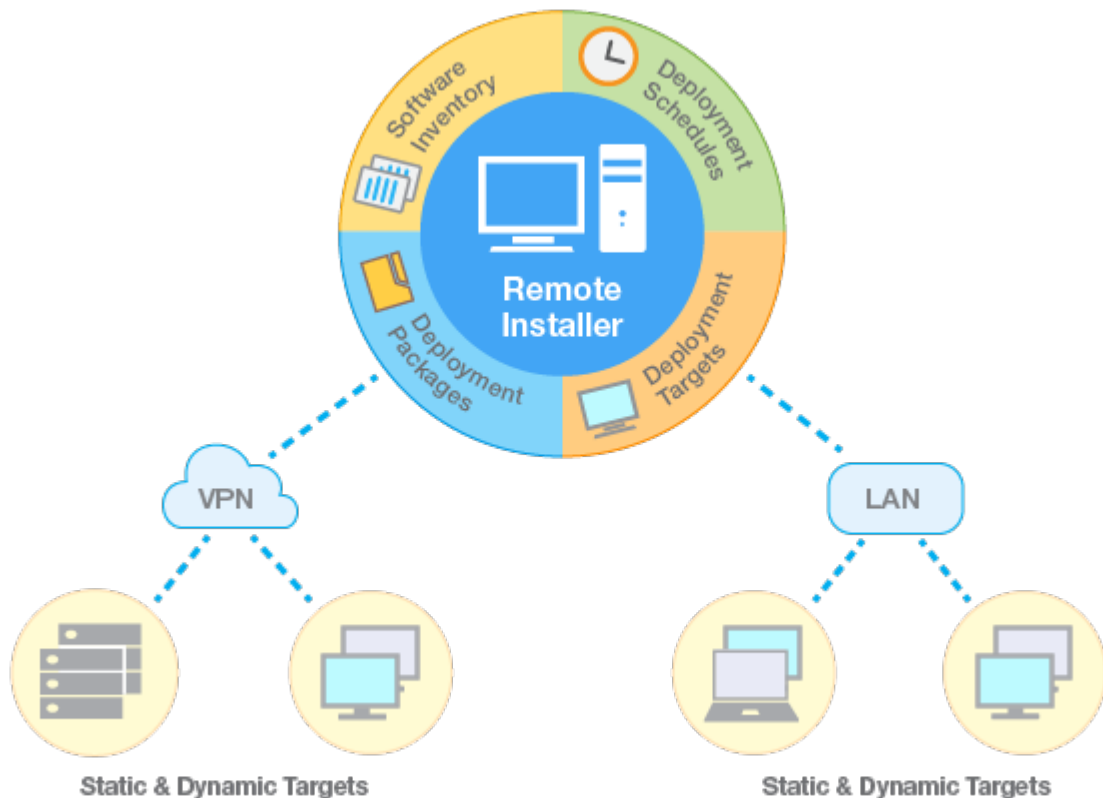
Using EMCO Remote Installer, you can benefit from the following features that are demonstrated in the course of this tutorial.

- **Software inventory**. To plan software deployments, you need to know what software is installed in the network and what versions of the software are installed on remote PCs. The program automatically audits all software installed in your network, so you can see the software installed on every computer and the software inventory summary for the entire network. This simplifies uninstalling of unwanted software and updating of outdated software.

- **Flexible deployment targets**. You can manually select PCs where software should be deployed, but the program also supports advanced deployment scenarios. You can define conditions to select deployment targets dynamically, for example, to deploy software on all PCs where the previous version of the same software is installed, or deploy software to a specific organizational unit from Active Directory.

- **Multi-step deployments**. The program allows you to deploy multiple software in a single deployment operation. You can also perform custom pre- and post-install steps on remote PCs.

- **Reusable deployment packages**. If you need to repeat the same deployment operation multiple times, you can save the deployment configuration and use it to run on different remote PCs in the future.

- **Scheduled deployments**. You can schedule deployments for automatic execution on a defined date and time. If required, you can configure the program to repeat deployments on a regular basis.

In the following chapters, you will familiarize yourself with the user interface of the program and learn how to configure your network to satisfy the program requirements and how to configure deployment operations for them to run remotely. You will learn how to use various software audit and software deployment features of the program in practice.

The main features of the program are also demonstrated on the Video Tour page of the website. Every video there is focused on a specific feature of the program, so you can use the videos as a demonstration of the features described in this tutorial.

Performing the Required Pre-Start Checks

Before you start using the program and following the steps described in this tutorial you need to check a few points explained below. It's really important to check and understand these points to be able to use EMCO Remote Installer successfully.

1. Check the edition of Remote Installer you use
EMCO Remote Installer is available in two editions: Free (freeware edition) and Professional (commercial edition). The functionality differences between the Free and Professional editions are explained on the Compare Editions page.

2. Check if your network environment is configured to meet the requirements
To deploy software remotely, you need to use a Windows account that has administrative rights on remote PCs. Also, the standard Windows networking services should be started on remote PCs and the corresponding network ports should be opened. It's recommended to check the list of technical requirements for the local and remote PCs to ensure that your network environment is properly configured. If your network environment doesn't satisfy the requirements, remote operations will fail. In such cases, you need to check the **Execution Results** and the **Log** views for details and follow the provided instructions to configure your network environment properly.

**3. Make sure that the package to be deployed works silently**
Remote Installer allows you to automatically deploy software packages on multiple remote PCs across a network. To make this possible, you need to have installation packages that can be deployed silently, i.e. without interaction with a user. Such packages should not require a user to enter any data or select installation options, so they need to be preconfigured after the installation scenario.

All MSI packages support silent deployment, but if you have an installation in the EXE format, you need to contact its vendor to find out how to install it silently. Different installations require different approaches to activate the silent installation mode: in some cases you need to specify the silent installation command-line switches, in other cases you need to record and specify an installation scenario. If an EXE installation doesn't support the silent installation mode, you can convert it into a silent MSI package using EMCO MSI Package Builder.

If you need to install, uninstall or repair an installation in the EXE format, you should test its silent deployment locally before deploying it using Remote Installer. Just run the installation manually in the silent mode and if the deployment is completed successfully, specify the same deployment options in Remote Installer.

Getting to Know the Program Interface

EMCO Remote Installer can be used to automate software management across a local network. This task includes different types of operations, for example, selecting target PCs for deployment, reviewing installed software, scheduling remote operations, etc. For all of these operations Remote Installer provides specific views where you can examine and manage data. The default layout of the main screen is organized into four areas `Pic 1`, and you can rearrange the views according to your taste if you prefer to do so.
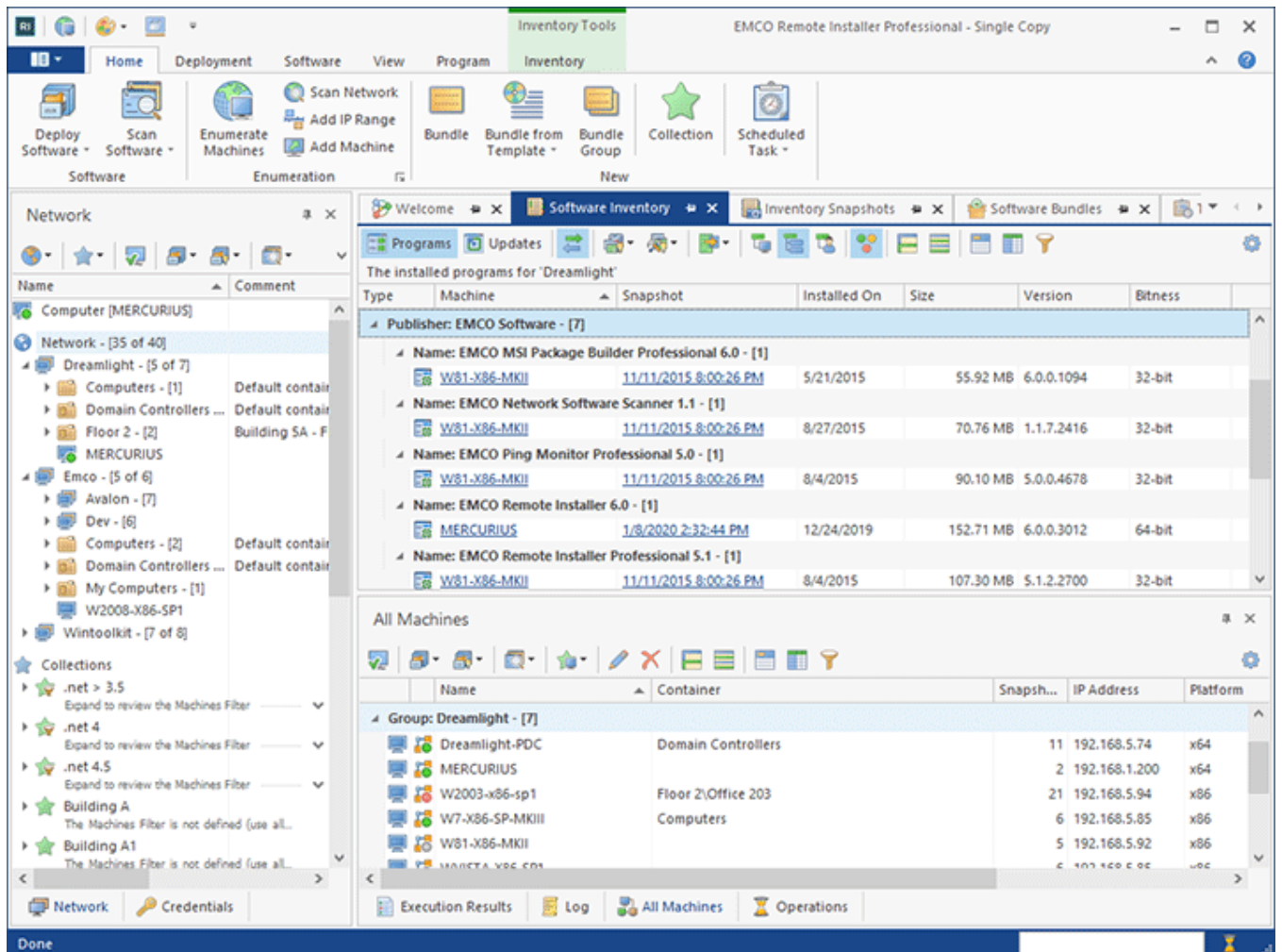
Pic 1. The main program window

Remote Installer has a Ribbon UI where all main actions are represented in the **Ribbon** menu located at the top of the program's window. Using the actions available on the default Ribbon tab, you can perform the main actions provided by the program such as deploying software, scanning the installed software, scheduling remote operations, etc. You can access all available operations by switching to other Ribbon tabs.

Under the Ribbon menu, on the left side of the main screen, you can find the network management area. Using the **Network** view located in this area, you can select network PCs, for example, to deploy software or to review the installed programs and updates. The **Credentials** view also located in this area is used to configure administrative credentials required to access remote PCs.

On the right side of the network management area, you can see the main area, which includes a few tabs. The **Welcome** tab displays the main actions of the program. The **Software Inventory** and **Inventory Snapshots** views available on the corresponding tabs are used to audit the installed software on remote PCs. The **Software Bundles** view is used to manage the software packages to be deployed remotely. Finally, the **Tasks and Schedule** view can be used to manage software deployment and audit tasks, and to schedule their execution.

At the bottom of the program window, you can find other group views organized by tabs. The **Execution Results** view is used to display the results of all the executed remote operations, and you can use it to find out the execution status for every target PC. The **Log** view displays program errors and statuses of the network operations. The **All Machines** view is used to display detailed information about remote PCs, including their OS and platform info. Finally, the **Operation Management** view shows the currently executed operations and allows to cancel them.

Every program view is designed to display specific information and to help you perform a particular set of tasks. In the following chapters, you can see how the different views are used to complete the day-to-day software deployment and audit tasks. You can find more detailed information on all the program views in the Program Interface Overview chapter.

Scanning the Network and Auditing the Installed Software

To plan software deployments, you need to audit the installed software. Therefore, as the first step of this tutorial, we will scan the local network to detect available PCs and to collect software inventory information.

To start the network enumeration, you can press **Enumerate Machines** on the **Welcome** tab or click the **Enumerate Machines** button on the Ribbon. As a result, the **Enumerate Machine** wizard is displayed and you should press the **Next** button to choose the network enumeration type. To add PCs to the program, you can either enter an IP range or scan entire domains or workgroups. Depending on the approach chosen, you should enter an IP range or select the domains and workgroups to be scanned `Pic 1`. Once you have specified the enumeration conditions, you can press the **Finish** button, after which the program will start scanning your network.
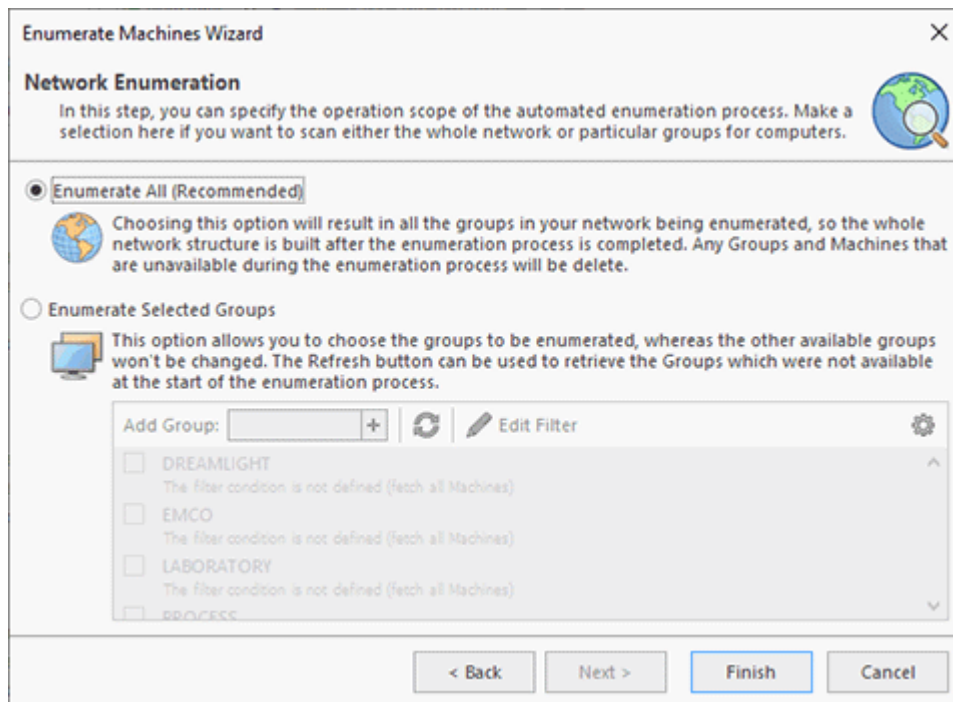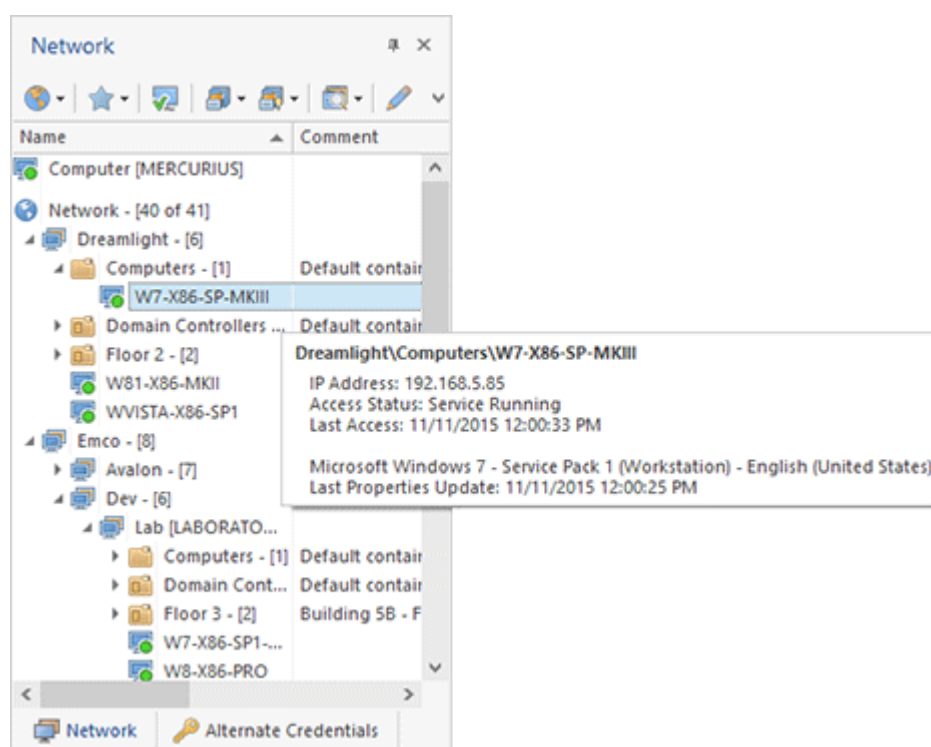

Pic 1. Network enumeration options

During the network enumeration, you can see that the detected remote PCs are displayed on the **Network** view. If your Windows account doesn't have permissions to extract network information from specific domains or workgroups, you will see requests for administrative credentials for the enumerated domains/workgroups, so you have to enter the credentials to scan a workgroup or a domain. When the network enumeration is finished, you can check the enumeration status on the **Application Log** view to ensure that all the domains and workgroups have been enumerated successfully. In case of enumeration errors, you can find the error details and suggestions in the **Application Log**. You should follow the recommendations provided and repeat enumeration once the problems are resolved.

## Reviewing Scan Results and Auditing the Installed Software

When the network enumeration is completed, you can see the detected remote PCs displayed in the **Network** view. Your local PC is displayed at the top of this view, so you can quickly find it. All the enumerated network PCs, including your local PC, are available under the **Network** node. All the PCs are grouped by workgroups and domains, the domain PCs are also grouped to reflect the domain structure, so you can see organizational units in the network tree. Note that the program detects all computers available during the network enumeration, including Linux and MAC computers, but Remote Installer can only manage Windows desktops and servers, so such computers may be displayed in the tree with specific icons. If you hover a mouse pointer over a PC, you can see the PC's status in the text form, which is meant to help you to get familiar with different status icons `Pic 2`.

Pic 2. Network enumeration results

During the network enumeration, Remote Installer automatically collects information about software installed on remote PCs, so you can easily audit software to plan your deployments. To review the software installed on a specific PC, you need to select it in the **Network** tree and open the **Software Inventory** tab `Pic 3`. The displayed information is similar to the information provided by the Windows Programs and Features dialog, but Remote Installer allows you to receive centralized software inventory data for all remote PCs.
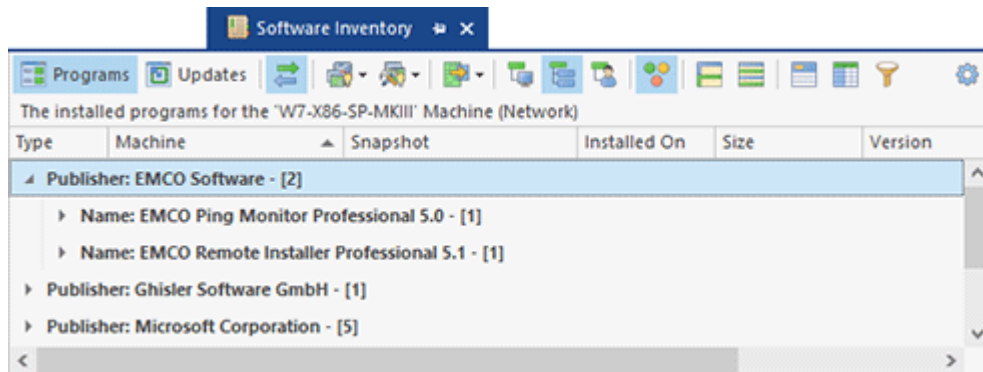
Pic 3. Software inventory information for a remote PC

By default, the data is grouped by software publisher and application name, but you can use the buttons located on the **Software Inventory** view's toolbar to apply a different grouping. On the toolbar, you can find the buttons allowing you to switch between the displays showing the installed software and updates. Software inventory information is displayed in the smart grid, so you can use the data grouping, sorting, filtering and searching features to organize the data according to your needs and to find the required software entries.

Overview of the Advanced Software Auditing Features

You can use Remote Installer for centralized software auditing tasks to find specific software installations within a network, to audit software changes, to automate the software inventory. Below, you can find a quick overview of the software auditing features provided by the program.

Auditing Software Across Entire Network

In the previous chapter, you learned how to audit the installed software on a specific PC, but what if you need to find, for example, all copies of *Adobe Reader* installed within your network? To review software installed on more than one PC, you can select the required PCs in the **Network** view. For example, you can use the multi-select feature to pick a few PCs, or you can select an organizational unit node in the tree if you would like to inspect it. To audit software in a workgroup/domain, you should select the corresponding node in the tree, and to audit the entire network, you should select the root Network node. In our case, we need to audit the entire network, so select the Network node in the tree and you can see the full list of installed applications in the **Software Inventory** view Pic 1.

Pic 1. Finding Adobe Reader installations

You need to expand the *Adobe Systems Incorporated* group to see the installations of different *Adobe* tools, including different versions of *Adobe Reader*. You can see the list of PCs where it is installed under every software item node.

If you would like to learn more about software auditing, you can read the Scanning for Software chapter, which explains how to use different network scanning methods, and the Software Inventory chapter, which explains how to audit the collected inventory data.

Using Software Inventory Info for Reporting and Deployment

Collecting the software audit information is just the first step in the software management. If you like, you can export the software audit info to a CSV file and then open it in Excel to build a report, or you can use it to specify the deployment targets in Remote Installer, for example, to uninstall certain software from all PCs, or upgrade software to a new version, or deploy software on PCs where it is missing. Some of these cases will be demonstrated later in the course of the Getting Started tutorial.

You can learn more about the software data exporting feature in the Exporting Programs and Updates chapter.

Tracking Software Changes

The software audit information collected by Remote Installer can be out-of-date after a few days if you or remote users install or uninstall software on/from remote PCs. To update software inventory information, you just need to scan the installed software. Select the PCs in the **Network** tree and choose software scanning options on the Ribbon or in the context menu. As a result, Remote Installer will extract new software inventory information from the selected remote PCs. To track the changes made, you can open the **Inventory Snapshots** view. It displays the scans history for the selected PCs, and you can choose two scans to compare and see the changes Pic 2.
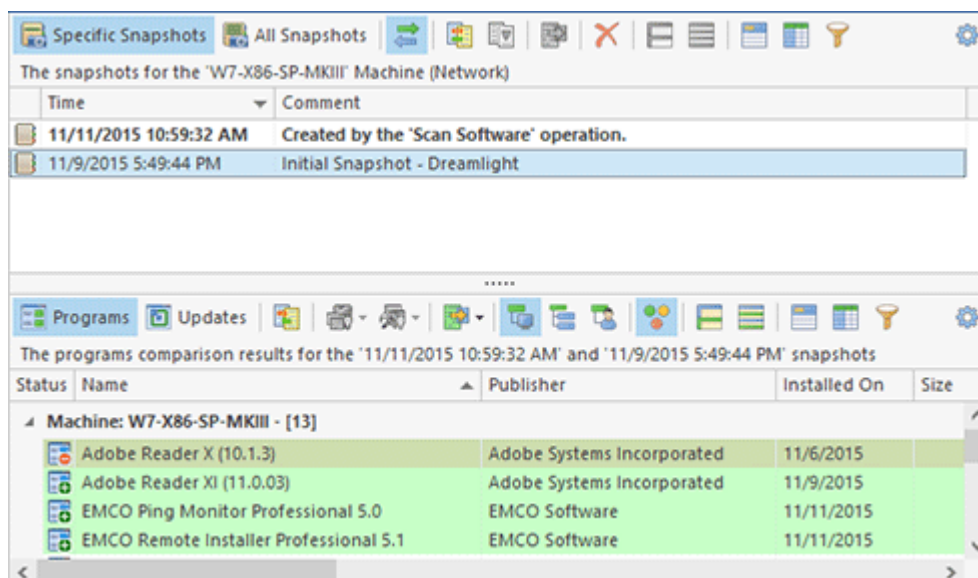
Pic 2. Comparing software scans to see the differences

You can learn more about inventory snapshots and how to use them for tracking software changes in the **Inventory Snapshots** chapter.

Automated Software Audit

If required, you can automate the updating of software inventory information by creating and scheduling a software scanning task. For this, open the **Tasks and Schedule** view and create a new recurrent software scanning task. When configuring the task, you can specify the target PCs to be scanned and configure the task recurrence options, for example, to execute the task automatically every work day at a defined time. As a result, Remote Installer will automatically update the software inventory information and you won't need to update it manually.

Creating and managing tasks is explained in the **Tasks and Schedule** chapter, so read it if you would like to learn more about this topic.

Deploying Software Using the Quick Install Operation

To deploy software remotely, you need to have an installation that supports silent deployment.

As explained in the Performing the Required Pre-Start Checks chapter, for EXE installations you need to find the command-line installation options or a scenario file to activate silent deployment and test the silent installation locally before deploying it via Remote Installer. MSI and MSP installation packages support silent deployment by default, so there are no specific requirements for these installation formats.

The simplest way to deploy software remotely is by using the **Quick Install** action. First, you need to select the target PCs where the software should be deployed. Select one or multiple PC nodes in the **Network** view. If your **Network** view is empty, you have to enumerate the network first as described in the Scanning the Network and Auditing the Installed Software chapter. In the **Network** view, you can select organization units, workgroup/domains or root Network nodes if you need to deploy software on all the PCs that belong to those groups.

Having selected the target, you need to press **Deploy Software** > **Quick Install** on the Ribbon or select the **Quick Install** option in the context menu. Then, you need to select the installation you want to deploy on the dialog that appears. If you have selected an MSI package, you can see the selected package summary on the dialog that appears, and you need to press the **OK** button to start the deployment. If you have selected an EXE package, you need to specify the silent deployment options. In the corresponding dialog fields, you can enter silent command-line parameters to be passed to the installation or an answer file that includes the installation process configuration. Contact the installation vendor to find out the silent options that you need to specify. Once the EXE package is configured, press the **Finish** button to start the deployment process **Pic 1**.
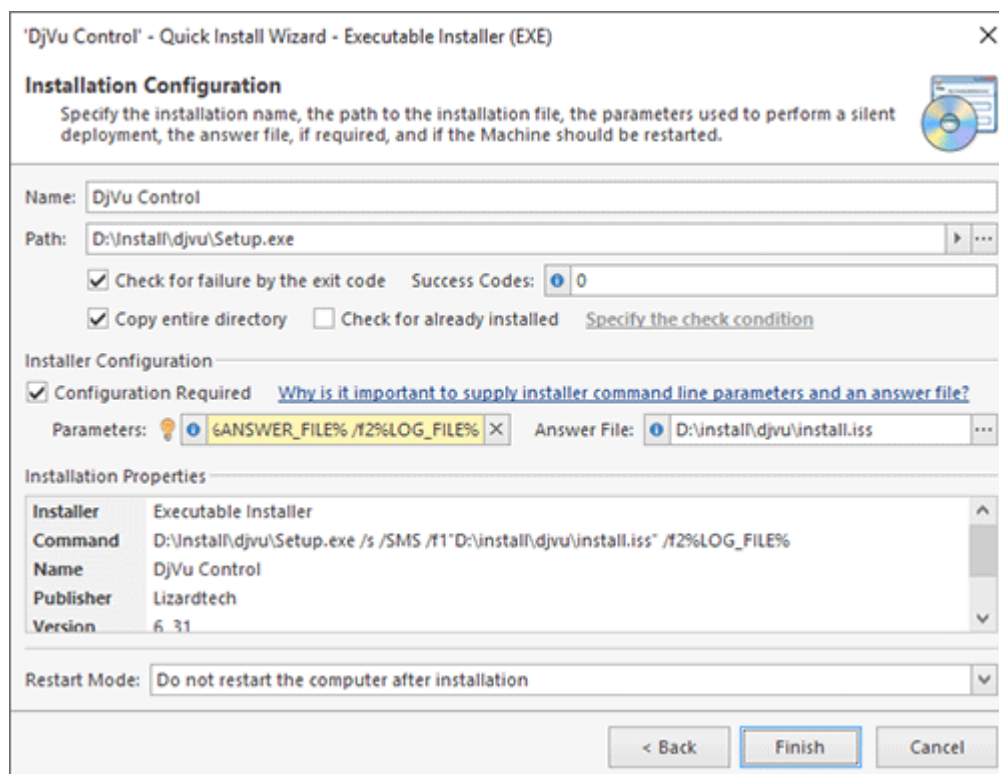
Pic 1. Software Deployment configuration

Remote Installer performs software deployment concurrently on multiple target PCs that you specified. You can follow the deployment process in the **Operation Management** view. You can cancel the deployment in that view if required. Once the deployment is completed, you can see the results in the **Execution Results** view. The information on the **Execution Results** tab is grouped by remote tasks and workgroups/domains. You can expand the grouping rows to check the execution statuses for every PC. In case of errors, you can find detailed problems reports, and you should follow the provided suggestions to resolve the problems `Pic 2`.
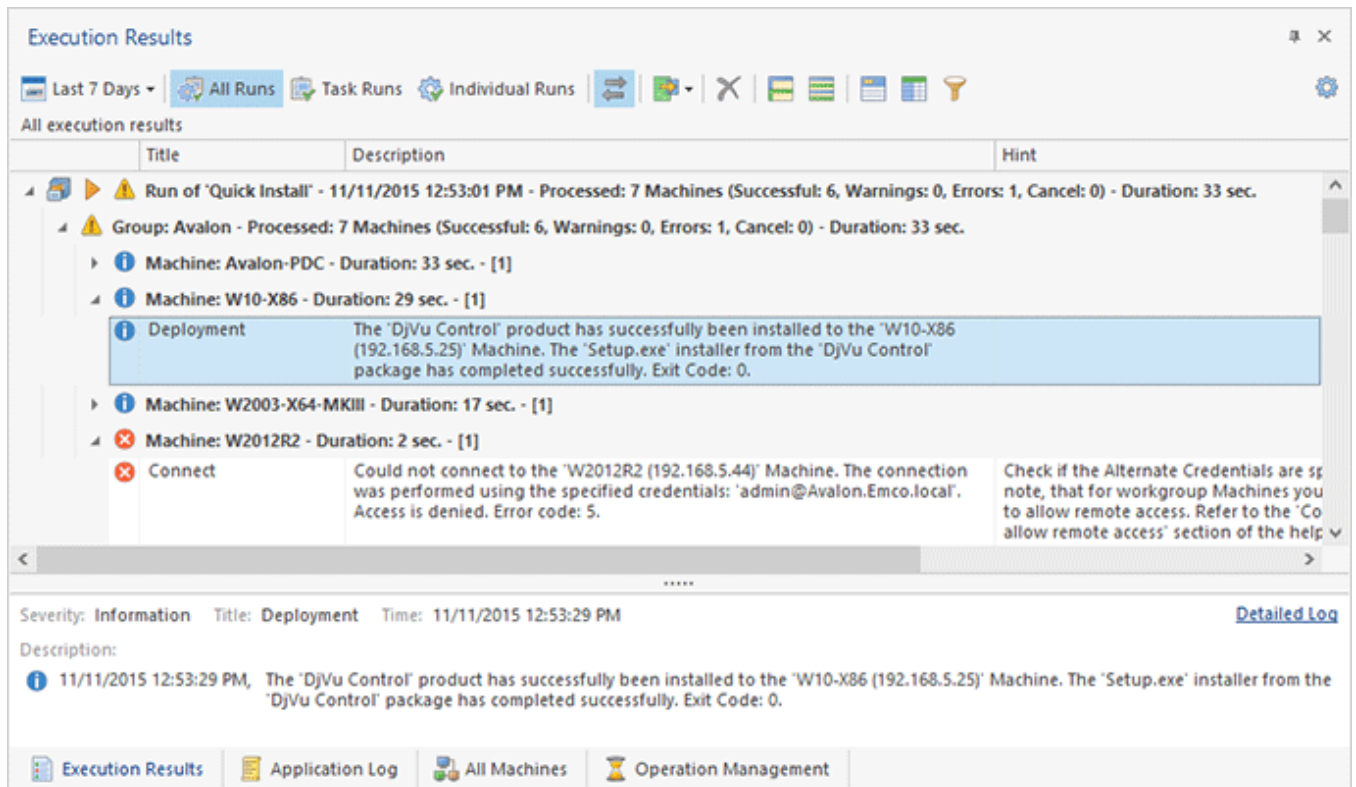
Pic 2. Software deployment results

If you would like to learn more about software deployment, you can find information on configuring different types of installations to run silently and troubleshooting installation configuration problems in the Silent Deployment Particularities chapter. Also, this chapter provides instructions on how to deploy software from network shares to save the network bandwidth.

Overview of the Advanced Software Deployment Features

The Quick Install operation demonstrated in previous chapter is just the simplest way to deploy software, but in many cases you need to use more advanced deployment features. In this chapter, you can find a brief overview of the available features. A more detailed description of every feature can be found in the corresponding chapter of this manual.

Grouping PCs Using Collections

When deploying software, you need to define the target PCs where the software will be deployed. When deploying software using the Quick Install operation, it's possible to just select particular PCs on the **Network** view. In practice though you will face more complicated cases, for example, when it is needed to repeat different deployments in the same group of PCs multiple times, or when you need to upgrade software on all the PCs where the previous software version is installed. In such cases, it's very difficult or practically impossible to select target PCs manually, so Remote Installer introduced the concept of collections, which allows you to group and select target PCs easily.

EMCO Remote Installer displays collections in the **Network** view under the corresponding node, so you can create collections to suit your needs and then use them in remote operations to target the required PCs. Every collection can include static machines, machine queries and filters.

For instance, if you need to repeat deployment operations multiple times on the same PCs, and it's hard to select the same PCs over and over again, you can create a collection and add the required PCs to the collection as static Machines **Pic 1**.
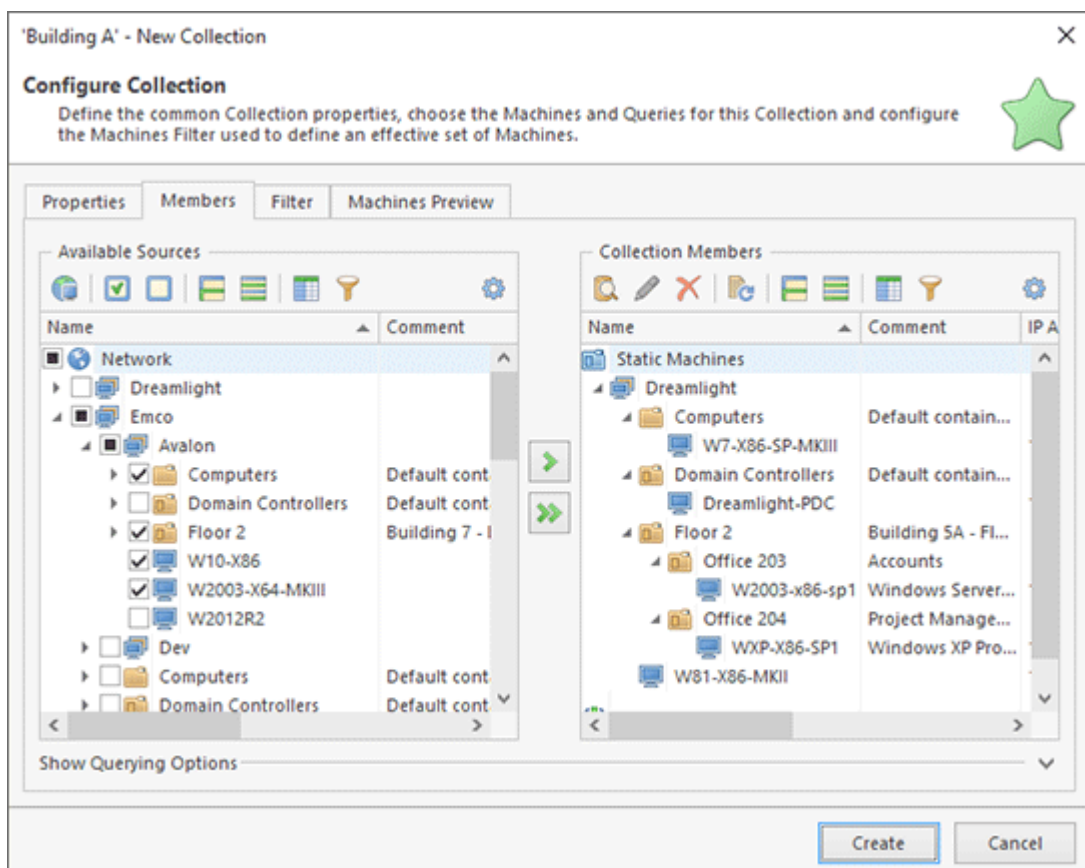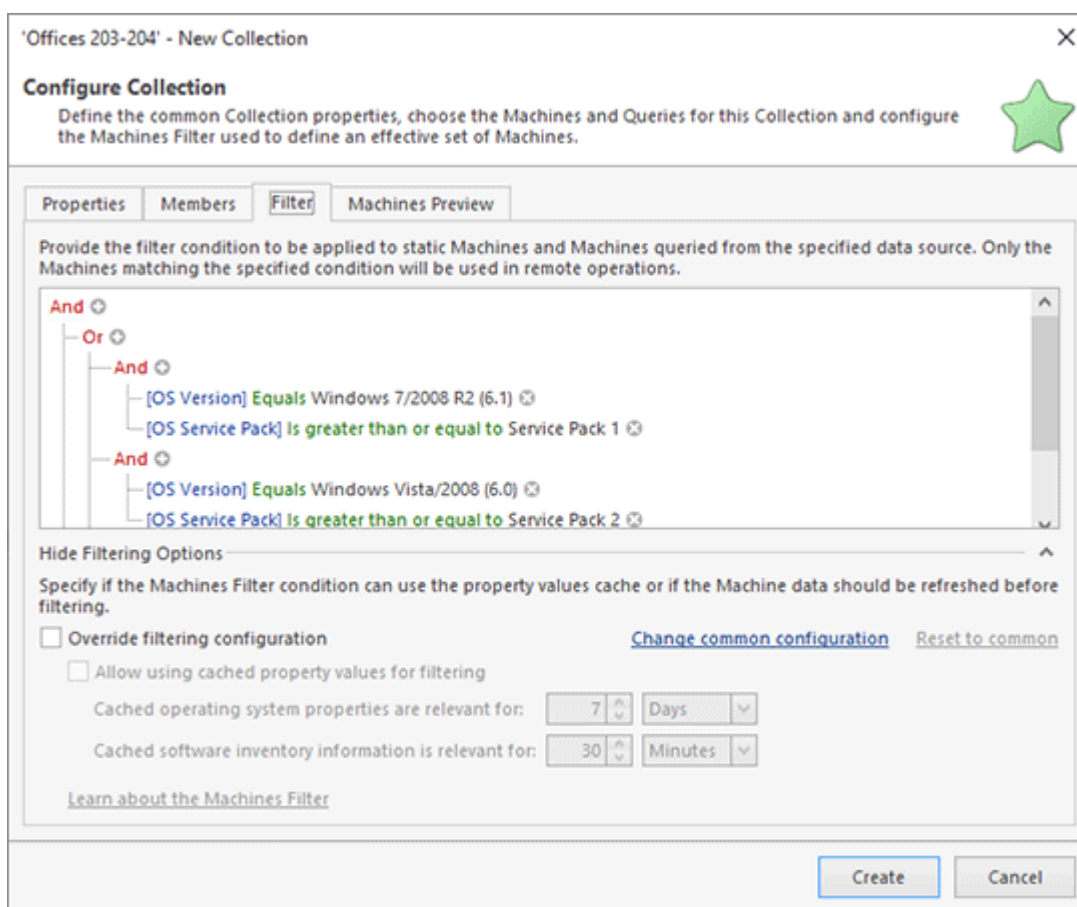

Pic 1. Creating a collection with a static Machines

Sometimes the set of PCs isn't fixed and can change over time. For example, if you manage a particular organizational unit (OU) in a domain and need to deploy software to all PCs in the OU, adding the required PCs to the collection statically makes little sense, because the set of PCs in the OU may change over time. In that case, you can add a machine query to a collection that returns the actual set of PCs based on the defined condition `Pic 2`.
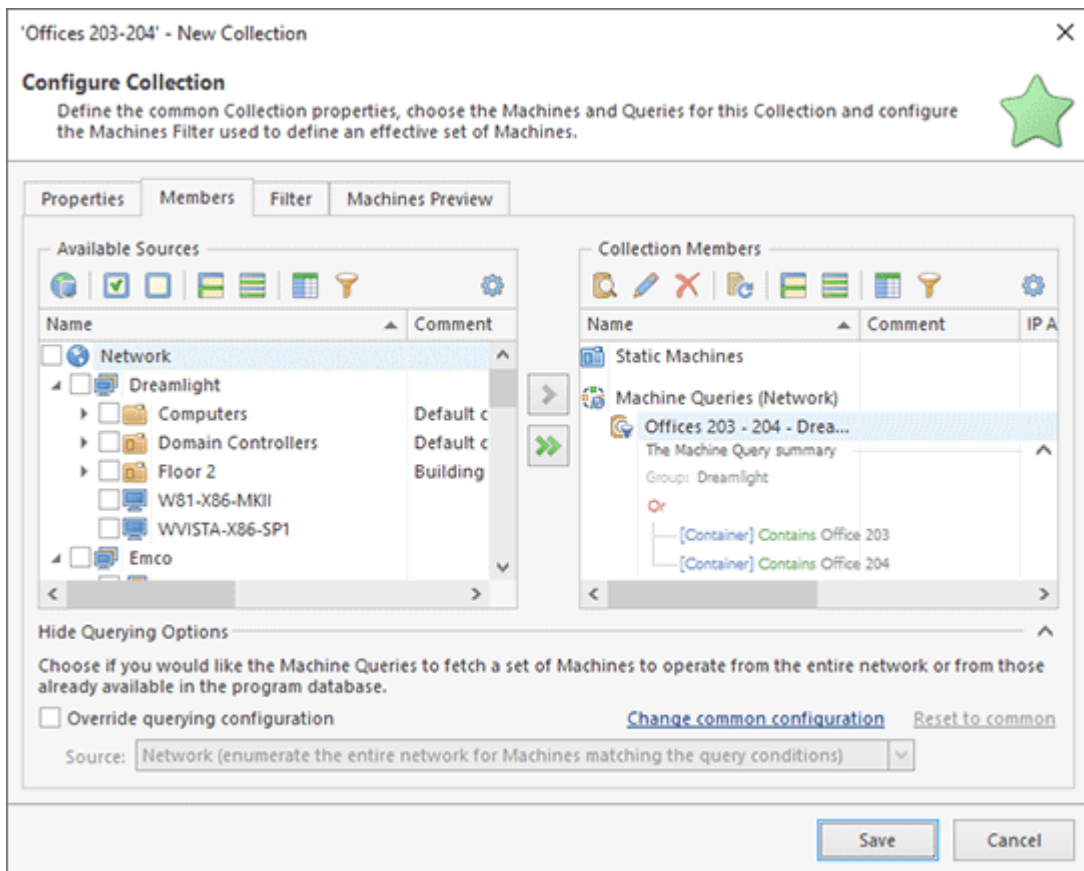
Pic 2. Creating a collection with a Machine Query

Finally, you can filter the PCs defined by the static Machines list and the Machine Queries using the required criteria defined in a Filter. For example, you can select only the PCs that have a particular OS and/or software installed `Pic 3`.

Pic 3. Configuring a collection with a Filter

Just to summarize the above, a collection defines a group of target PCs that can be configured using the following objects:

- A set of static Machines that you can select in the UI.

- A set of Machine Queries (available in the Professional edition only). A query is a logical condition that allows selecting the required PCs in a workgroup/domain based on the PC names and names of organizational units where such PCs are located.

- A Filter (available in the Professional edition only) that is used to filter out the PCs reported by Machine Queries and static Machine definitions. In the Filter, you can use logical conditions that operate with the OS and software inventory information of remote PCs.

As you can see, you can combine configurations of static Machines, Machine Queries and Filters to create configurations of any complexity. If you define complex conditions to configure Machine Queries and Filters and then use the collection to target the required PCs in a deployment operation, Remote Installer executes Machine Queries and Filters first to get the up-to-date set of target PCs satisfying the defined conditions and then performs a remote operation on those PCs.

More detailed information on this topic is available in the **Collections** chapter. Read it to learn how to preview collection results, use collection snapshots and familiarize yourself with other advanced features.

Creating Reusable Software Bundles

When deploying software remotely, you need to configure its deployment options. For example, for an EXE installation, you need to specify silent deployment parameters or an answer file, as well as optional pre- and post-install actions. Different installations have different options, so if you need to repeat the same installations multiple times on different groups of PCs, it is convenient to configure all deployment options only once and then simply to reuse them.

EMCO Remote Installer allows you to create software bundles to save the deployment configuration, reuse it and exchange it with your colleagues using the export and import features.

A bundle includes install, uninstall and repair packages that provide configurations of corresponding actions for specific software. For example, if you need to manage *Adobe Reader*, you can create a bundle for it and provide the configuration of install, uninstall and repair operations in its install, uninstall and repair packages. Later, when you, for instance, need to install *Adobe Reader*, you can merely select the bundle, and its install configuration will be used in the remote install operation automatically. Thus, you can just execute the operation without configuring the installation options.

To create a bundle, you don't need to configure all its install, uninstall and repair packages. For example, if you only plan to install software, you can configure just the install package. Other packages can be configured later, if required. Configuring a package in a bundle is identical to configuring the corresponding operation. For instance, if you need to create an install package that configures the deployment of an EXE installation, you should specify a path to the EXE installation file, its silent deployment options and optional pre- and post-install actions `Pic 4`. In another case, if you need to create an uninstall package for an MSI, you should only specify its product GUID because this is the only parameter required to uninstall an MSI.

Pic 4. Configuring a software bundle

Bundles can describe complex software configurations. For example, you can configure a bundle to deploy different installation packages on x86 and x64 platforms. Also, if you need to deploy multiple software packages, you can create a bundle group that includes multiple bundles.

You can learn more about bundles in the **Software Bundles** chapter. It explains how to create and use bundles and provides information on exporting and importing bundles and bundle groups. The **Deployment Packages** chapter contains more information on configuring the deployment operations. You can read it to learn how to configure pre- and post-install actions, deploy different packages on different platforms, and use MSI transforms and other advanced features.

Using the Advanced Deployment Operation

When performing the Quick Install operation, you are limited to using only the basic deployment features and you can deploy only single software to a selected set of static PCs. If you need to use the advanced deployment features, you should perform the **Deploy Software** action, which is available on the Ribbon and in the context menu of different views.

After initiating the Deploy Software operation, you are prompted to specify the deployed software and the target PCs. The main difference from the Quick Install operation is that the Deploy Software configuration allows you to use software bundles as deployed software and collections as target PCs, so you have practically endless deployment options based on all the features provided by bundles and collections. It's important that the Deploy Software operation configuration consists of two simple steps only, so you can configure and execute the operation quickly and easily `Pic 5`.
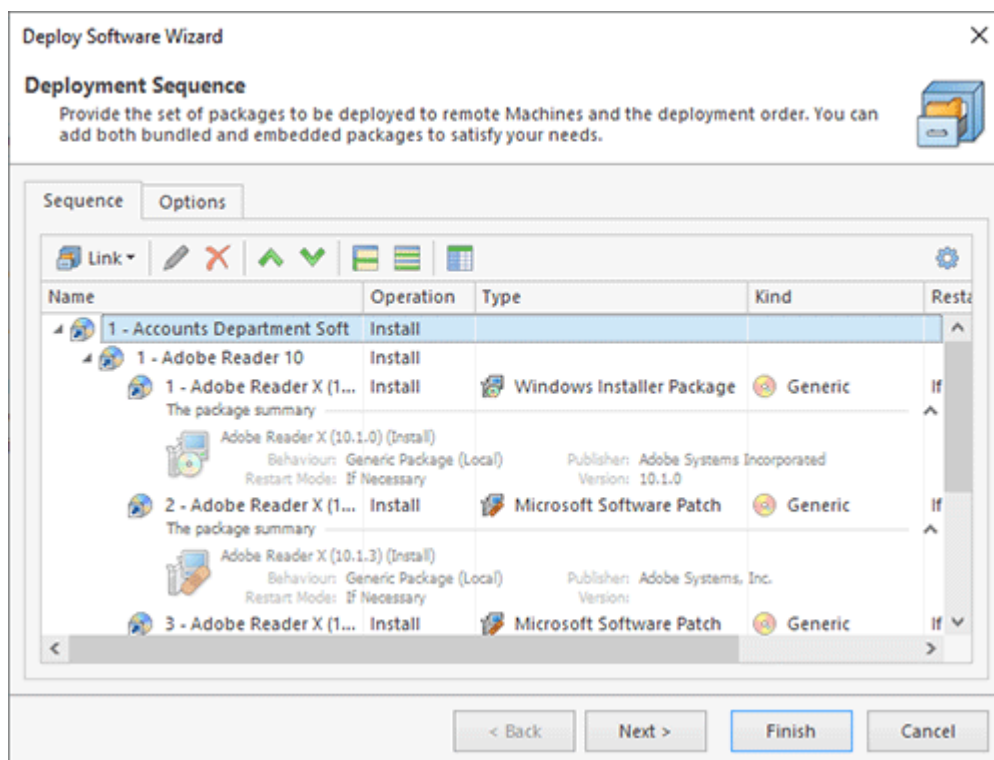
Pic 5. Configuring of the Deploy Software operation

In general, Deploy Software is meant to be used as the main software deployment operation. You can use Deploy Software to install, uninstall and repair software on remote PCs. Using this operation, you can deploy multiple software packages at once and deploy different installations on the Windows x86 and x64 platforms. You can re-use software bundles configured by your colleagues and deploy software on dynamic groups of PCs, for example, on PCs that run a particular Windows version and/or on PCs with specific software installed.

You can learn more about different deployment operations in the **Deploying Software** chapter. It explains the differences among the available operations and shows how to configure them.

Scheduling Remote Operations and Re-Executing Failed Tasks

If you need to repeat the same remote operation multiple times, you can create a task that can be executed either manually or automatically on schedule. For example, if you need to automate the software audit, you can create a recurrent software scanning task that will be automatically executed by Remote Installer on daily basis. If required, you can create tasks for any remote operations such as software scanning, software installation, uninstallation and repairing.

> It is possible to create tasks in a commercial edition of the program only. The Free edition doesn't allow creating tasks.

Remote tasks are managed in the **Tasks and Schedule** view where you can see the list of existing tasks and create new and recurrent ones Pic 6 . The task configuration is similar to the configuration of a remote operation, so, for example, to create a software scan task, you need to configure a set of target PCs, and to configure a deployment task, you need to configure the deployed software package and the target PCs. Once a task is created, you can execute it with no additional configuration steps and then check its execution results.

Pic 6. Remote tasks configured on the Tasks and Schedule view

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If you need to automate a task execution, you can create a scheduled task or a recurrent task. To create a scheduled task in addition to the standard task settings, you should specify the task execution date and time. To create a recurrent task, you need to configure its execution time and recurrence options, for example, to execute a task daily, or monthly, or on the selected days of the week, etc **Pic 7**. The scheduled and recurrent tasks are displayed in the schedule area, so you can see when the tasks will be executed.

Pic 7. Configuring the task recurrence options

Another important aspect of using tasks is that tasks can be executed again on the target PCs where the task execution previously failed. For example, if you execute a software deployment task and some of the target PCs are tuned off, the task will fail on such PCs. You can easily repeat the task execution on the failed PCs by selecting the corresponding option in the task's context menu, so, eventually, the software will be deployed on all target PCs after a few iterations.

You can learn more about tasks in the **Taks and Schedule** chapter, which contains information on creating different types of tasks, scheduling them for automatic execution, configuring recurrence options, etc.

Uninstalling Software

Having completed a software scan, you can review the software installed on the selected PCs in the **Software Inventory** view. The **Software Inventory** view provides almost the same information that you can see in the Windows Programs and Features, so the same way you can uninstall software from the Windows Programs and Features, you can uninstall it remotely using Remote Installer.

If the software you need to uninstall was installed as an MSI package or an EXE package that supports silent uninstall by default, you can easily uninstall it by selecting the software entry in the **Software Inventory** view and performing the **Quick Uninstall** action, which is available on the **Deployment** tab of the Ribbon or in the context menu. If the selected software was installed as an EXE package that doesn't automatically provide silent uninstall options, use the **Smart Uninstall and Repair** action and specify silent command-line parameters or an answer file that should be passed to the uninstaller on remote PCs so as to uninstall the software in the silent mode `Pic 1`.
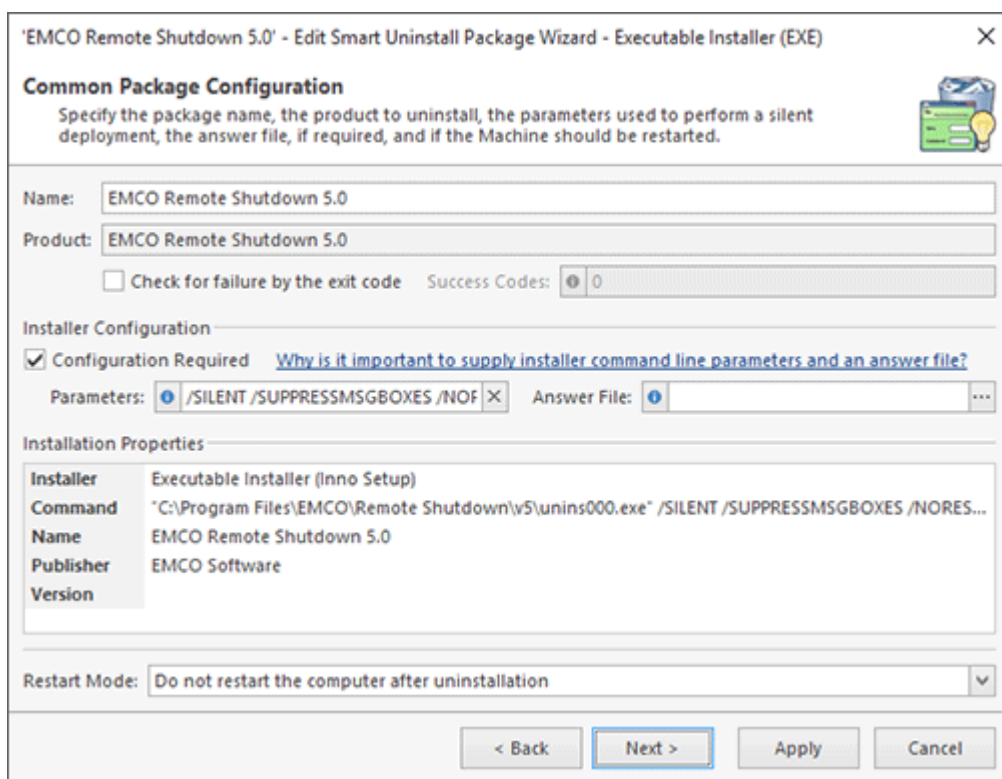
Pic 1. Configuring the EXE uninstallation options

The target PCs where unistallation should be performed are determined by your selection. For example, if you review software installed on a particular PC in the **Software Inventory** view, the selected item will be uninstalled from the selected PC only. If you review software installed across a network and select specific software, you can see all the PCs where this software is installed under the software node, and if you choose to uninstall it, the software will be uninstalled from the all of the displayed PCs. Also, if needed, you can select multiple software items to uninstall in the scope of a single operation.

If you need to repeat the same uninstall operation multiple times on different PCs, you can create a bundle with preconfigured uninstall options. Later, you can specify the target PCs where the bundle should be executed. To perform uninstall operations of any complexity using software bundles and collections of target PCs, you can use the **Deploy Software** action, which is available on the Ribbon. This action can include multi-step deployment configurations, allowing to install a new version of software after the old one has been uninstalled.

You can learn more about software uninstallation in the **Running Smart Uninstall and Repair** chapter. In this chapter, you can learn how to configure uninstall and repair operations, how to execute them and how to create corresponding tasks if you wish to run the operations on a schedule.

Chapter 3: Program Interface Overview

The Remote Installer main window **Pic 1** can be divided into the following parts: the **Welcome Screen** view **A**, the **Software Inventory** view **B**, the **Inventory Snapshots** view **C**, the **Software Bundles** view **D**, the **Tasks and Schedule** view **E**, the **Network** view **F**, the **Credentials** view **G**, the **Execution Results** view **H**, the **Log** view **I**, the **All Machines** view **J**, the **Operation Management** view **K** and the **Ribbon** bar **L**.
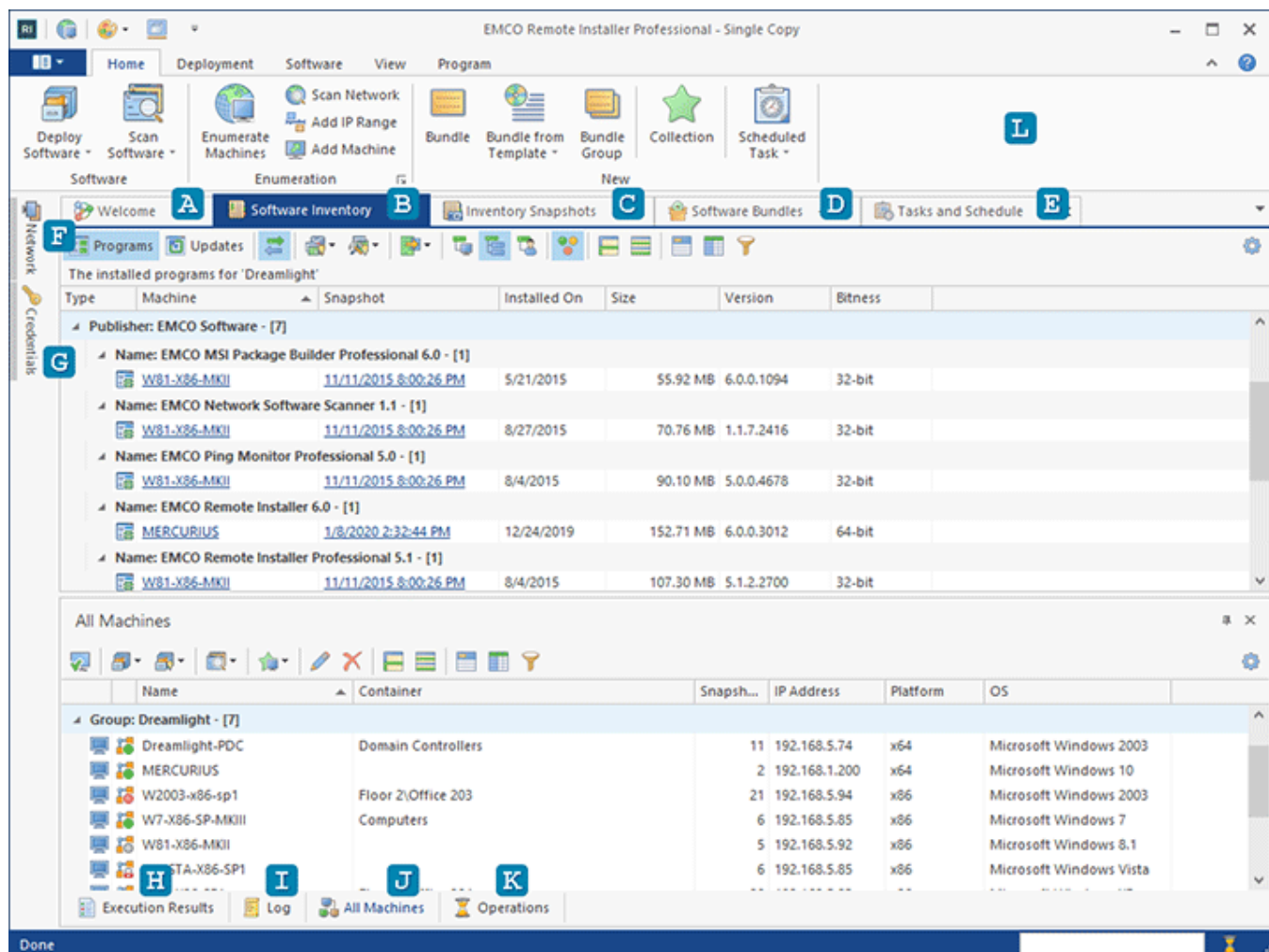
Pic 1. The main program window

On the first start up, all the areas are empty, then the **Software Inventory** view displays the software inventory pertaining to the selection, the **Inventory Snapshots** view displays either all inventory snapshots or those pertaining to the selection, the **Software Bundles** view displays the repository of Bundles and Bundle Groups used for deployment, the **Tasks and Schedule** view displays the task for performing deployment and software scan in the future, the Network view is filled with information about your network structure and the Collections to be used for building Machine Queues, the **Alternate Credentials** view is designed to provide the credentials to be used to connect to remote Machines, the **Execution Results** view shows remote Machines operation results, and the **Application Log** window shows supplementary operations results and events.

Welcome Screen

The **Welcome Screen** is located right in the middle of the application main window and is intended to help you start working with Remote Installer `Pic 1`.
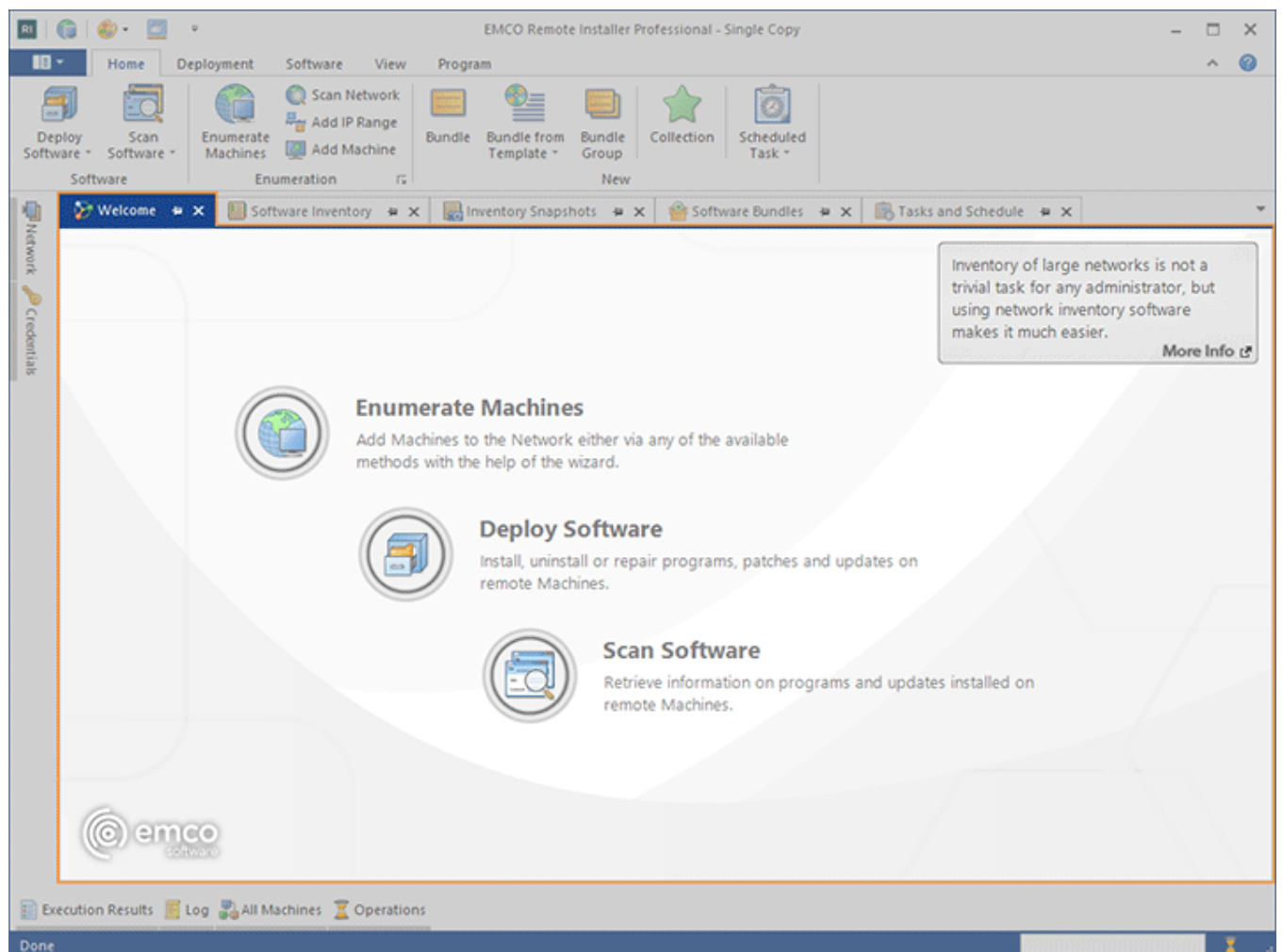
Pic 1. The Welcome Screen

In the middle of the **Welcome Screen**, there are shortcut buttons that enable you to execute most commonly used actions. The buttons sequence is set in such a way as to help you understand the sequence of the steps to be performed to solve the tasks Remote Installer is designed for.

In the top right corner of the **Welcome Screen**, you can find the information area used to show you the tips that may be useful for you while using Remote Installer. If you find the displayed tip interesting, you may click it to get more information on the subject.

Finally, if you want to know more about EMCO Software, you can visit our web-site by clicking the company logo in the bottom left corner of the **Welcome Screen**.

Software Inventory View

Remote Installer is designed to make it as easy as possible for you to get software inventory for remote Machines. The **Software Inventory** view always displays the most relevant list of programs and updates installed on remote Machines `Pic 1`.

Software Inventory	**Software Inventory** The **Software Inventory** button from the **Inventory** Ribbon group on the **Software** page should be used to review the software inventory information for the selected Machines.

This view displays inventory pertaining to the selected Machines – this mode is activated using the **Link with Selection** button. In this mode, the view is updated automatically every time the scope of selected Machines is changed and when scans are completed or snapshots are deleted for the selected Machines, so you do not need to refresh the view to see the most recent information pertaining to the selected Machines.
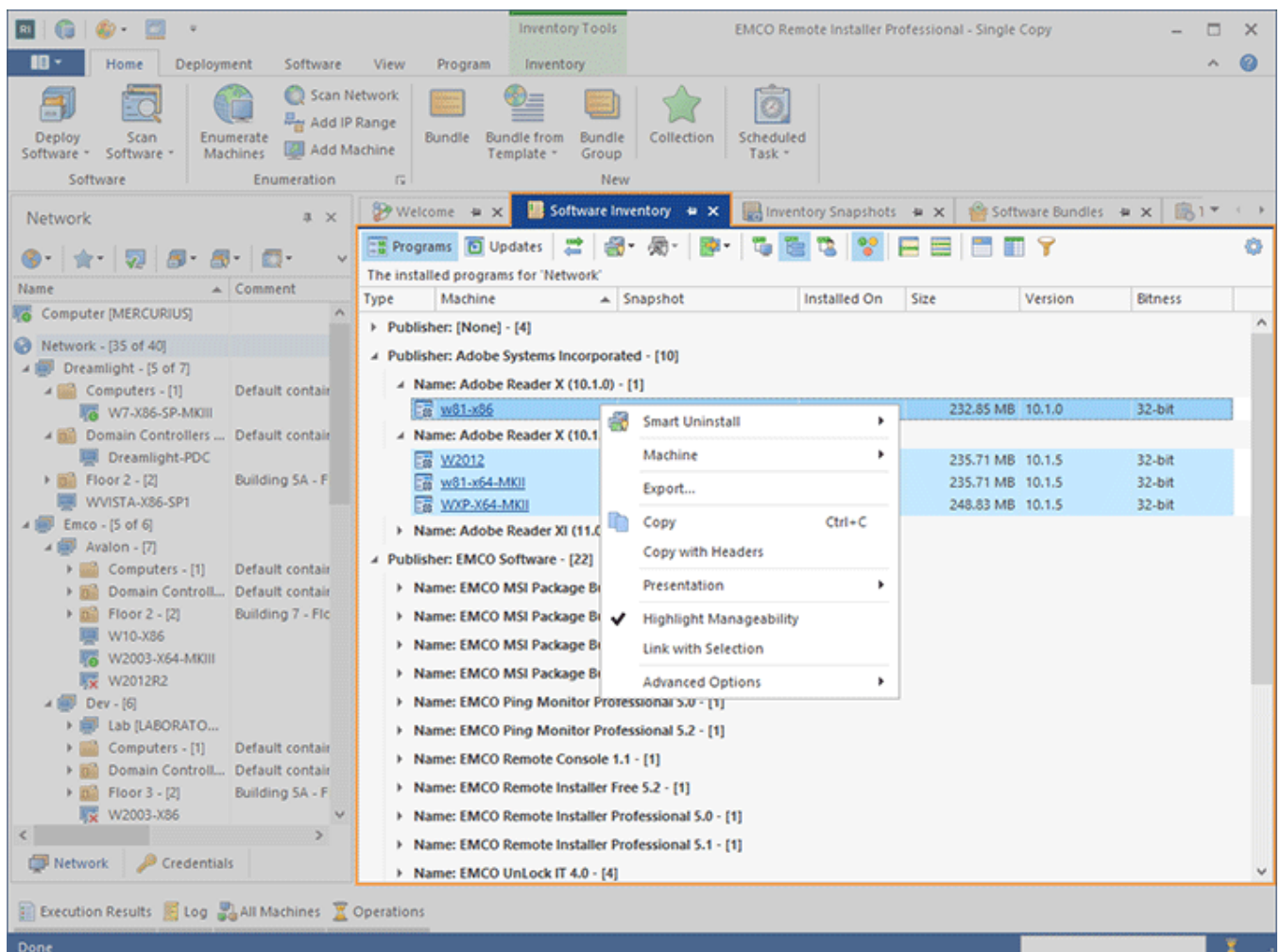
Pic 1. Software inventory displayed for a set of remote Machines

The type of each item available in the software inventory view is represented with one of the following icons:
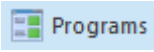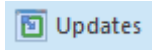
- a program that can be both repaired and uninstalled with Remote Installer;

- a program that can be either repaired or uninstalled with Remote Installer;

- a program that can be neither repaired nor uninstalled with Remote Installer;

- an update that can be uninstalled with Remote Installer;

- an update that cannot be uninstalled with Remote Installer.

To increase the program response time when changing the selection within the **Network** and the **All Machines** views in environments with a significant number of Machines, the **Link with Selection** mode can be disabled. In case you have disabled this mode for your purposes, you can review the inventory for a set of Machines by selecting them in the **Network** or **All Machines** view and choosing the **Inventory > Software Inventory** item from the pop-up menu or the **Software Inventory** button from the **Inventory** Ribbon group on the **Software** page.

Toolbar Overview

Programs	**Programs** The **Programs** button should be used to switch to the list of installed programs.
Updates	**Updates** The **Updates** button should be used to switch to the list of installed updates.
	Link with Selection The **Link with Selection** button turns on and off the option of linking the **Software Inventory** view to the selection within the **Network** and **All Machines** views. When linkage is enabled, the view content is automatically refreshed to display the most relevant inventory for the selected Machines.
	Smart Uninstall With the help of the **Smart Uninstall** button, you can perform immediate uninstall of the selected products from the selected remote Machines, execute a smart deployment task to uninstall the products having provided additional uninstall options, create a scheduled smart deployment task to uninstall those products or add those products to an already existing smart deployment task for uninstall.
	Smart Repair With the help of the **Smart Repair** button, you can perform immediate repair of the selected products on the selected remote Machines using the repair options defined in the program preferences, execute a smart deployment task to repair those products having provided additional repair options, create a scheduled smart deployment task to repair those products or add those products to an already existing smart deployment task for repair.
	Export The **Export** button should be used to export the programs or updates inventory to a CSV file.

	Group by Machine The **Group by Machine** button should be used to group the view with programs or updates by Machine, whereas updates will also be grouped by the program each update is meant for. This grouping is one of the predefined ones, and you can always roll back to it using this button.
	Group by Publisher and Name The **Group by Publisher and Name** button should be used to group the view with programs or updates by programs/update publisher and name, whereas updates will also be grouped by the program each update is meant for. This grouping is one of the predefined ones, and you can always roll back to it using this button.
	Custom Grouping The **Custom Grouping** button should be used to reset the predefined grouping, after which you can group programs and updates any way you want.
	Highlight Manageability The **Highlight Manageability** button should be used to enable or disable the view mode when the programs and updates that cannot be repaired and/or uninstalled are highlighted.
	Full Expand The **Full Expand** button should be used to expand all the grouping rows in the table.
	Full Collapse The **Full Collapse** button should be used to collapse all the grouping rows in the table.
	Group By Box The **Group By Box** button should be used to configure the data grouping for the table.
	Choose Columns The **Choose Columns** button should be used to choose the columns to be displayed in the table.
	Filter Editor The **Filter Editor** button should be used to define the custom filter criteria to be applied to the data displayed within the table.
	Configuration The **Configuration** button provides access to the option of resetting the view layout.

The **Software Inventory** view is by default grouped by publisher and program name. This grouping belongs to the predefined ones. You can choose between either this grouping type, or grouping by Machine or custom grouping. Also, you can configure a set of properties displayed for each program and update using the **Column Chooser** item. It is possible to roll back to the default view state using the **Reset Layout** menu item from the **Configuration** menu.

You can switch to the Inventory Snapshots view to see the entire snapshot for the scan during which the specific program or update was retrieved by clicking the hyperlink in the **Snapshot** column. The hyperlink within the **Machine** column allows you to switch to the inventory of a single Machine.

Another useful feature available from of the **Software Inventory** view is the ability to uninstall and repair products installed on remote Machines. The products that can be managed by Remote Installer are marked with the pinion decorator in the bottom right corner of the program icon. You can immediately uninstall or repair those products using the **Smart Uninstall > Quick Uninstall** and **Smart Repair > Quick Repair** menu items, execute or create new smart deployment tasks pertaining to those products or add them to an already existing smart deployment task using the **Uninstall/Repair**, **New Scheduled Task** and **Add to Task** menu items.

The data displayed in the **Software Inventory** view can be easily exported to a CSV file using the **Export** button on the toolbar. The exported file can then be used as an inventory report. It is also possible to copy any number of programs or updates, with or without the column headers, to the clipboard and then paste them to any editor. These features are available from the toolbar and in the pop-up menu of the programs and updates table.

As you can see, with Remote Installer it is quite easy to review and export software inventory: just specify the set of remote Machines to view inventory for and Remote Installer will do the rest for you.

Inventory Snapshots View

The purpose of the **Inventory Snapshots** view is to display the snapshots for all scans ever performed and the list of programs and updates for each scan allowing you to compare snapshots. It can be used in two view modes, those are **Specific Snapshots** and **All Snapshots**. In the **Specific Snapshots** mode the view displays only the snapshots for specific Machines – for the view to be automatically refreshed pertaining to the selected Machines the **Link with Selection** mode should be enabled.

Inventory Snapshots	**Inventory Snapshots** The **Inventory Snapshots** button from the **Inventory** Ribbon group on the **Software** page should be used to review available snapshots for the selected Machines.

The view is automatically switched to the **Specific Snapshots** mode any time you are requesting the program to display inventory snapshots for the selected Machines or for the Machines from any Collection; and when the entire snapshot review is requested it is automatically switched to the **All Snapshots** mode.

The **Inventory Snapshots** view can also be used for the snapshots comparison. Using the comparison feature, you can review which products were installed, uninstalled and updated between specific scans.

> In the **Inventory Snapshots** view, the latest snapshot is displayed in bold font; if the scan is still incomplete (i.e. it is not complete for all of the reviewed Machines), it is displayed in italic.
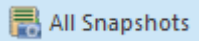
To review the snapshots and the lists of programs and updates, select the Machines that were scanned in the **Network** or the **All Machines** view and switch to the **Specific Snapshots** view mode. If the **Link with Selection** mode is enabled, the snapshots list will be automatically refreshed, otherwise you should also choose the **Inventory > Inventory Snapshots** item from the pop-up menu or press the **Inventory Snapshots** button from the **Inventory** Ribbon group on the **Software** page.
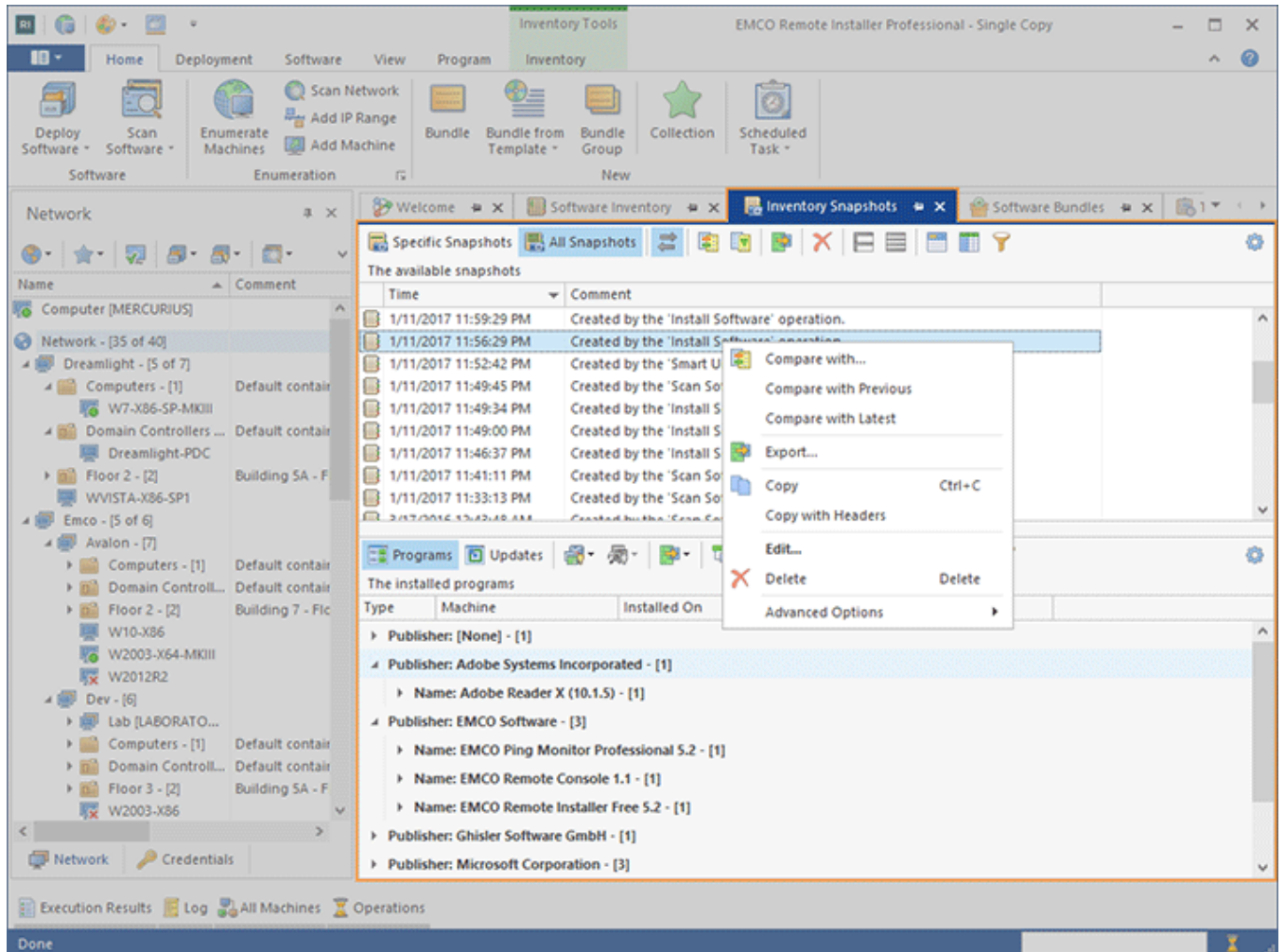

Pic 1. The Inventory Snapshots view displaying scan results for selected Machines

Each snapshot along with the programs and updates lists can be easily deleted when it is no longer needed by using the **Delete** button on the toolbar. You are offered to choose if you would like to delete the results only for certain Machines or for all the Machines that were processed during the scan the snapshot stands for. You can also delete all snapshots for a certain scope of Machines by selecting them in the **Network** or the **All Machines** view and choosing the **Inventory > Delete All Snapshots** pop-up menu item.

Toolbar Overview

	Specific Snapshots The **Specific Snapshots** button should be used to switch the **Inventory Snapshots** view to the mode, where the software scan results are displayed only for a specific set of Machines.

|	
All Snapshots	**All Snapshots** The **All Snapshots** button is used to switch the **Inventory Snapshots** view to the mode, where the snapshots for all scans ever performed on any Machine are displayed.
	Link with Selection The **Link with Selection** button is available in the **Specific Snapshots** view mode and turns on and off the option of linking the **Inventory Snapshots** view to the selection within the **Network** and the **All Machines** views. When linkage is enabled, the view content is automatically refreshed to display the most relevant snapshots for the selected Machines.
	Compare with The **Compare with** button should be used to compare the selected snapshot with another one from those available.
	Compare with Previous The **Compare with Previous** button should be used to compare the selected snapshot with the previous one.
	Export The **Export** button allows you to export the programs or updates from the selected snapshot to a CSV file.
	Delete The **Delete** button should be used to delete the selected snapshot. It is possible to delete the results for a certain Machines or for all the Machines that were processed during the scan.
	Full Expand The **Full Expand** button should be used to expand all the grouping rows in the table.
	Full Collapse The **Full Collapse** button should be used to collapse all the grouping rows in the table.
	Group By Box The **Group By Box** button should be used to configure the data grouping for the table.
	Choose Columns The **Choose Columns** button should be used to choose the columns to be displayed in the table.

▼	**Filter Editor** The **Filter Editor** button should be used to define the custom filter criteria to be applied to the data displayed within the table.
▽	**Configuration** The **Configuration** button should be used to change or reset the view layout.

All the described features of the snapshots part can be reached from the toolbar and the pop-up menu at the top of the **Inventory Snapshots** view.

The layout of the **Inventory Snapshots** view is really flexible. You can use both horizontal and vertical orientation of the view parts and switch their places. These features are available from the **Configuration** menu within the **Group Layout** section. The **Rotate** item changes the orientation and the **Flip** button can be used for the view parts to switch places.

Displaying scan results

Choosing a specific snapshot leads to displaying the list of programs or updates retrieved during the scan the snapshot stands for `Pic 2`.
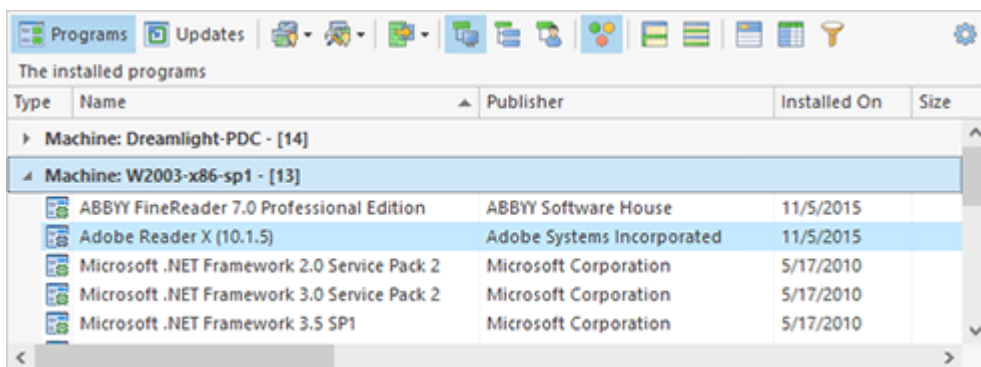
Pic 2. The list of installed programs

By default, the list of installed programs is displayed. To review the list of installed updates, press the **Updates** button on the bottom part toolbar `Pic 3`. You can then switch back to the list of programs using the **Programs** button.
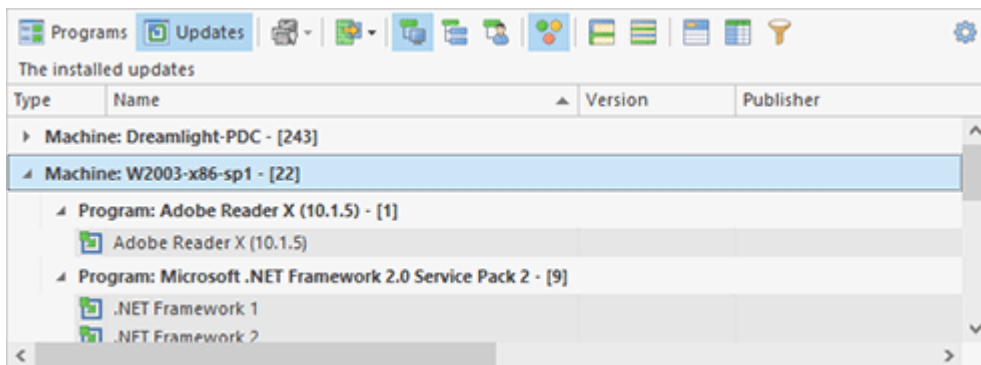
Pic 3. The list of installed updates

The type of each item available in the scan results is represented with one of the following icons:

▣ - a program that can be both repaired and uninstalled with Remote Installer;
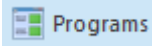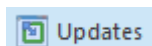
- a program that can be either repaired or uninstalled with Remote Installer;

- a program that can be neither repaired nor uninstalled with Remote Installer;

- an update that can be uninstalled with Remote Installer;

- an update that cannot be uninstalled with Remote Installer.

By default, the programs and updates part of the **Inventory Snapshots** view is organized by Machine name, whereas the updates are also grouped by the program each update is meant for. Such grouping is one of the predefined groupings available. You can also regroup this view by publisher and program name or use custom grouping.

> By default, the programs and updates tables initially display the same columns as the operating system in the **Programs and Features** section of the **Control Panel**, except for the columns displaying the Machine and Snapshot properties. You can use the **Choose Columns** button from the table toolbar to review the entire list of available columns and choose the ones you would like to see in the table.

You can then always roll back to the default view layout using the **Reset Layout** item from the view configuration menu.

Toolbar Overview

Programs	**Programs** The **Programs** button should be used to switch to the list of installed programs.
Updates	**Updates** The **Updates** button should be used to switch to the list of installed updates.
	Smart Uninstall With the help of the **Smart Uninstall** button, you can perform immediate uninstall of the selected products from the selected remote Machines, execute a smart deployment operation to uninstall those products having provided additional uninstall options, create a scheduled smart deployment task to uninstall those products or add those products to an already existing smart deployment task for uninstall.
	Smart Repair With the help of the **Smart Repair** button, you can perform immediate repair of the selected products on the selected remote Machines using the repair options defined in the program preferences, execute a smart deployment operation to repair those products having provided additional repair options, create scheduled smart deployment task to repair those products or add those products to an already existing smart deployment task for repair.
	Export The **Export** button should be used to export the list of installed programs or updates to a CSV file.

Group by Machine

The **Group by Machine** button should be used to group programs or updates by Machine whereas the updates will also be grouped by the program each update is meant for. This grouping belongs to the predefined ones, and you can always roll back to it using this button.

Group by Publisher and Name

The **Group by Publisher and Name** button should be used to group programs or updates by program/update publisher and name; the updates will also be grouped by the program each update is meant for. This grouping belongs to the predefined ones, and you can always roll back to it using this button.

Custom Grouping

The **Custom Grouping** button should be used to reset the predefined grouping so that you can group programs or updates any way you want.

Highlight Manageability

The **Highlight Manageability** button should be used to enable or disable the view mode when the products that cannot be repaired and/or uninstalled are highlighted.

Full Expand

The **Full Expand** button should be used to expand all the grouping rows in the table.

Full Collapse

The **Full Collapse** button should be used to collapse all the grouping rows in the table.

Group By Box

The **Group By Box** button should be used to configure the data grouping for the table.

Choose Columns

The **Choose Columns** button should be used to choose the columns to be displayed in the table.

Filter Editor

The **Filter Editor** button should be used to define the custom filter criteria to be applied to the data displayed within the table.

Configuration

The **Configuration** button provides access to the option of configuring and resetting the view layout.

The **Inventory Snapshots** view allows you to uninstall and repair software from any snapshot. The products that can be managed by Remote Installer are marked with the pinion decorator in the bottom right corner of the program icon. You can immediately uninstall or repair those products using the **Smart Uninstall > Quick Uninstall** and **Smart Repair > Quick Repair** menu items, execute or create new smart uninstall or repair tasks pertaining to those products or add them to an already existing smart task using the **Uninstall/Repair**, **New Scheduled Task** and **Add to Task** menu items.
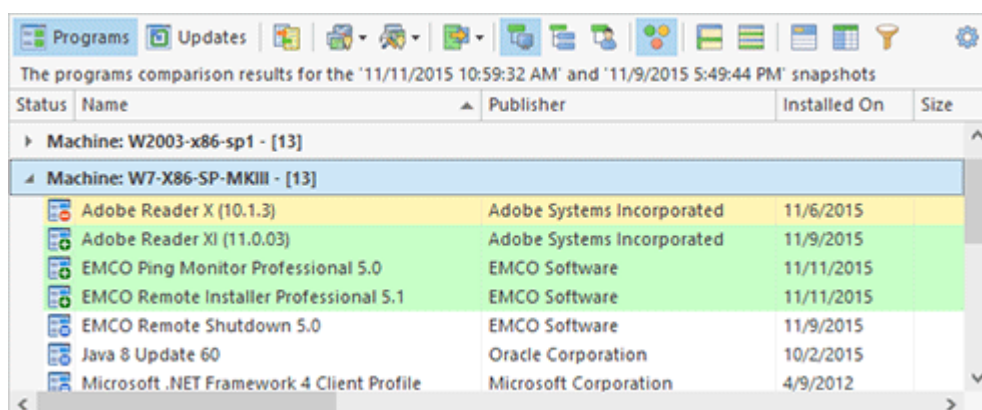
You can easily export the lists of installed programs and updates using the **Export** button from the bottom part toolbar. It is also possible to copy any number of programs or updates, with or without the column headers, to the clipboard and then paste them to any editor. These features are available in the pop-up menu of the programs and updates table.

As you can see, the snapshots review is quite simple and intuitive: just select the snapshot you would like to review the results for and switch between the programs and updates tables.

Displaying the snapshots comparison

Another important feature of Remote Installer is an ability to compare snapshots. Using this mode, you can see which programs and updates were installed, uninstalled or updated between two different scans. Remote Installer gives you several options for comparing snapshots, namely, a comparison of a selected snapshot with the latest one, a comparison of a selected snapshot with the previous one, and a comparison of a selected snapshot with another one from those available. To perform a comparison of two snapshots, simply select two snapshots in the top part of the **Inventory Snapshots** view and choose the **Compare with Each Other** item from the pop-up menu. To compare a selected snapshot with the latest one, choose the **Compare with Latest** item from the pop-up menu in the top part of the **Inventory Snapshots** view. Finally, to compare a selected snapshot with the previous one, choose the **Compare with Previous** menu item. Using the **Compare with** menu item and the respective button on the toolbar of the **Inventory Snapshots** view, you can choose the snapshot to compare the selected one with. In such a case, a dialog is displayed on the screen to let you choose the snapshot to compare with.

The comparison results are displayed in the bottom part of the **Inventory Snapshots** view for any type of comparison. Like when reviewing the actual scan results, you can choose between the programs and updates view using the **Programs** and **Updates** buttons respectively Pic 4.

Pic 4. Snapshots comparison results

The type of each item available in the comparison results is represented with one of the following icons:

- a program that was installed between the scans;

- a program that was updated between the scans;

- a program that was uninstalled between the scans;

- a program that was not changed between the scans;

- a program on a Machine that was not processed during one of the scans;

- an update that was installed between the scans;

- an update that was updated between the scans;

- an update that was uninstalled between the scans;

- an update that was not changed between the scans;

- an update on a Machine that was not processed during one of the scans.

When comparing both programs and updates, you can specify if you would like to review all items or only the changed ones and if the changed items should be highlighted within the comparison results table.

Toolbar Overview

Programs	**Programs** The **Programs** button should be used to switch to the installed programs comparison results.
Updates	**Updates** The **Updates** button should be used to switch to the installed updates comparison results.
	Show Differences Only The **Show Differences Only** button should be used for configuring the view to display only the programs and updates that were installed, uninstalled or updated between the scans.
	Smart Uninstall With the help of the **Smart Uninstall** button, you can perform immediate uninstall of the selected products from the selected remote Machines, execute a smart deployment operation to uninstall those products having provided additional uninstall options, create a scheduled smart deployment task to uninstall those products or add those products to an already existing smart deployment task for uninstall.
	Smart Repair With the help of the **Smart Repair** button, you can perform immediate repair of the selected products on the selected remote Machines using the repair options defined in the program preferences, execute a smart deployment operation to repair those products having provided additional repair options, create scheduled smart deployment task to repair those products or add those products to an already existing smart deployment task for repair.
	Export The **Export** button should be used to export the comparison results to a CSV file.

Group by Machine

The **Group by Machine** button should be used to group programs or updates comparison by Machine, whereas the updates will also be grouped by the program each update is meant for. This grouping belongs to the predefined ones, and you can always roll back to it using this button.

Group by Publisher and Name

The **Group by Publisher and Name** button should be used to group programs or updates comparison by program/update publisher and name, the updates will also be grouped by a program each update stands for. This grouping belongs to the predefined ones, and you can always roll back to it using this button.

Custom Grouping

The **Custom Grouping** button should be used to reset the predefined grouping so that you can group programs and updates comparison any way you want.

Highlight Differences

The **Highlight Differences** button should be used for configuring the view to highlight the programs and updates that were installed, uninstalled or updated between the scans.

Full Expand

The **Full Expand** button should be used to expand all the grouping rows in the table.

Full Collapse

The **Full Collapse** button should be used to collapse all the grouping rows in the table.

Group By Box

The **Group By Box** button should be used to configure the data grouping for the table.

Choose Columns

The **Choose Columns** button should be used to choose the columns to be displayed in the table.

Filter Editor

The **Filter Editor** button should be used to define the custom filter criteria to be applied to the data displayed within the table.

Configuration

The **Configuration** button provides access to the option of configuring and resetting the view layout.

Like when reviewing the scan results, you can choose the columns to be displayed within the programs and updates comparison tables using the **Choose Columns** button and apply a custom filter to the displayed data using the **Filter Editor** button. The **Highlight Differences** and **Show Differences Only** items, which are available on the toolbar and in the pop-up menu, should be used to configure the comparison results representation described above. You can export the comparison results to a CSV file using the **Export** button or copy certain entries to the clipboard, with or without the column headers, using the corresponding items from the pop-up menu.

With Remote Installer, you can get information on all software scans ever performed, review all Machines scanned on a specific date, find out which Machines were scanned and when, generate inventory reports for specific scan dates, etc. All these options are provided by the **Inventory Snapshots** view and should make your everyday work easier.

Software Bundles View

The **Software Bundles** view `Pic 1` is used to display and manage the set of available **Bundles and Bundle Groups**. Each Bundle represents a single product and describes the actions required to install, uninstall and/or repair that product. The Bundle Groups are used to group different bundles in a single deployment unit.
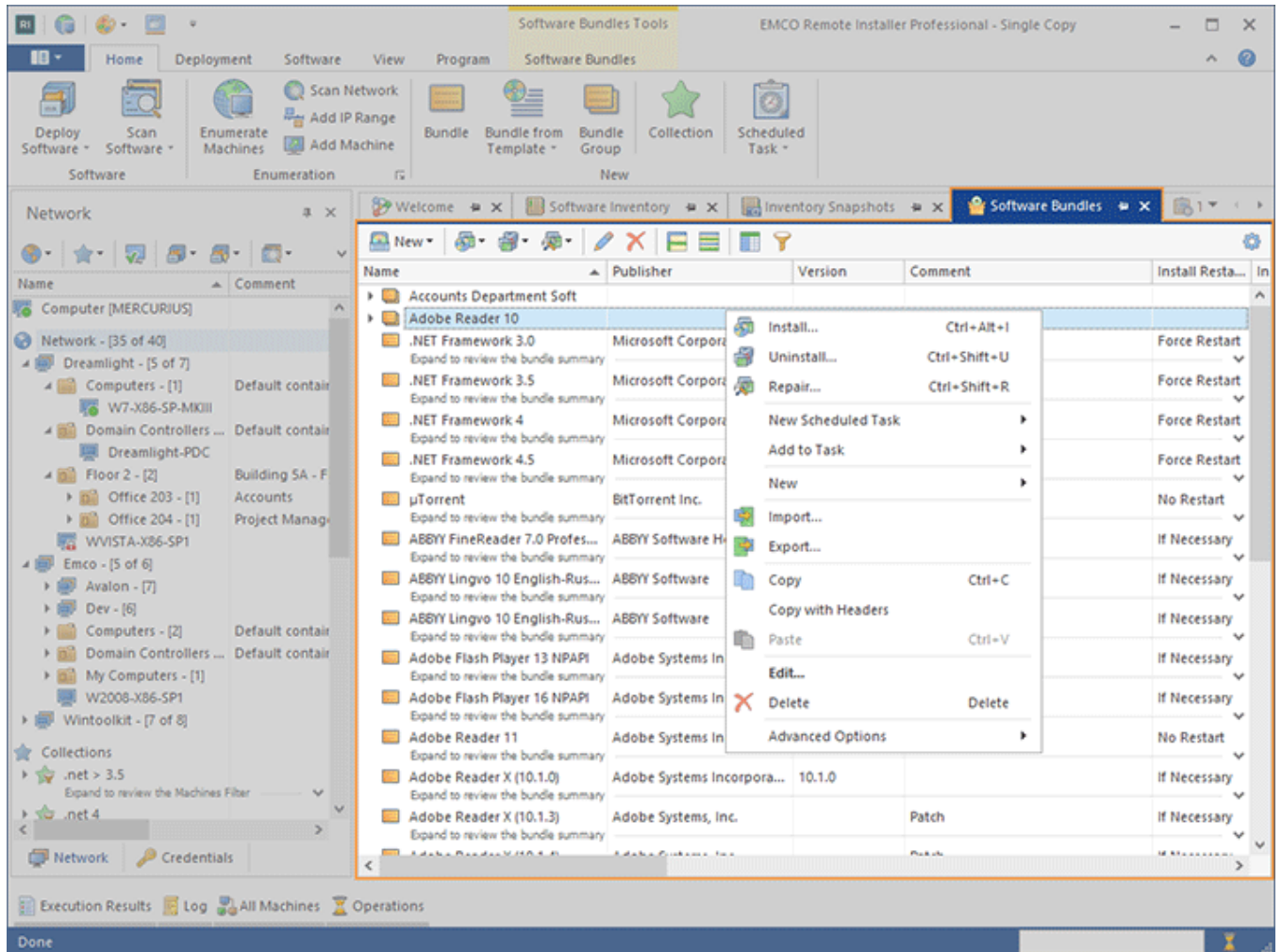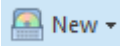
Pic 1. The Software Bundles view

The icon next to every item represented in the **Software Bundles** view is used to describe the item's type and state. The state icons are provided to help you understand what is happening in the program at a particular moment. Below is a list of the icons used and their meanings:

- a Bundle;

- a Bundle Group;

- a Bundle included into a Bundle Group;

- a Bundle Group included into a Bundle Group;

- a Bundle is being processed and not operable;

- a Bundle Group is being processed and not operable.

The **Software Bundles** view is the starting point for the Bundles and Bundle Groups management. From this view, it is also possible to install, uninstall or repair of software. You can execute a deployment operation for specific Bundles immediately, create a scheduled task for performing an operation in the future or add Bundles to be installed, uninstalled or repaired with an already created Deploy Software task.

Toolbar Overview

New	**New** The **New** button from the **Software Bundles** view toolbar should be used to create a new Bundle or a new Bundle Group.
	Install The **Install** button from the **Software Bundles** view toolbar can be used to install the selected Bundles to remote Machines, schedule a new Deploy Software task for installing the selected Bundles, or add those Bundles to an existing Deploy Software task to be installed.
	Uninstall The **Uninstall** button from the **Software Bundles** view toolbar can be used to uninstall the selected Bundles from remote Machines, schedule a new Deploy Software task for uninstalling the selected Bundles, or add those Bundles to an existing Deploy Software task to be uninstalled.
	Repair The **Repair** button from the **Software Bundles** view toolbar can be used to repair the selected Bundles on remote Machines, schedule a new Deploy Software task for repairing the selected Bundles, or add those Bundles to an existing Deploy Software task to be repaired.
	Edit The **Edit** button from the **Software Bundles** view toolbar should be used to edit the selected Bundle or Bundle Group.
	Delete The **Delete** button from the **Software Bundles** view toolbar allows you to delete the selected Bundles and Bundle Groups from the software bundles repository.

	Full Expand The **Full Expand** button should be used to expand all nodes in the **Software Bundles** view.
	Full Collapse The **Full Collapse** button should be used to collapse all nodes in the **Software Bundles** view.
	Choose Columns The **Choose Columns** button should be used to choose the columns to be displayed in the **Software Bundles** view.
	Filter Editor The **Filter Editor** button should be used to define the custom filter criteria to be applied to the data displayed within the **Software Bundles** view.
	Configuration By using the **Configuration** button, you can configure and reset the layout of the Software Bundles view.

Within the **Software Bundles** view, you can easily review the install, uninstall and repair packages defined in each Bundle. You can find a preview row under each Bundle. When expanded either by double-click or by using the arrow button on the right of the preview row, a summary for the defined deployment packages is displayed. If you are not interested in this information and would like to save some space, you can hide the preview by disabling the **Show Details** option from the **Configuration** menu. As for the Bundle Groups, they can include both Bundles and other Bundle Groups. To review the Bundle Group content, you can simply expand the row representing each Bundle Group.

The actions for software deployment, Bundles management and layout configuration are also available in the pop-up menu of the **Software Bundles** view.

You can customize the **Software Bundles** view by choosing other columns to be displayed and filter data to make it fit your needs best. See the Grouping and Filtering Data topic for details. It is always possible to roll back to the default view layout by using the **Reset Layout** item from the view configuration menu.

The **Software Bundles** view fully supports the drag-and-drop technique. Via drag-and-drop, you can move Bundles and Bundle Groups among different Bundle Groups, add Bundles to Bundle Groups, duplicate Bundles and Bundle Groups, etc. You may also use the copy/paste technique to reach the same goals. From this view, it is also possible to export Bundles and Bundle Groups and import them either to a software bundles repository or directly into specific Bundle Groups.

Tasks and Schedule View

The **Tasks and Schedule** view is located at the very middle of the Remote Installer main screen `Pic 1` and consists of five parts: the **Scheduling** area Ⓐ, the **Tasks** area Ⓑ, the **Machine Queue** pane Ⓒ and the **Task Details** pane Ⓓ.
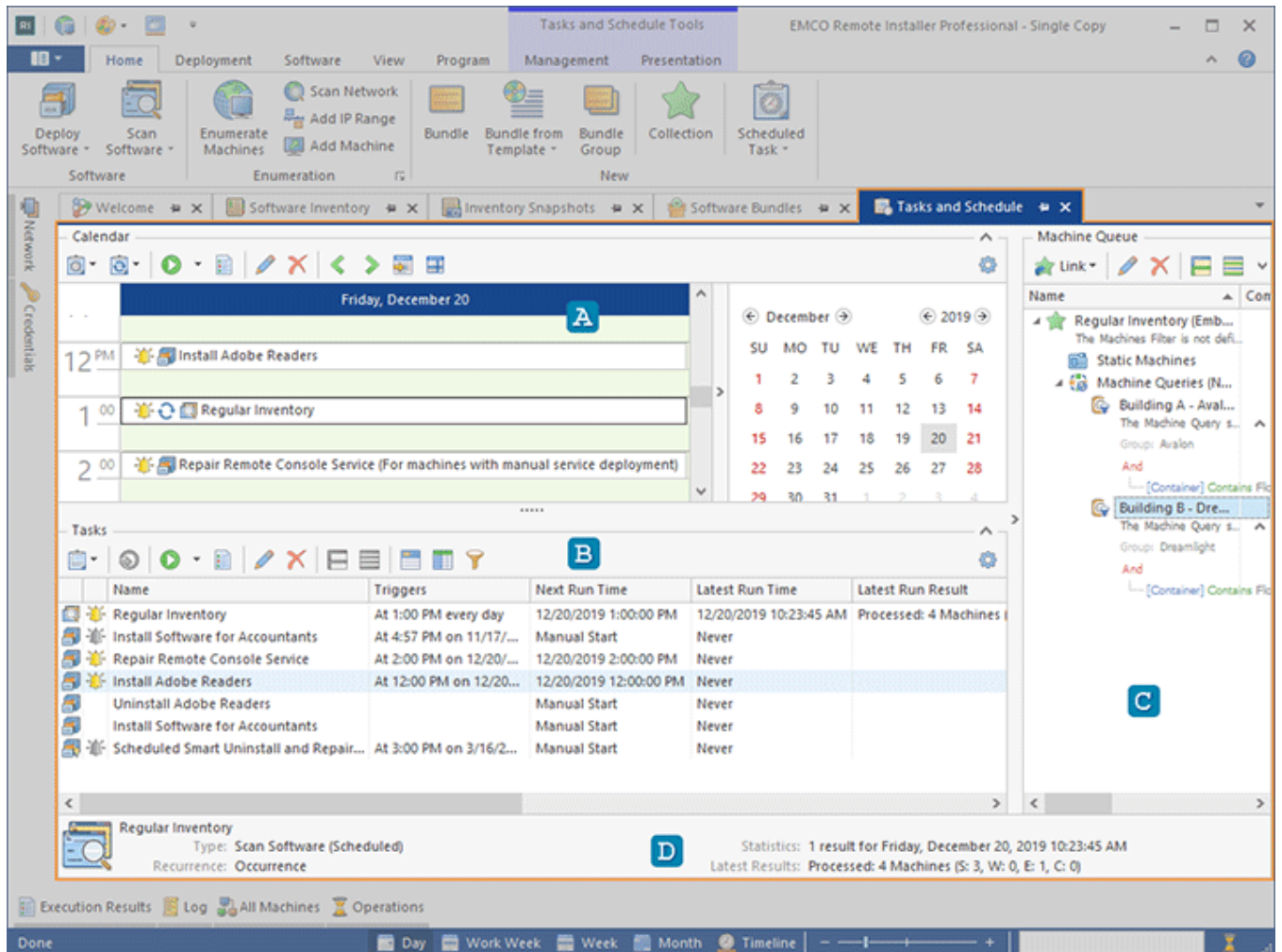
Pic 1. The Tasks and Schedule view

In this chapter, you will be introduced to all these parts, which will make it easier for you to understand the concept of the **Tasks and Schedule** view and to get to know the set of available features better.

Tasks Area

The Tasks area **Pic 1** displays all the tasks created and scheduled within Remote Installer in form of a table. Using this area, you can create new tasks, schedule already created tasks, run the selected tasks, review their execution results and delete them when they are no longer needed.

> You can drag Collections from the **Network** view and drop them on the **Tasks** area. You are offered to create a new task if Collections are dropped on an empty space. Collections dropped on a task are added to its **Machine Queue**. The same result can be achieved by using the Copy/Paste technique. It is also possible to drag/drop and copy/paste standalone Machines and Queries, whereas the embedded Collections containing those Machines and Queries will be created automatically.

By default, the **Tasks** area shows you the name of every task, the comment specified for it, its scheduling properties, last execution time, and last results, as well as the task type and scheduling state, both represented by icons. You can also make it display the column that shows each task's description by using the column chooser. It is possible to sort this view both by the text fields and the fields that represent the task type and state. Thus, you can configure the view layout in the way that is most convenient for your everyday work with Remote Installer. Detailed information on every task is available in the tool tip shown when you are hovering the mouse pointer over the row representing this task. The tasks that require additional configuration before being executed are highlighted.
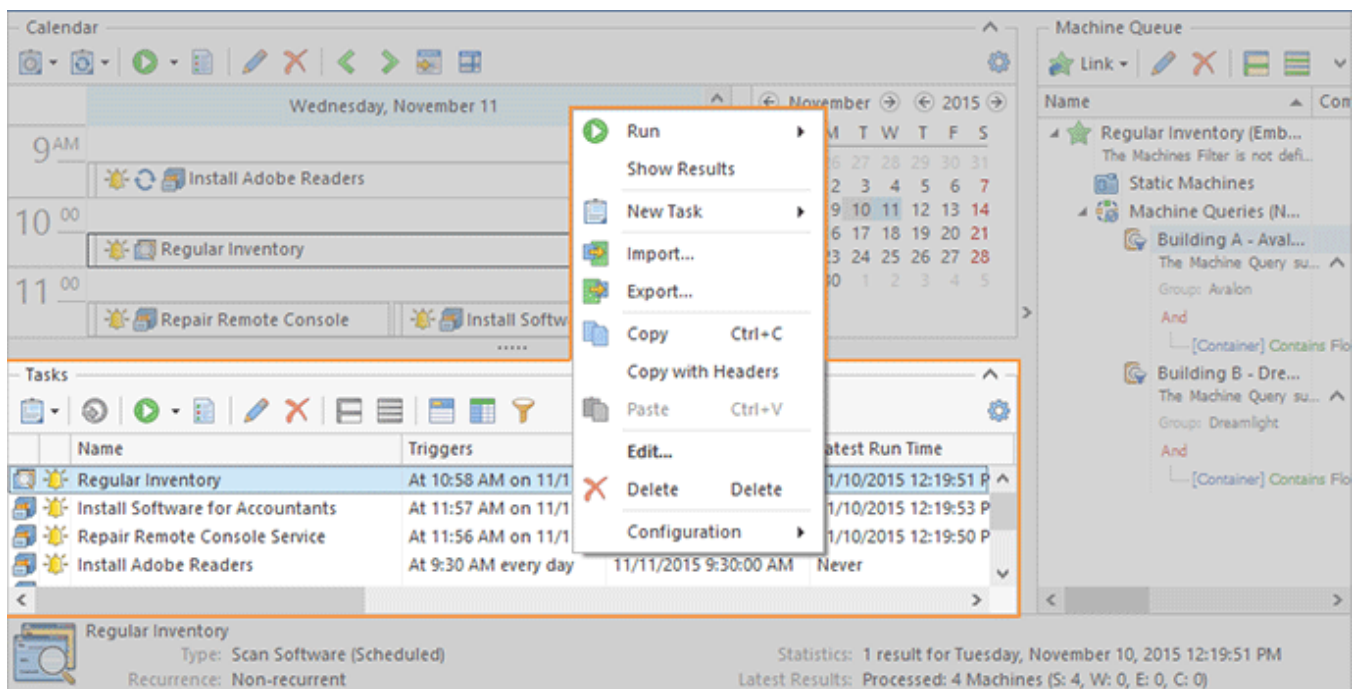
Pic 1. The Tasks area

The state of every scheduled task can be seen in the **Tasks** area and is represented with a colored bell icon. This enables you to always see what is going to happen to each one of the scheduled tasks in future. Below you can see the meaning of each of the bell icons:

- The task has already been processed by the scheduling engine. It has either been executed or its execution has been skipped.

- The task is waiting for its execution time to come and will be executed as soon as the scheduled time comes.

- The task is either created in the past or moved to the past, and is processed according to the specified confirmations configuration.

- The task is the Past Task. It should have been executed on the schedule but the program was not running, so it is processed according to the specified confirmations configuration.

- The decision regarding the task execution was postponed by snooze when asked for the execution confirmation.

Toolbar Overview

	New Task The **New Task** button from the **Tasks** area toolbar can be used to create a new task to be executed in the future.
	Schedule Task The **Schedule Task** button from the **Tasks** area toolbar should be used to put the selected task on schedule.
	Run The **Run** button from the **Tasks** area toolbar can be used to execute the selected tasks immediately. You can execute the task either for all Machines from the Machine Queue or only for those not processed during the latest execution due to errors.
	Show Results The **Show Results** button from the **Tasks** area toolbar allows you to display the execution results for the selected tasks in the Execution Results view.
	Edit The **Edit** button from the **Tasks** area toolbar allows you to edit the selected task.
	Delete The **Delete** button from the **Tasks** area toolbar allows you to delete the selected tasks.
	Full Expand The **Full Expand** button should be used to expand all the grouping rows in the **Tasks** area.
	Full Collapse The **Full Collapse** button should be used to collapse all the grouping rows in the **Tasks** area.
	Group By Box The **Group By Box** button is used to display **Group By Box** for configuring data grouping within the **Tasks** area
	Choose Columns The **Choose Columns** button should be used to choose the columns to be displayed in the **Tasks** area.
	Filter Editor The **Filter Editor** button should be used to define the custom filter criteria to be applied to the data displayed within the **Tasks** area.
	Configuration By using the **Configuration** button, you can configure and reset the layout of the **Tasks** area.

You can create, edit, delete and execute tasks directly from the **Tasks** area using the buttons from the view toolbar. In addition to the options of creating a new task, opening an already existing task for edit, running a selected task, copying or deleting it, pasting a task from the clipboard or pasting Collections from the clipboard into the Machine Queue of an existing task is available in the pop-up menu of the **Tasks** area.

If you prefer to work with scheduled tasks only, you can collapse this area using a glyph on the area caption. You can also change the orientation between the **Tasks** area and the **Scheduling** area and switch their places using the **Rotate Layout** and **Flip Layout** items from the **Group Layout** pop-up of the **Configuration** menu.

Scheduling Area

The **Scheduling** area `Pic 1` shows the scheduled Tasks on a timeline where the level of details depends on the chosen view and zoom factor. On the right of the **Scheduling** area you can find the **Date Navigator** pane that can be used for navigation within the **Scheduling** area. This chapter describes every view that can be chosen for the **Scheduling** area and their advantages, and provides you with an overview of the navigation features.

> You can drag Collections from the **Network** view and drop them on the **Scheduling** area. You are offered to schedule a new task if Collections are dropped on an empty space. Collections dropped on a task are added to its Machine Queue. The same result can be achieved by using the Copy/Paste technique. It is also possible to drag/drop and copy/paste standalone Machines and Queries, whereas the embedded Collections containing those Machines and Queries will be created automatically.

Within the **Scheduling** area, you can see the name and state images for every task, and the task's location on the timeline shows its execution time. The state images allow you to see the type of each task, understand if the task is recurrent and if it should still be executed or has already been executed. Detailed information on every task is available in the tool tip shown when you are hovering the mouse pointer over this task in the **Scheduling** area.
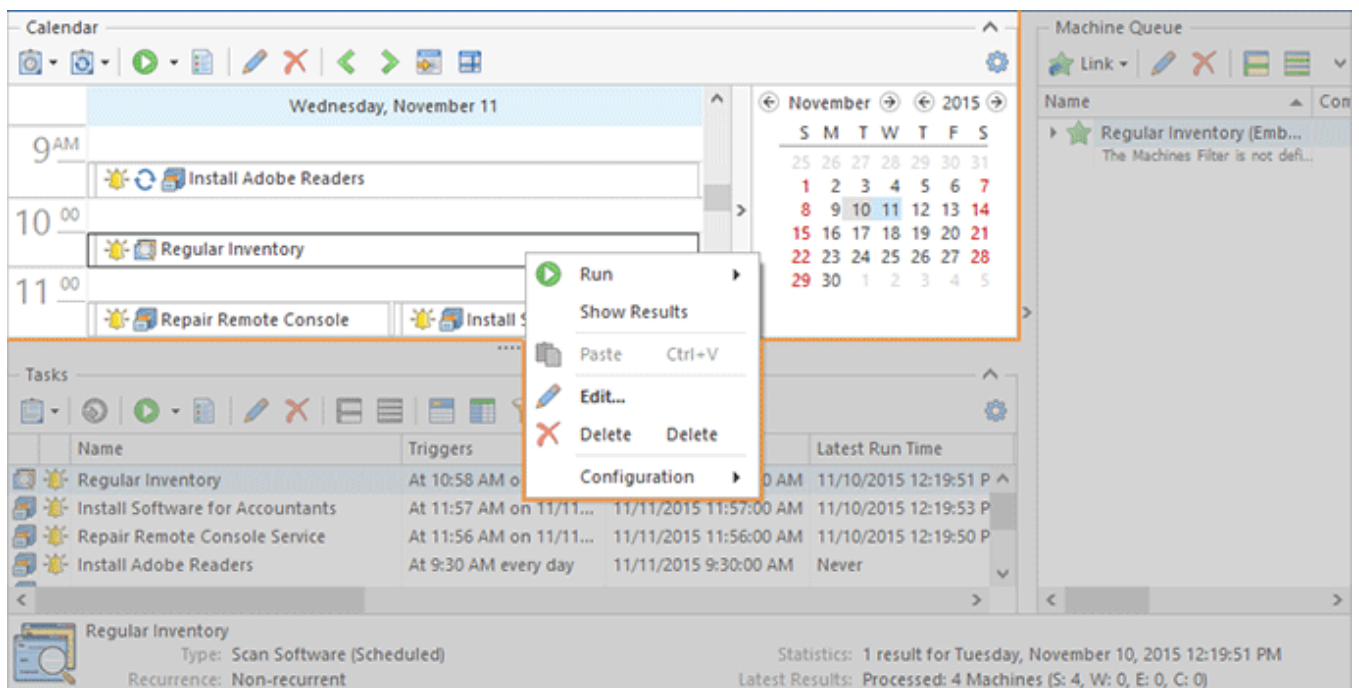
Pic 1. The Scheduling area

The state of every task that is still unprocessed by the scheduling engine can be seen in the **Scheduling** area and is represented with a colored bell icon. Below, you can see the meaning of each of the bell icons:

- - the task is waiting for its execution time to come and will be executed as soon as the scheduled time comes.

- - the task is either created in the past or moved to the past and is processed according to the specified confirmations configuration.

- - the task is a Past Task. It should have been executed on schedule but the program was not running, so it is processed according to the specified confirmations configuration.

🔔 - the decision regarding the task execution was postponed when asked for the execution confirmation.

Toolbar Overview

📷▾	**New Task** The **New Task** button from the **Scheduling** area toolbar can be used to create a new task and put it on schedule.
📷▾	**New Recurring Task** The **New Recurring Task** button from the **Scheduling** area toolbar can be used to create a new task to be executed recurrently.
▶▾	**Run** The **Run** button from the **Scheduling** area toolbar can be used to execute the selected tasks immediately. You can either execute the task for all Machines from the Machine Queue or only for those not processed during the latest execution due to errors.
📋	**Show Results** The **Show Results** button from the **Scheduling** area toolbar allows you to display the execution results for the selected tasks in the Execution Results view.
✏	**Edit** The **Edit** button from the **Scheduling** area toolbar allows you to edit the selected task.
✖	**Delete** The **Delete** button from the **Scheduling** area toolbar allows you to delete the selected tasks either from schedule or permanently.
◀	**Backward** The **Backward** button from the toolbar should be used to navigate backward in the currently selected view within the **Scheduling** area.
▶	**Forward** The **Forward** button from the toolbar should be used to navigate forward in the currently selected view within the **Scheduling** area.
📅	**Today** The **Today** button from the toolbar enables you to quickly navigate to the today's date within the **Scheduling** area.
🗓	**Go to Date** The **Go to Date** button from the toolbar should be used to navigate to a specific date within the **Scheduling** area.
▽	**Configuration** By using the **Configuration** button, you can configure and reset the layout of the **Scheduling** area.

You can schedule new tasks, edit existing tasks, delete them from schedule, execute them and navigate within the **Scheduling** area using the toolbar. Besides, a quick access to the options of scheduling a new task, opening an already existing task for edit, running the selected task or deleting it from the schedule, pasting a task from the clipboard or pasting Collections from the clipboard into the Machine Queue of an existing task is available from the pop-up menu of the **Scheduling** area.

If you prefer to work with regular tasks only, you can collapse this area using a glyph on the area caption. You can also change the orientation between the **Tasks** area and the **Scheduling** area and switch their places using the **Rotate Layout** and **Flip Layout** items from the **Group Layout** pop-up of the **Configuration** menu.

Now that the **Scheduling** area is fully described, we will show you the range of the available views, and describe each view in details so that you can understand its concept and choose the views you feel comfortable with while using Remote Installer in your work.

Scheduling area views

The **Scheduling** area can be displayed in different view modes giving you different levels of detail. You can choose among five views: Day View, Work Week View, Week View, Month View and Timeline View. The view chooser, along with the zooming editor, is located on the **Tasks and Schedule** contextual Ribbon page and in the main screen status bar next to the progress bar.

> For the **Day View** and the **Work Week View**, it is possible to define additional time rulers showing the time for time zones that differ from the one set in the underlying operating system. To configure additional time rulers, you can either choose the **Additional Time Rulers** item from the **Configuration** menu on the toolbar or right-click the default time ruler and choose the **Additional Time Rulers** item from the pop-up menu. The **Additional Time Rullers** preference page will appear on the screen enabling you to configure the required time rulers.

Let us take a closer look at each view available for representation of the Scheduling area. Each view is designed to help you solve a specific problem without any difficulties.
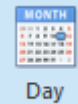
Day

The **Day** button from the **View Mode** Ribbon group on the contextual **Presentation** page from the **Tasks and Schedule Tools** category and on the status bar should be used to switch the **Scheduling** area to the Day View. If the Day View is already chosen, this button is highlighted.

The Day View offers the most detailed picture of tasks during a single day or a couple of days. It displays tasks within vertical timelines where the task's topmost edge corresponds to its start time. The time ruler is displayed to the left of the Day View. If the day chosen in the **Date Navigator** pane is a part of a working week, the working hours are highlighted on the timeline. The timeline header is highlighted if the chosen day is the current date. The current time is marked with a stroke on the time ruler.
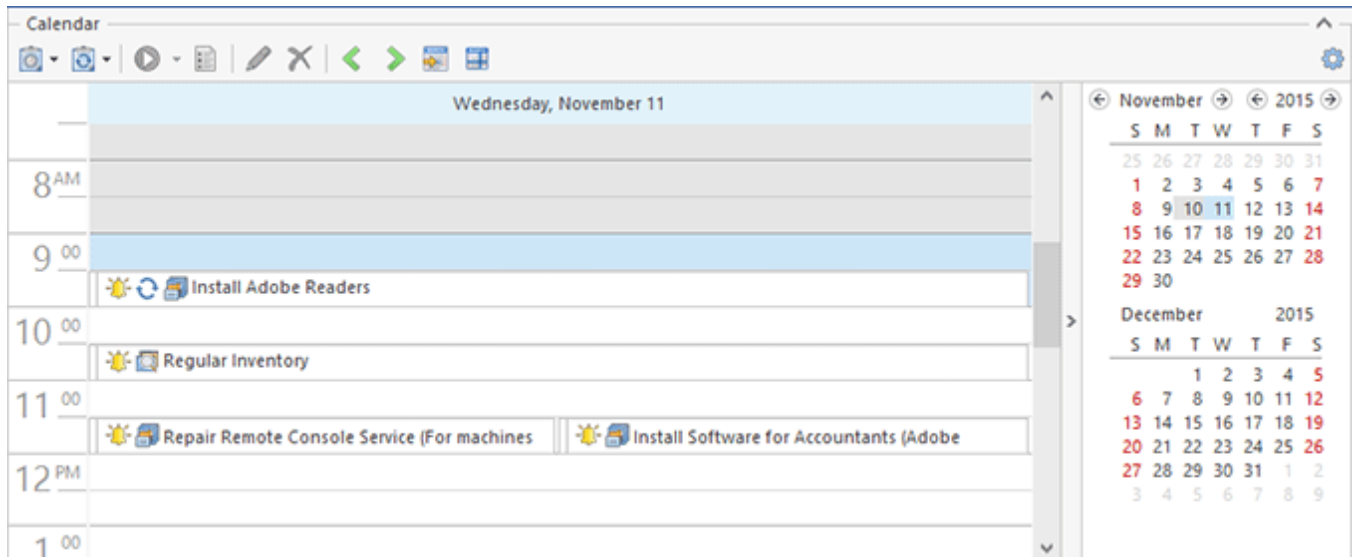
Pic 2. The Scheduling area in the Day View

Scroll buttons displayed at the top or bottom of the time ruler indicate if additional tasks exist in any non-visible area of the Day View. Those buttons can be clicked to scroll to the next/previous tasks. If there are no tasks available on the current timeline, the **Next Task** and **Previous Task** buttons displayed on the timeline are used for navigation.

Work Week

The **Work Week** button from the **View Mode** Ribbon group on the contextual **Presentation** page from the **Tasks and Schedule Tools** category and on the status bar should be used to switch the **Scheduling** area to the Work Week View. If the Work Week View is already chosen, this button is highlighted.

The Work Week View is similar to the Day View and shows the days chosen as working days in the **Calendar Options**. The **Calendar Options** enables you to specify both the working days and the working hours; hence you can configure this view to fully fit your working schedule.
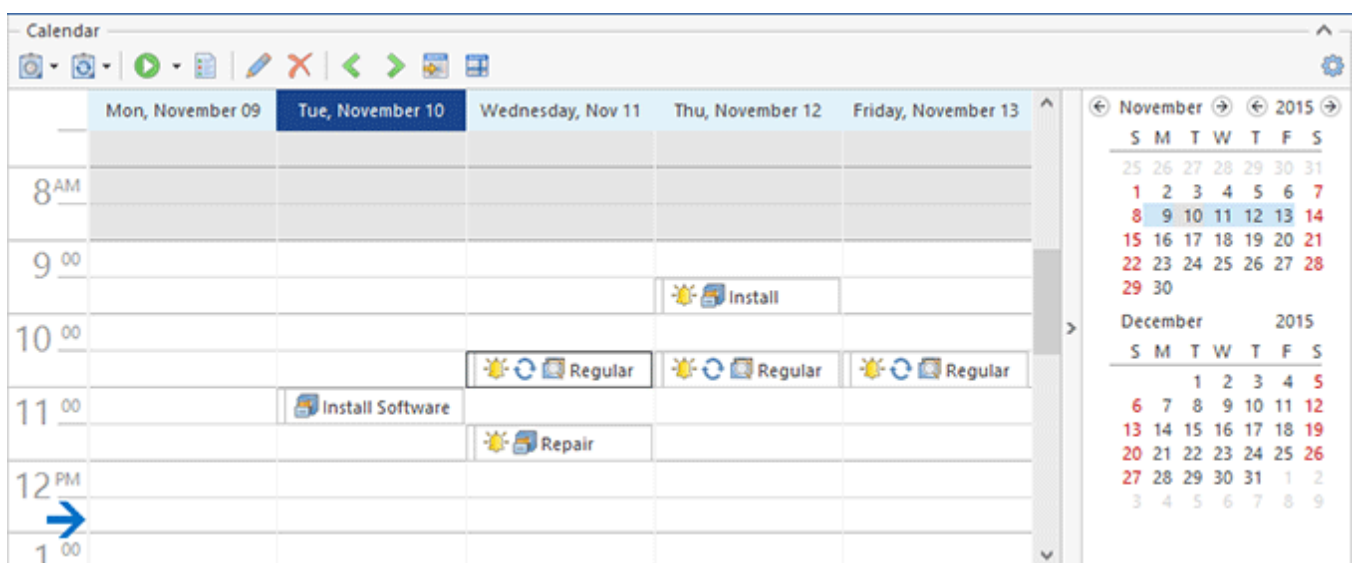
Pic 3. The Scheduling area in the Work Week View

This view is specially designed for users who want to work with Remote Installer and see the same level of detail as for the Day View for the whole work week.

	Week
MONTH Week	The **Week** button from the **View Mode** Ribbon group on the contextual **Presentation** page from the **Tasks and Schedule Tools** category and on the status bar should be used to switch the **Scheduling** area to the Week View. If the Week View is already chosen, this button is highlighted.

The Week View displays tasks for any given weekly period. The start time is displayed using digits, and the current date is indicated by highlighting the corresponding date header.
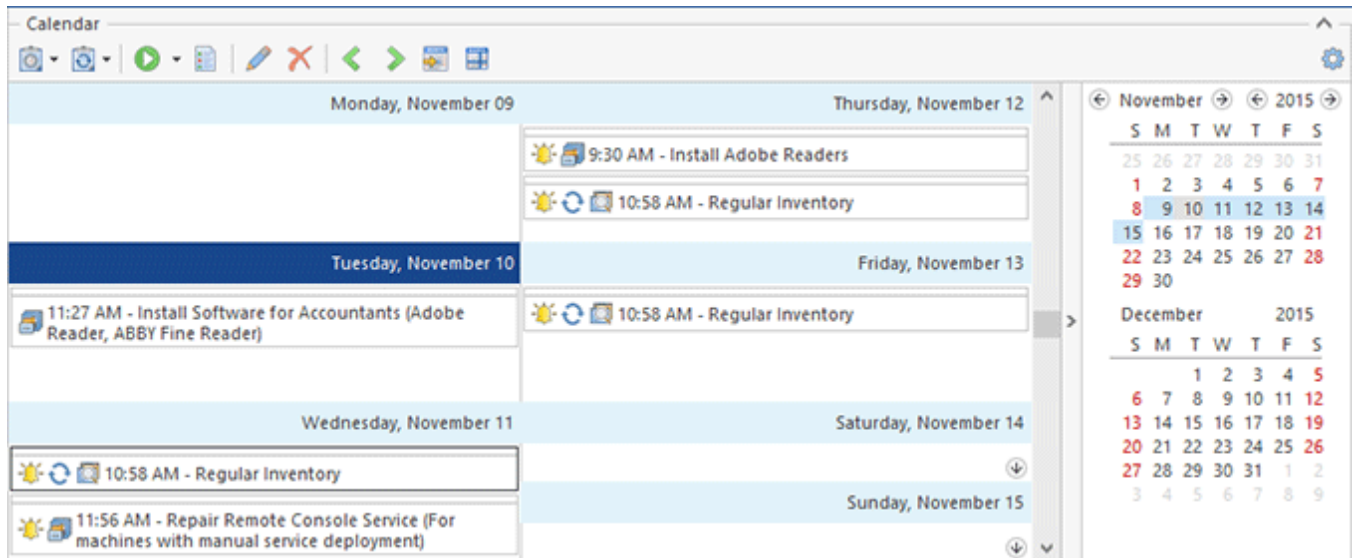
Pic 4. The Scheduling area in the Week View

If there are any existing tasks that do not fit into the screen area, the down arrow button is displayed. Clicking this button switches the representation to the corresponding date in the Day View.

Month	**Month** The **Month** button from the **View Mode** Ribbon group on the contextual **Presentation** page from the **Tasks and Schedule Tools** category and on the status bar should be used to switch the **Scheduling** area to the Month View. If the Month View is already chosen, this button is highlighted.

The Month View is designed to allow you to browse and analyze long-term plans. This view positions days one after another horizontally so that they constitute weeks, while individual weeks are placed one under another. The dates belonging to different months are automatically colored and the weekends are compressed. The start time is displayed using digits, and the current date is indicated by highlighting the corresponding date header.
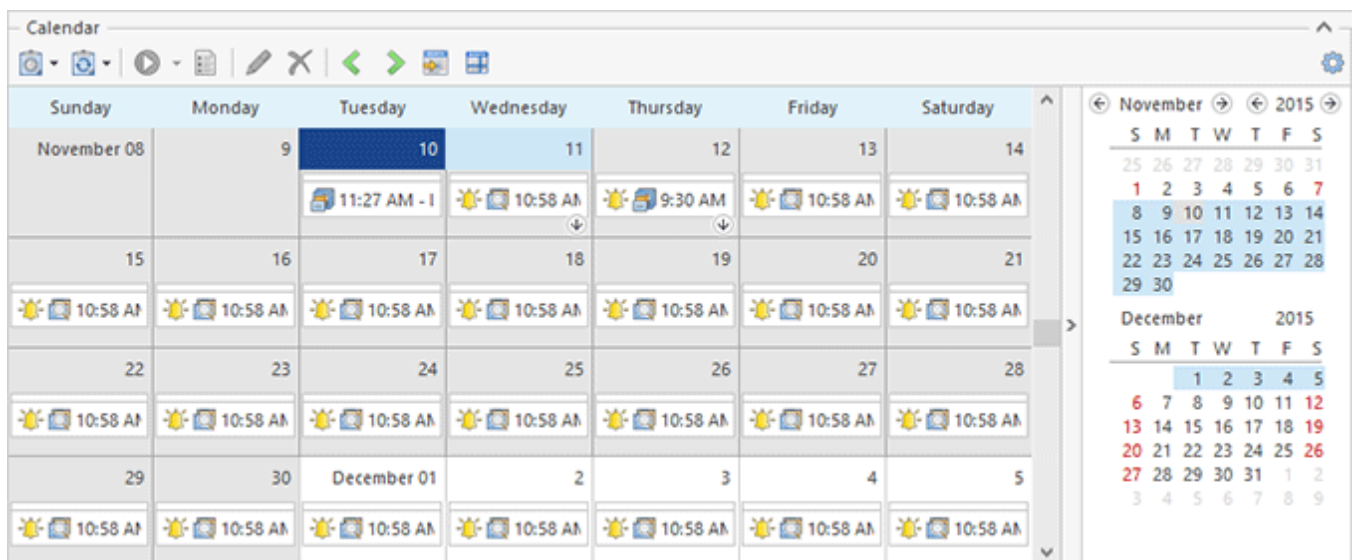
Pic 5. The Scheduling area in the Month View

If there are any existing tasks that do not fit into the screen area, the down arrow button is displayed. Clicking this button switches the representation to the corresponding date in the Day View.

	Timeline
Timeline	The **Timeline** button from the View Mode Ribbon group on the contextual **Presentation** page from the **Tasks and Schedule Tools** category and on the status bar should be used to switch the **Scheduling** area to the Timeline View. If the Timeline View is already chosen, this button is highlighted.

The Timeline View is the most customizable one. This view type arranges tasks on horizontal timelines representing the time scales chosen from the pop-up menu.
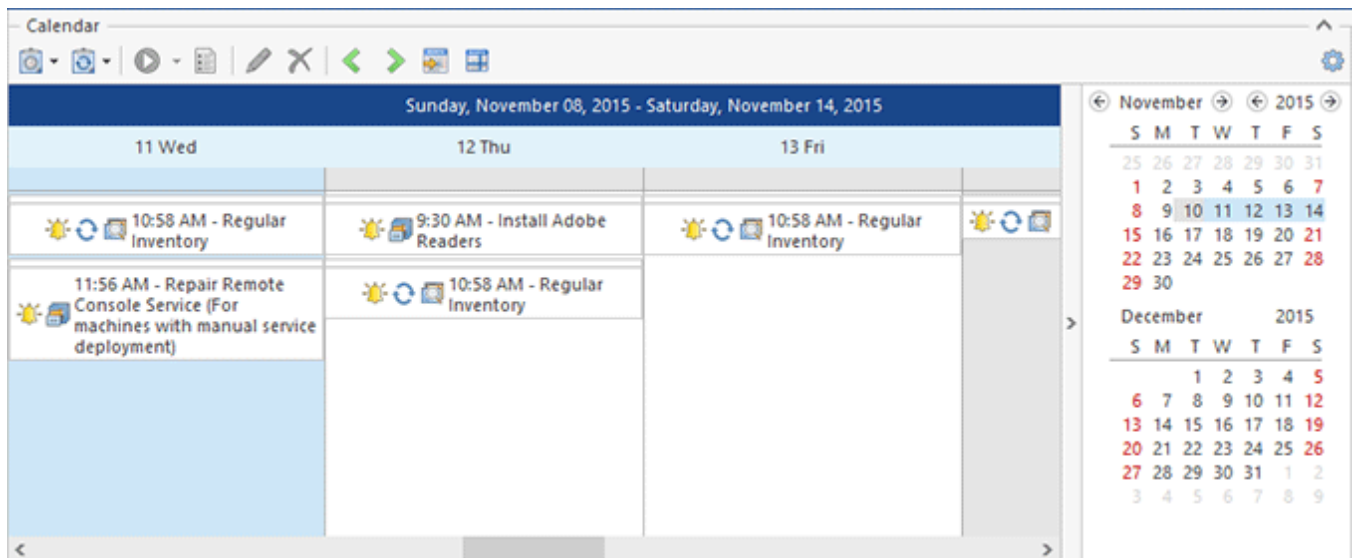
Pic 6. The Scheduling area in the Timeline View

This view can be used to navigate throughout the **Scheduling** area without any limitations and change of the level of detail if needed.

Navigation within the Scheduling area

Remote Installer provides you with easy-to-use tools for navigating the **Scheduling** area. The **Navigation** group on the **Ribbon** bar contains actions that can help you to quickly navigate within the currently selected view. By using those actions, you can move forward, or backward, or jump to the today's date.

	Backward
Backward	The **Backward** button from the **Navigation** Ribbon group on the contextual **Management** page from the **Tasks and Schedule Tools** category should be used to navigate backward in the currently selected view within the **Scheduling** area.
	Forward
Forward	The **Forward** button from the **Navigation** Ribbon group on the contextual **Management** page from the **Tasks and Schedule Tools** category should be used to navigate forward in the currently selected view within the **Scheduling** area.

Today	**Today** The **Today** button from the **Navigation** Ribbon group on the contextual **Management** page from the **Tasks and Schedule Tools** category enables you to quickly navigate to the today's date within the **Scheduling** area.
Go to Date	**Go to Date** The **Go to Date** button from the **Navigation** Ribbon group on the contextual **Management** page from the **Tasks and Schedule Tools** category should be used to navigate to a specific date within the **Scheduling** area.

Another noteworthy feature ensures that any required date chosen within the **Date Navigator** is also shown within the Scheduling area. Besides, when a range of dates is chosen within the date navigator, the view is automatically switched to the appropriate one to cover the chosen range of days. Furthermore, in each view you can jump to any date using the **Go to Date** option from the pop-up menu.

Grouping by Type and Date

The tasks displayed in the **Scheduling** area can be grouped by type or by date enabling you to manage only the tasks of a certain type **Pic 7**. You can increase or decrease the number of the visible task types and navigate through the visible task types using the navigator in the bottom right corner of the **Scheduling** area next to the scroll bar.
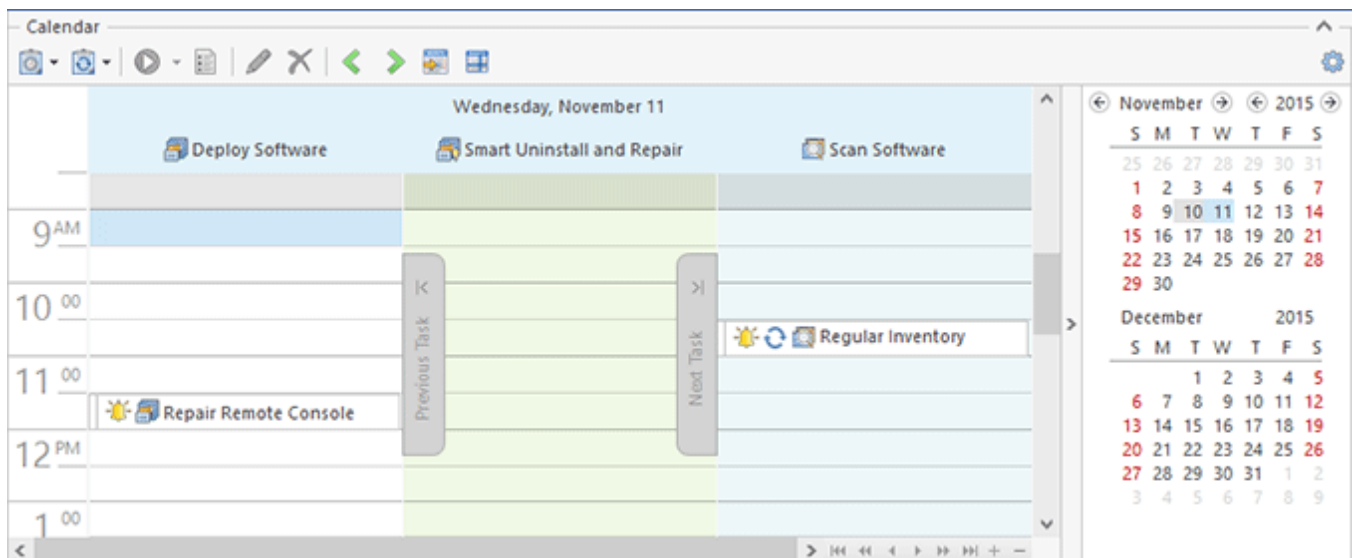
Pic 7. The Scheduling area grouped by task type

The grouping options should be configured on the **Scheduler Configuration** preference page.

Date Navigator

The **Date Navigator** pane is displayed in the right of the **Scheduling** area. It should be used to select the dates to be displayed within the **Scheduling** area **Pic 1**. The view type used for the **Scheduling** area is automatically adjusted to accommodate to the dates selected in the **Date Navigator** pane.
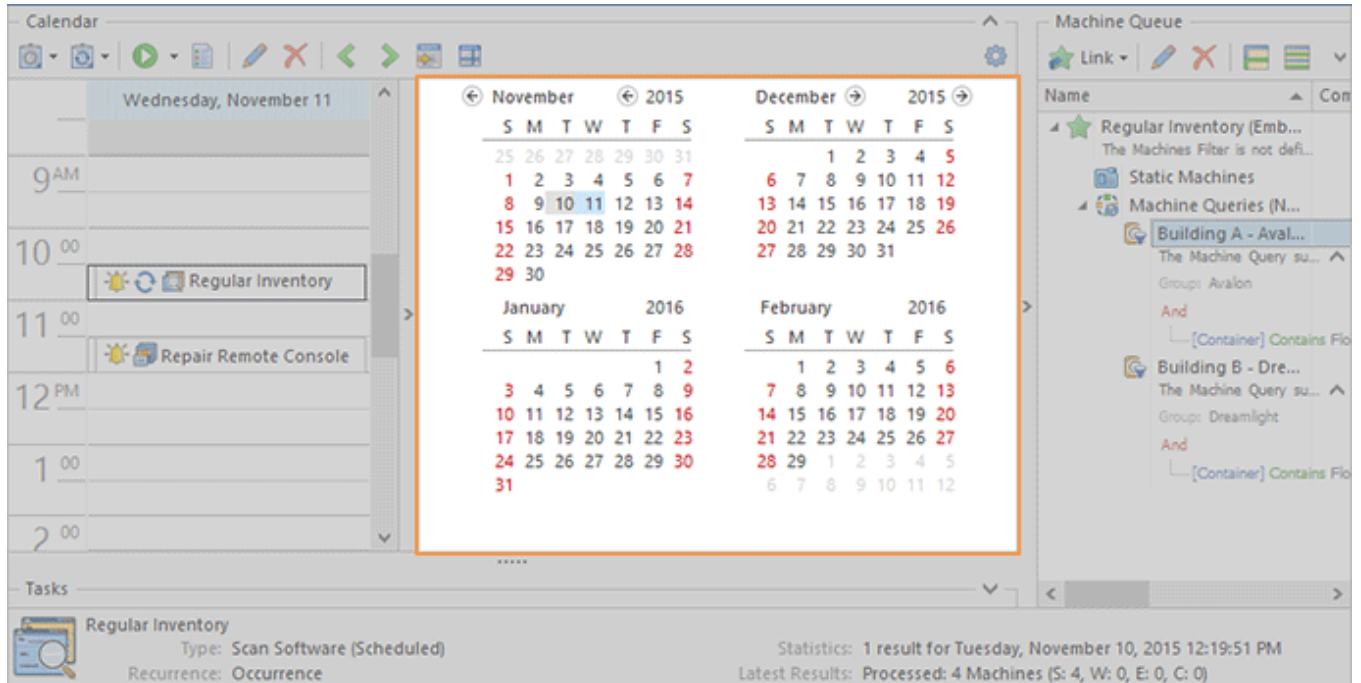
Pic 1. The Date Navigator pane

The **Date Navigator** can be configured to help you find scheduled tasks and perform weekly planning.

> 💡 It is possible to drag a task from the **Scheduling** area and drop it on any date in the **Date Navigator** to schedule that task or its copy on that date.

You can configure the view to display the dates with tasks in bold font, and turn on the week numbering on the **Calendar Options** preference page.

Machine Queue Pane

The **Machine Queue** pane is displayed on the right of the **Tasks and Schedule** view. It displays the Collections from the Machine Queue of the task selected within the **Scheduling** area or the **Tasks** area. You can add Collections to the task's Machine Queue and remove them anytime you want.

> 💡 You can drag Collections from the **Network** view and drop them on the **Machine Queue** pane – the Collections dropped are added to the task's Machine Queue. The same result can be achieved using the Copy/Paste technique. Besides, you can drag/drop and copy/paste standalone Machines and Queries. In case Machines and Queries are dropped/pasted to a Collection, they are added to that collection, otherwise embedded Collections containing those entries are created within the Machine Queue.

The **Machine Queue** pane allows you to review and edit the Machine Queue for particular tasks quickly and easily while navigating between the tasks.
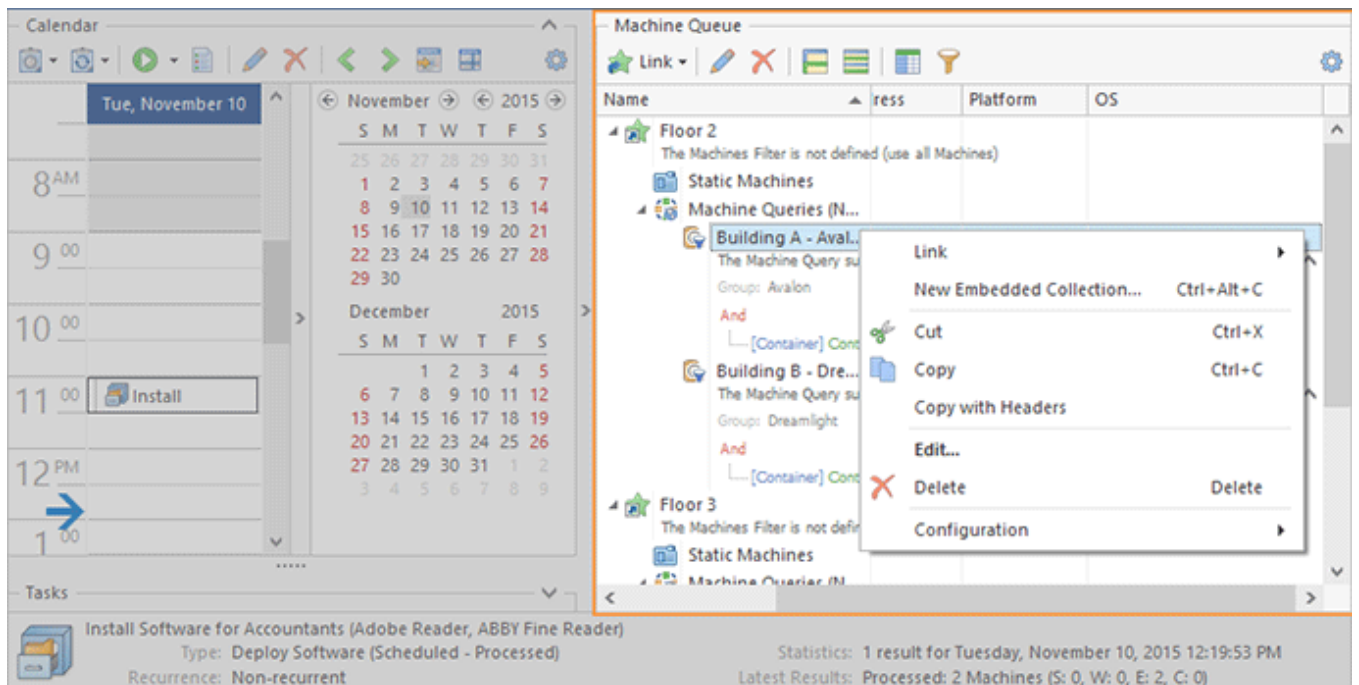
Pic 1. Machine Queue pane

By default, the Machine Queue tree displays only a limited number of available properties for every item, but you can also add columns that display other properties using the column chooser. Do not hesitate to change the visible columns and the filtering principles the way you want. By the way, you can always reset the view layout to the default settings using the **Reset Layout** command from the view menu.

Toolbar Overview
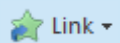
> ⭐ Link ▾   **Link**
>
> The **Link** button from the **Machine Queue** pane toolbar can be used to add Collections from those defined in the program scope to the currently displayed Machine Queue.

	Edit
	The **Edit** button from the **Machine Queue** pane toolbar allows you to edit the selected object.
	Delete
	The **Delete** button from the **Machine Queue** pane toolbar can be used to delete the selected Collections from the currently displayed Machine Queue or the selected members from the parent Collection.
	Full Expand
	The **Full Expand** button should be used to expand all nodes in the **Machine Queue** pane.
	Full Collapse
	The **Full Collapse** button should be used to collapse all nodes in the **Machine Queue** pane.
	Choose Columns
	The **Choose Columns** button should be used to choose the columns to be displayed in the **Machine Queue** pane.
	Filter Editor
	The **Filter Editor** button should be used to define the custom filter criteria to be applied to the data displayed within the **Machine Queue** pane.
	Configuration
	By using the **Configuration** button, you can configure and reset the layout of the **Machine Queue** pane.

For Collections and Queries the **Machine Queue** pane allows to preview the filter conditions without editing those collections and queries. It can be done by enabling the **Show Details** option from the **Configuration** menu. When it is enabled, there is an additional preview row under each node representing a Collection or a Machine Query. From this preview, you can see if there is any condition defined, and if there is one, expand it to review the condition using the arrow on the right.

	Link Collection
	The **Link Collection** button from the **Machine Queue** Ribbon group on the contextual **Management** page from the **Tasks and Schedule Tools** category allows you to add Collections from those defined in the program scope to the currently displayed Machine Queue.

Within the **Machine Queue** pane, it is possible to add the existing Collections defined in the program scope to the displayed Machine Queue, create embedded Collections within the Machine Queue, delete Collections from the Machine Queue, change the properties of any Collection, Query and Machine, etc. All those options are available on the Machine Queue pane toolbar. Those actions, together with collections copying and pasting, are also available in the pop-up menu of the **Machine Queue** pane. The action for adding Collections to **Machine Queue** is also available in the **Machine Queue** Ribbon group on the contextual **Management** page from the **Tasks and Schedule Tools** category. As for the actions for editing item properties and removing collections from the Machine Queue, you can find the **Edit** and **Delete** buttons in the **Organize** Ribbon group on the **Program** page.

In general, the **Machine Queue** pane is a viewer that allows previewing and editing the task's Machine Queue without editing the task itself. In case you are not interested in this pane and would rather save some space on the screen, you can hide the pane by clicking the arrow on the separator to the left of the **Machine Queue** pane.

Task Details Pane

The **Task Details** pane is located at the bottom of the **Tasks and Schedule** view. It displays information on the items selected in the Scheduling area or the Tasks area. The behavior of this pane is similar to that of the Windows Explorer information pane. When an item is selected, detailed information on it is displayed including its name, comment, type and execution statistics.
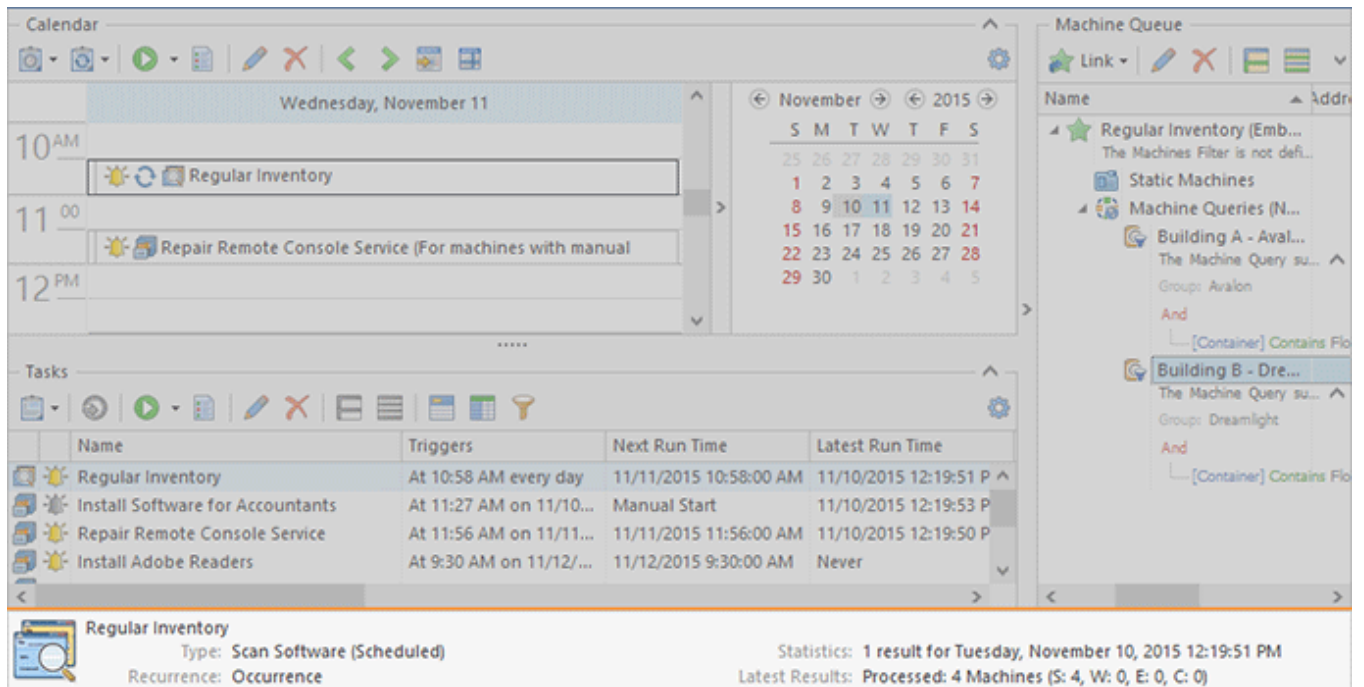
Pic 1. The Task Details pane

The **Task Details** pane is very useful if you want to review brief statistics on the task execution such as the results of the last execution, the number of stored execution results, etc. Thus, you can navigate among the tasks and review their executions statistics in real time.

Network View

The Network view is located by default on the left of the main program window. It displays the results of the automatic network scan, the Machines added manually, Collections and Collection Snapshots `Pic 1` .
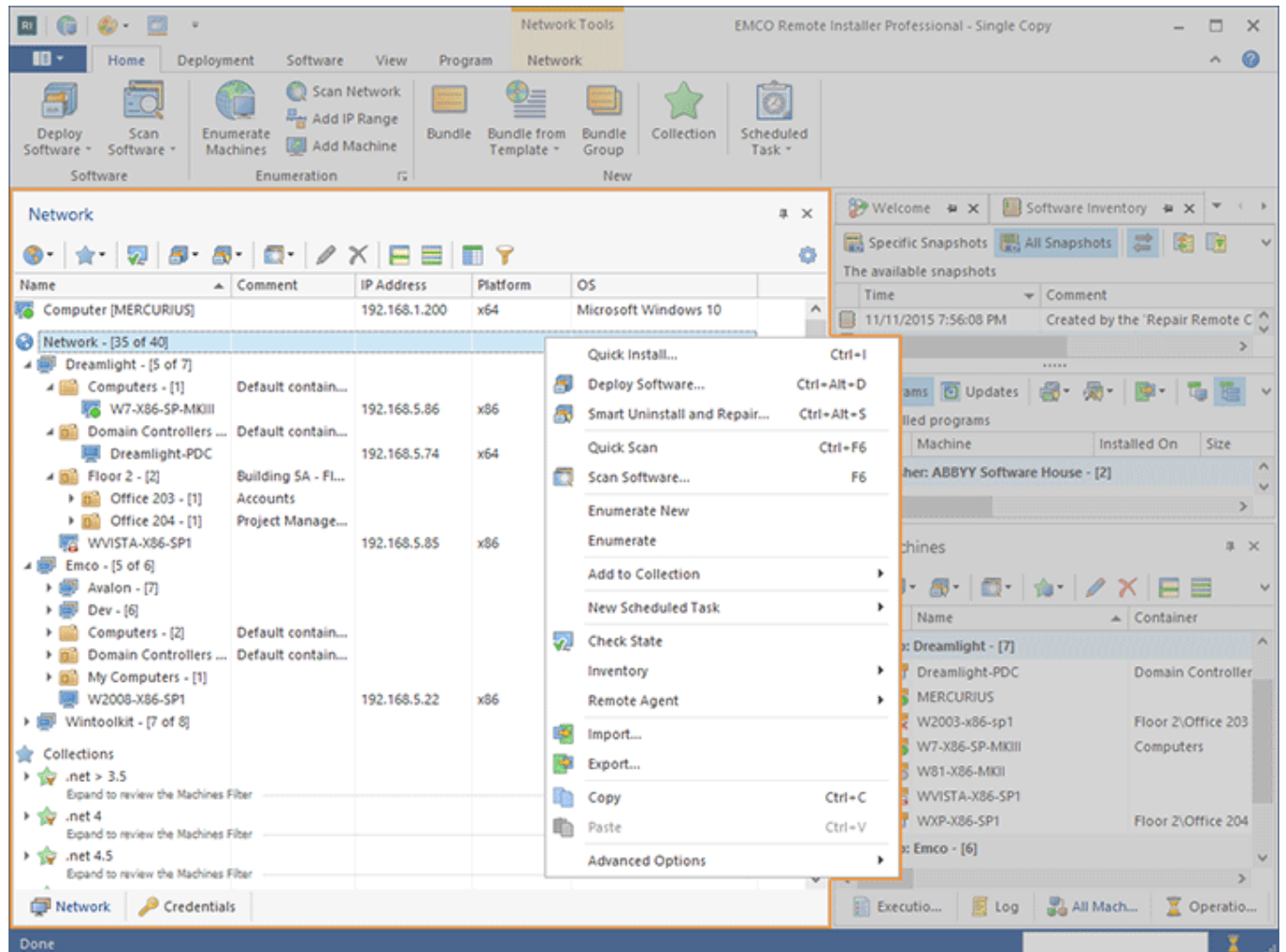
Pic 1. The Network view

The icon next to every item is used to describe of the item's type and state. The state icons are intended to help you understand what is happening in the program at the moment. You can always see if the item is currently being processed by some operation and if it can be removed.

Below is a list of the icons used for different items and the item processing states:

🌐 - the network root;

🌐 - the network root is being processed, e. g. a network enumeration process is running;

🖥 - a Group (may be both a domain and a workgroup);

🖥 - the Group is being processed;

🖥 - the Group is being processed and not operable from this view;

📁 - an Active Directory Container (such as default *Computers*);

📁 - the Active Directory Container is being processed;

📁 - the Active Directory Container is being processed and not operable from this view;

- an Organization Unit;

- the Organization Unit is being processed;

- the Organization Unit is being processed and not operable from this view;

- a Machine;

- the Machine is being processed;

- the Machine is being processed and not operable from this view;

- the grouping node for the Collections defined in the program scope;

- the Collection that describes a set of Machines to operate;

- the Collection is being processed;

- the Machine Query used to retrieve a scope of Machines;

- the Machine Query is being processed;

- a grouping node for static Machines within a Collection;

- a grouping node for Machine Queries within a Collection;

- a grouping node for Collection Snapshots;

- a Collection Snapshot.

For Collections, a filter decorator is painted over the item icon if the Machines Filter is defined for such an item (). The same approach is used for Machine Queries (). On the **Machine Queries** node within each Collection, you can see if the Machines are retrieved from the entire network () or from the program database (), and for the Groups, Machines and Containers within the Collection Snapshot, a snapshot decorator is painted (), so that you can see that this is a snapshot content.

Beside showing the item name, type and state icon, the **Network** view allows you to review the comment for every item retrieved during a network scan and the description defined in the object properties. The comment field value retrieved depends on the network scan method chosen in the enumeration options. If the **Active Directory Only** type is chosen, the comment value is the description for the object in the Active Directory data, whereas for the **Computer Browser Only** method the comment value is the **Computer Description** defined in every Machine's OS settings. If the **Both Active Directory and Computer Browser** method is chosen, the comment is filled with the description defined in Active Directory only if it is available, otherwise the computer description defined in the Machine's OS is displayed. When adding machines manually, you can provide a comment for the Machine being added in the **Comment** field. The view also contains other columns displaying additional Machine properties such as the IP address, the platform, the operating system, etc.

For each Machine in the **Network** view, the respective Machine's icon can be decorated with one of the machine status icons to show the latest access status:

- the Machine is accessible, i.e. it satisfies the requirements for remote Machines and can be operated;

- the Machine is accessible and the remote agent is installed but is not running;

- the Machine is accessible, the remote agent is installed and running;

- the Machine is accessible, the remote agent is installed but is not up-to-date;

- the Machine is accessible, but the remote agent is unreachable: either it is impossible to check the state of the remote agent or it fails to start;

- it is currently impossible to connect to this Machine, i.e. the Machine is offline;

- the Machine is inaccessible, i.e. it is currently impossible to operate this Machine;

- the access to the remote Machine is denied; to operate this Machine, you should provide the administrative credentials in the **Credentials** view;

- the operating system installed on this Machine is no longer supported.

The number of Machines available in every container is displayed next to the container name in square brackets, so you can always get this information quickly and easily without having to do manual counting. For example, 3 of 5 means that there are 3 Machines in this container within the **Network** view but the program network structure includes 5 machines assigned to this container.

The **Network** node represents the network items found during enumeration. Machines that are not available during the automated network scan process may be removed from this node.

> The network enumeration is not required if you are going to operate a local Machine. There is always an item named **Computer** within the **Network** view, which is a shortcut to the local Machine. This is a fully functional item introduced to make your work more comfortable. If you have performed enumeration, this item is also displayed in the network structure within the **Network** node.

The **Collections** node is used to permanently store information on preconfigured sets of Machines and Machine Queries to be used while configuring the **Machine Queue** for any operation. For detailed information on the Collections concept, refer the **Collections** section of the documentation. The Collections mostly consist of Machine Queries and an optional filter applied to Machines. You can also store query results in a special object called the Collection Snapshot. There can be only one snapshot for every Collection. It is identified by the Collection itself and the snapshot creation time. All snapshots are grouped within the **Collections' Snapshots** node.

Toolbar Overview

	Enumeration The **Enumeration** button from the **Network** view toolbar should be used to scan the selected containers for Machines. If the **Enumerate New** option is used, only new Machines are added to the containers, otherwise, if the **Enumerate** option is used, the Machines from the selected containers that are not available during the scan are removed from the **Network** node.
	Collections The **Collections** button from the **Network** view toolbar is a multifunctional button that contains the actions for Collections management. It is possible to create new Collections, create snapshots for Collections and add the selected items to existing Collections.
	Deploy Software The **Deploy Software** button from the **Network** view toolbar is a multifunctional button that allows you to perform software deployment and create a scheduled deployment task to perform deployment in the future.
	Smart Uninstall and Repair The **Smart Uninstall and Repair** button from the **All Machines** view toolbar is a multifunctional button that allows you to uninstall or repair software on remote Machines choosing the products to uninstall or repair from the inventory and to create a scheduled smart uninstall or repair task for future execution.

Scan Software	
	The **Scan Software** buttons from the **Network** view toolbar is a multifunctional button that allows you to perform a software scan and schedule a new software scan task.
Check State	
	The **Check State** button from the **Network** view toolbar should be used to check the access status for the selected Machines or the Machines from the selected Collections.
Edit	
	The **Edit** button from the **Network** view toolbar allows you to review and change the selected item's properties.
Delete	
	The **Delete** button from the **Network** view toolbar can be used to delete the selected items from the view.
Full Expand	
	The **Full Expand** button should be used to expand all nodes in the **Network** view.
Full Collapse	
	The **Full Collapse** button should be used to collapse all nodes in the **Network** view.
Choose Columns	
	The **Choose Columns** button should be used to choose the columns to be displayed in the **Network** view.
Filter Editor	
	The **Filter Editor** button should be used to define the custom filter criteria to be applied to the data displayed within the **Network** view.
Configuration	
	The **Configuration** button from the **Network** view toolbar enables you to configure the enumeration options, show/hide the filter conditions preview and reset the view layout.

The main goal of the **Network** view is displaying enumeration results and Collections; thus it allows you to perform all the actions for building the network structure and for managing Collections. You can scan either the entire network or selected containers for Machines, create Collections and add the selected items to existing Collections. Those actions are available on the toolbar and in the pop-up menu of the **Network** view.

From the **Network** view, it is also possible to execute operations on remote Machines. If you select Collections, they are automatically added to the operation's Machine Queue. For the selected standalone Machines and Queries, an appropriate embedded Collection containing the selected objects is added to the Machine Queue.

The **Network** view allows you to review the filter conditions defined by the Queries and Collections without opening the object properties. Simply enable the **Show Details** option in the **Configuration** menu and you will find a row under each Machine Query and Collection node that shows if any condition is defined. In case it is defined, you can double-click this row or use the arrow button on the right of the row to expand/collapse the filter condition preview.

Other useful features of this view are the options to copy/paste, drag/drop and import/export Machines, Queries and Collections. The corresponding actions are available in the pop-up menu, the **Organize** Ribbon group and the **Clipboard** Ribbon group on the **Program** page.

Credentials View

The **Credentials** view is by default located on the left of the main program window. Its purpose is to define the credentials to be used to connect to remote Machines intended for processing. The representation of the **Credentials** view `Pic 1` is very similar to that of the **Network** view, but it also contains credentials associated with each network item. This tree is built and maintained automatically using the network structure.

The Credentials used to connect to remote Machines are stored until they are reset, i.e. even if the Machine referenced by the credentials is removed, the credentials will still exist but become inactive. Those credentials items are removed only if they are reset.
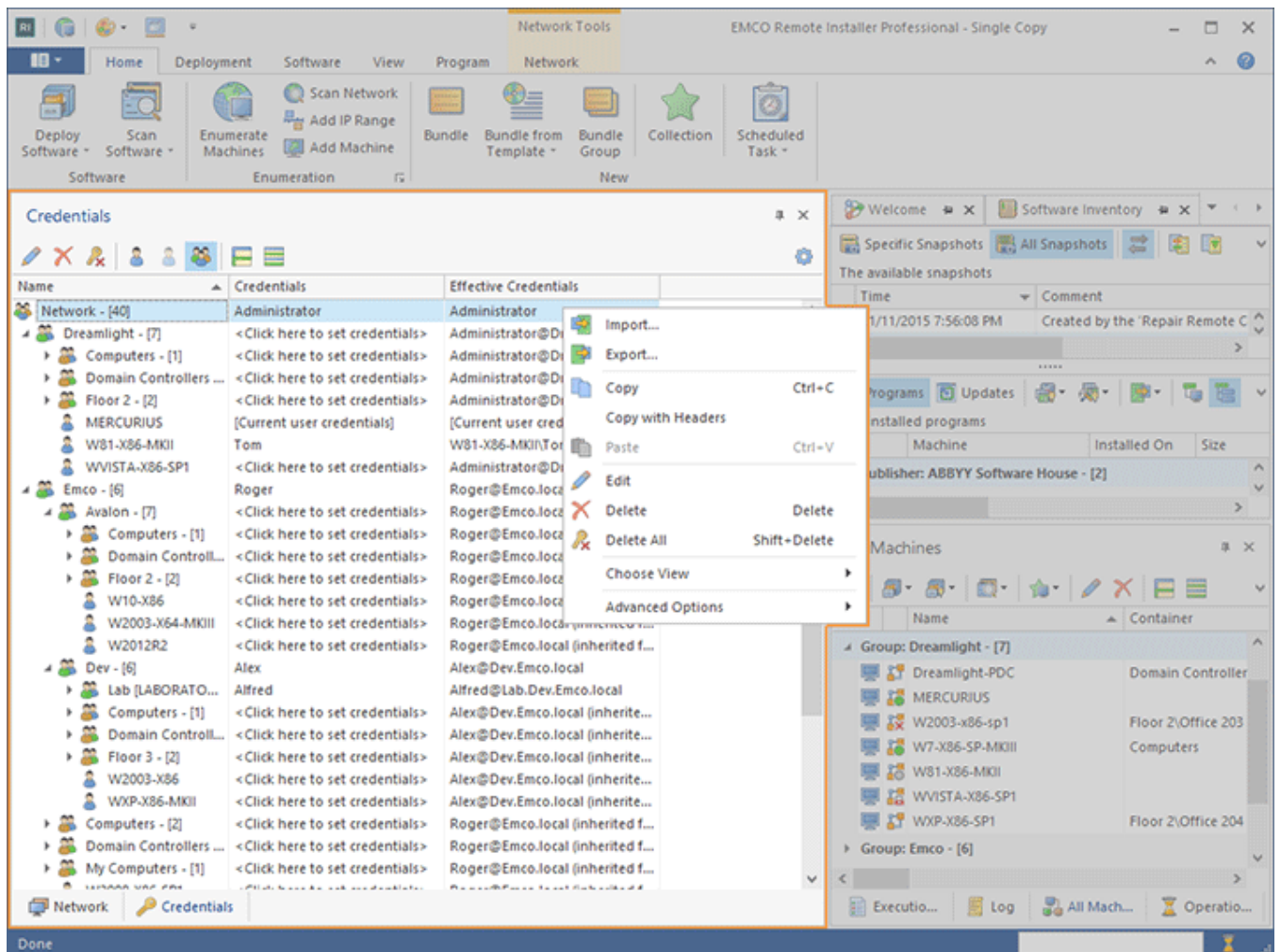
Pic 1. The Credentials view

Item Icon represents the item type and shows if the credentials defined for this item are currently active or not. The set of icons used to represent all types of the items and their states is described below:

- the root of the **Credentials**, that defines the default credentials to be used;

- the Group (may be either a domain or a workgroup) credentials;

- the Active Directory Container (an organization unit or another container in Active Directory) credentials;

- the Machine credentials;

- the Machine Group (may be either a domain or a workgroup) credentials that are currently inactive;

- the Active Directory Container (an organization unit or another container in Active Directory) credentials that are currently inactive;

- the Machine credentials that are currently inactive.

Item Name - the name of the item.

Credentials Part – shows the login name to use while connecting to remote Machines or a hint if the credentials are not set. The in-place edit shows the pop-up window to specify the credentials `Pic 2`.

For the containers in the **Credentials** view, the number of Machines with active credentials is displayed in square brackets, so that you can always get this information quickly and easily without having to do manual counting. If the container includes both active and inactive Machines credentials, the number of active credentials and the total number of credentials are displayed, e. g. 3 of 5 means that there are 5 Machine credentials in this container and 3 of them are active.

You can review the credentials to be used to connect to the remote Machine from the tool-tip displayed for it. This may be very useful if the credentials you have provided do not explicitly specify the domain or if the network structure is quite complex. You can review the **Credentials** section to get a closer look at the concept used for specifying credentials for connecting to remote Machines.

Toolbar Overview

✏️	**Edit** The **Edit** button from the **Credentials** view toolbar should be used to specify the credentials for the selected network item.
✖️	**Delete** The **Delete** button from the **Credentials** view toolbar should be used to delete the credentials from the selected network item.
🔑	**Delete All** The **Delete All** button from the **Credentials** view toolbar allows you to delete all credentials stored for network items.
👤	**Show Active** The **Show Active** button from the **Credentials** view toolbar switches the view to the mode that displays only the credentials for the items currently referenced by the program business data.
👤	**Show Inactive** The **Show Inactive** button from the **Credentials** view toolbar switches the view to the mode that displays only the credentials for the items that are currently not referenced by the program business data.
👥	**Show All** The **Show All** button from the **Credentials** view toolbar switches the view to the mode that displays all the available credentials items.
▤	**Full Expand** The **Full Expand** button should be used to expand all nodes in the **Credentials** view.

▤	**Full Collapse** The **Full Collapse** button should be used to collapse all nodes in the **Credentials** view.
▽	**Configuration** The **Configuration** button provides access to the option of resetting the view layout.

Within the **Credentials** view, you can define the credentials to be used to access each network resource and reset those credentials when they are no longer needed. In addition, it is possible to switch between different view modes by changing the display filter condition.

To specify the credentials to be used for a network resource, you should select such a resource in the **Credentials** view and click the ☑ button of the credentials part of the in-place edit. Alternatively, you can use the **Edit** button from the **Organize** Ribbon group on the **Program** page, the **Edit** button on the toolbar or the **Edit** item from the pop-up menu.

> 💡 When setting the credentials' user name, pay attention to the domain it will be used for. This information is shown in the **Log on to field**: this field value should be the domain or the Machine name where the account with the respective user name is present. To access the other domain, see the How do I access another domain? section.

The pop-up window Pic 2 is opened for you to specify the credentials for the selected item. You are offered to provide the user name and password to be used for connection in the appropriate fields of the pop-up window. The password confirmation must exactly match the password input.
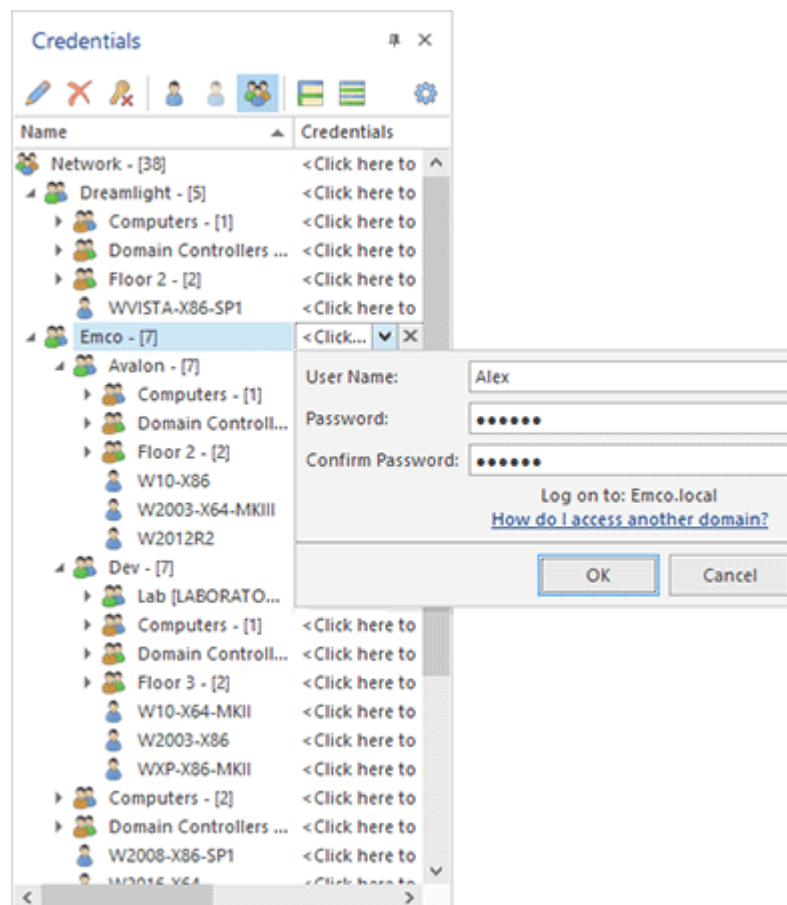
Pic 2. Specifying Credentials

When you are ready with the credentials specification, press **OK** to proceed.

If the specified credentials are no longer needed, you can reset them. To reset the credentials for a network resource, select the required resource in the **Credentials** view and click the ✖ button of the credentials part of the in-place edit. Alternatively, you can use the **Delete** button from the **Organize** Ribbon group on the **Program** page, the **Delete** button on the toolbar or the **Delete** item from the pop-up menu.

If you want to display either the active or inactive credentials only or both kinds of the credentials, you can choose the **Credentials** view mode by using the **Choose** View drop-down item from the **Credentials** view pop-up menu or the view switching buttons on the toolbar.

From the **Credentials** view, it is possible to import and export the credentials, as well as copy and paste them. You can use either the pop-up menu or the **Organize** and **Clipboard** Ribbon groups on the **Program** page to reach the goal. It is also possible to reset all the credentials available in the program by using the **Delete All** item and to expand or collapse all the nodes in the **Credentials** view by using the **Full Expand** or Full **Collapse** items on the toolbar and in the pop-up menu.

Execution Results View

The **Execution Results** view `Pic 1` shows the results of business operations on remote Machines. If any problems have been detected during the operation execution, troubleshooting advice is displayed next to the result message in the **Execution Results** view to help you solve those problems.

Within the **Execution Results** view, each row contains the result for a remote Machine: such information consists of the event type represented by an icon, the Machine name, the Group name, the event title, the completion date and the event description itself, with or without a troubleshooting hint. The description and the hint for any event are by default wrapped so that you can easily read it. If you would like to have more events visible at the same time, you can configure the Execution Results view to display only one line per event by disabling the Wrap Description option from the Configuration menu, after which a detailed description will only be shown in the event details pane. You can also remove the hint column from the view and review the troubleshooting advice only within the event details pane. It is possible to add the **Error Code** column to the view using the **Column Chooser** if required.
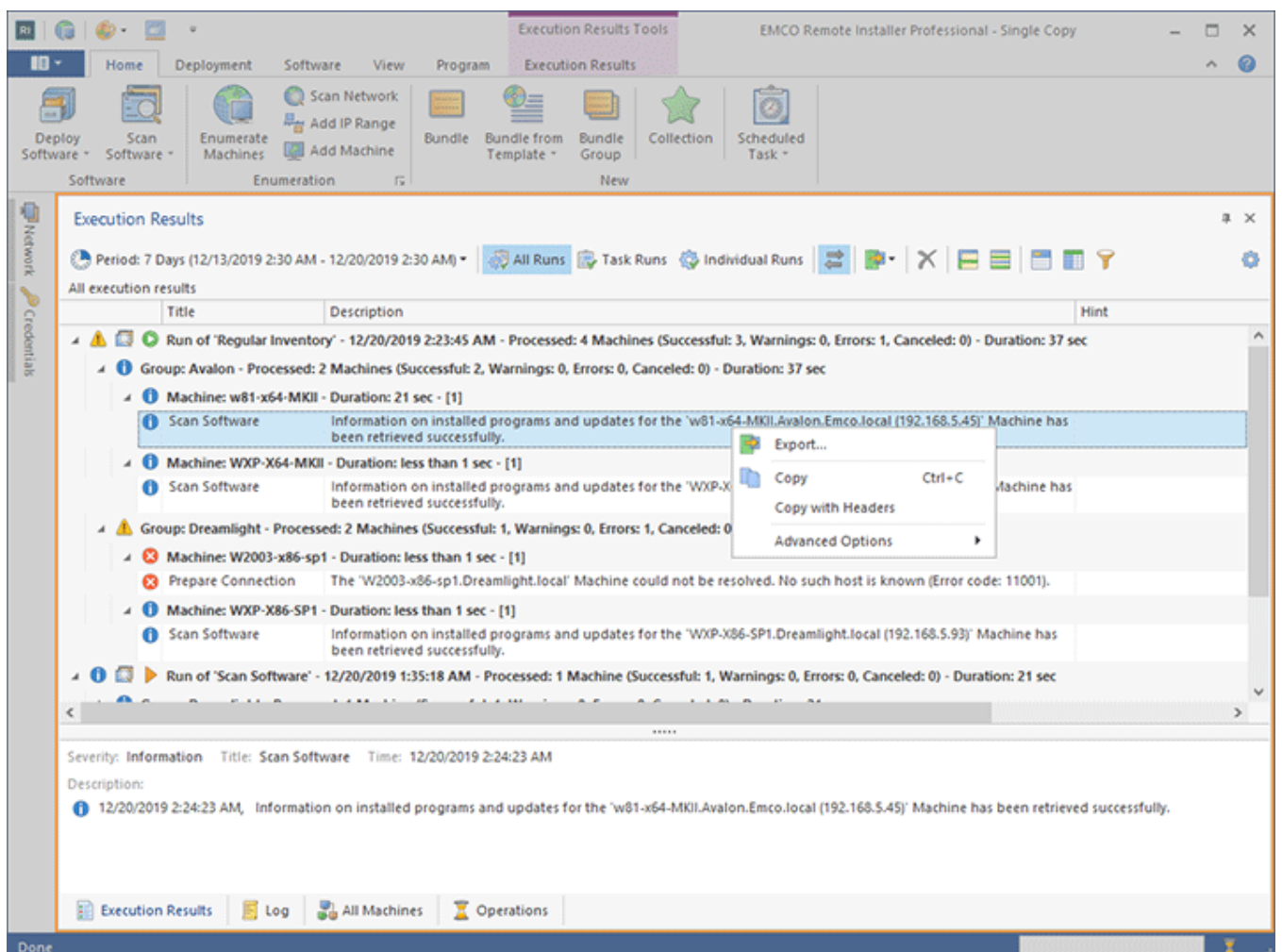
Pic 1. The Execution Results view

The icons used to display the event type enable you to understand if the operation has succeeded without actually reading the message. The following icons are used to display the event types:

🛈 - the blue icon with the 'i' character means that everything is OK.

🚫 - the brown circle icon with a cross-cut line is used to identify that the operation was canceled by user or due to shutdown of the underlying system.

⚠️ - the yellow icon with an exclamation mark is the warning icon. It means that some errors took place, but they are not critical. In such case, it is not guaranteed that the operation has actually succeeded.

❌ - the red icon with a white cross is the error sign: it means that the operation execution has failed.
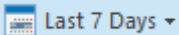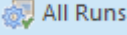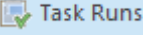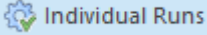
The results displayed within the view are grouped by Runs, by Groups the processed Machines are located in, and by the Machines. On each grouping row, you can see the time spent for processing either a single Machine or all Machines from a single Group, or all the Machines. The Run and Group rows also display brief execution statistics in form of numbers of the Machines the operation of which has completed with a specific severity level.

The event details pane is located by default at the bottom of the **Execution Results** view. It shows detailed information pertaining to the result selected in the table so that you can always see the entire event description and troubleshooting advice, if any. If you are not interested in this pane and do not want it to be displayed at all times, you can hide it by disabling the **Show Event Details Pane** option from the **Configuration** menu.

Each Run shows the execution type represented by one of the following icons:

💡 - the run is a result of a scheduled task execution, and the schedule element is still in the scheduling area.

💡 - the run is a result of a scheduled task execution, but there is no schedule element in the scheduling area this run refers to.

▶ - the run is a result of a manual task execution using the **Run** command.

▷ - the run is a result of an individual operation execution.

Toolbar Overview

📅 Last 7 Days ▾	**Results Range** The **Results Range** button allows you to choose the date range to display the execution results for.
⚙️ All Runs	**All Runs** The **All Runs** button switches the **Execution Results** view to the mode in which runs for both the tasks and the individual operations for the specified date range are displayed.
📋 Task Runs	**Task Runs** The **Task Runs** button switches the **Execution Results** view to the mode in which only runs of the tasks for the specified date range are displayed.
⚙️ Individual Runs	**Individual Runs** The **Individual Runs** button switches the **Execution Results** view to the mode in which only the execution results of individual operations for the specified date range are displayed.

	Link with Selection The **Link with Selection** button should be used to turn on and off the option of synchronizing the results displayed in the **Task Runs** mode of the **Execution Results** view with the tasks selected within the **Task and Schedule** view.
	Export The **Export** button is intended to export the displayed execution results to a CSV file.
	Delete The **Delete** button allows you to permanently delete the results for the selected runs.
	Full Expand The **Full Expand** button should be used to expand all the grouping rows in the **Execution Results** table.
	Full Collapse The **Full Collapse** button should be used to collapse all the grouping rows in the **Execution Results** table.
	Group By Box The **Group By Box** button is used to display the Group By Box for configuring data grouping within the **Execution Results** table.
	Choose Columns The **Choose Columns** button should be used to choose the columns to be displayed in the **Execution Results** table.
	Filter Editor The **Filter Editor** button should be used to define the custom filter criteria to be applied to the data displayed within the **Execution Results** table.
	Configuration By using the **Configuration** button, you can hide the message details pane, reset the view layout or open the **Execution Results** preference page.

The execution results set is selected only for the specified date range. This approach is used to optimize the memory usage and performance as there may be many execution results in the entire database. The display range for execution results is set by default to the **Last 7 Days** value and can be changed with the range drop-down button on the view toolbar. The text on the button shows the currently applied range. You can choose among the predefined ranges or provide a custom one.
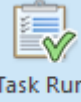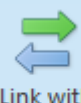
To prevent continuous growing of the results database, the execution results can be deleted by runs either manually or automatically. You can also delete the results manually whenever you wish taking into account your own conditions. To delete the results manually, select the runs to delete in the **Execution Results** view and press the **Delete** button on the toolbar or choose the **Delete** item from the pop-up menu. An automatic deletion of the execution results is configured on the **Execution Results** preference page.

The layout of the **Execution Results** view, including all the grouping and sorting settings and the details pane visibility, can be easily reset to factory settings by choosing the **Reset Layout** option from the **Configuration** menu.
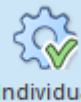
The **Execution Results** view can be used in three modes, namely **All Runs**, **Task Runs** and **Individual Runs**. Let us take a closer look at each of these modes.

	All Runs
	The **All Runs** button from the **View Mode** group on the **Execution Results** contextual page from the **Execution Results Tools** category switches the **Execution Results** view to the mode in which runs for both tasks and individual operations from the specified date range are displayed.

The **All Runs** mode is used by default. In this mode, the **Execution Results** view displays the execution results both for preconfigured tasks from the **Tasks and Schedule** view and for individual operations launched at any time.

	Task Runs
	The **Task Runs** button from the **View Mode** group on the **Execution Results** contextual page from the **Execution Results Tools** category switches the **Execution Results** view to the mode that only shows the runs of tasks for the specified date range.
	Link with Selection
	The **Link with Selection** button from the **View Mode** group on the **Execution Results** contextual page from the **Execution Results Tools** category should be used to turn on and off the option of synchronizing the results displayed in the **Task Runs** mode of the **Execution Results** view with the tasks selected within the **Task and Schedule** view.

The **Execution Results** view in the **Task Runs** mode shows the execution results for the tasks available in the **Tasks and Schedule** view. **Linking the Execution Results** view with the **Tasks and Schedule** view makes the results displayed in the **Execution Results** reflect the results of the tasks selected in the **Tasks and Schedule** view. If the **Execution Results** view is not linked to the **Tasks and Schedule** view, to review the results for the task you are interested in, you should select it in the **Tasks and Schedule** view and choose the **Show Results** menu item from the task's pop-up menu, otherwise results for all the tasks are displayed. In the **Task Execution Results** mode, results are also grouped by the task they belong to.

	Individual Runs
	The **Individual Runs** button from the **View Mode** group on the **Execution Results** contextual page from the **Execution Results Tools** category switches the **Execution Results** view to the mode that only shows the execution results of individual operations for the specified date range.

The **Individual Runs** mode should be used if you would like to review only the execution results for the standalone operations launched manually. For example, when operating Machines directly from the **All Machines** view.

Log View

The log is designed to store information on the events taking place during the program execution. The larger part of this information consists of events generated by the operations. The purpose of this chapter is to help you understand the log.
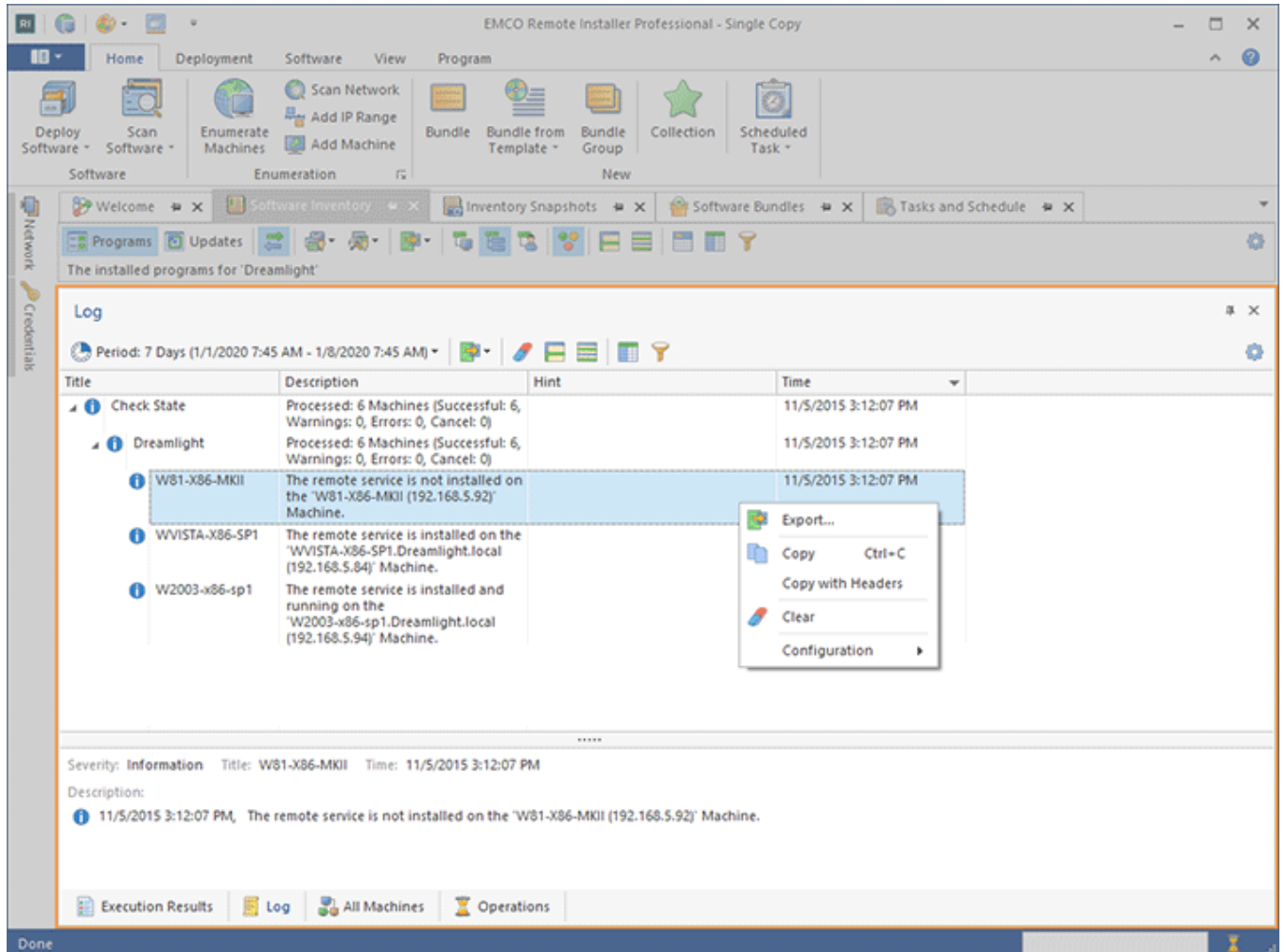
Pic 1. The Log view

The **Log** view is located by default at the bottom of the Remote Installer main window and displays the log in form of a tree and a pane that shows details of a selected event `Pic 1`. The description for any logged event is by default wrapped, so that you can easily read it. If you would like to have more events visible at the same time, you can configure the **Log** view to display only one line per event by disabling the **Wrap Description** option from the **Advanced Options** menu, after which a detailed description will only be shown in the event details pane. If you do not need the event details pane and would like to review the events only within the tree, you can hide the event details pane by disabling the **Show Event Details Pane** option from the **Advanced Options** menu. Also, it is possible to enable the automatic scrolling feature to always see new log events as soon as they arrive, using the **Autoscroll** item from the **Advanced Options** menu.

The logged events are selected only for the specified period. This approach is used to optimize memory usage and performance as there may be lots of events in the entire database. The display range for events is by default set to the **7 Days** value and can be changed with the range drop-down button on the view toolbar. The text on the button shows you the currently applied range. You can choose between the predefined ranges or provide a custom one.

Every event in the log is assigned a severity level represented by a certain icon. The icon allows you to see if any problem has occurred without reading the description. The following icons are available:

- ⓘ - the blue icon with an 'i' character means that everything is OK;

- 🚫 - the brown circle icon with a cross-cut line is used to identify that the operation was canceled by user or due to shutdown of the underlying system;

- ⚠ - the yellow icon with an exclamation mark is the warning sign: it tells you that some errors have occurred, but they are not critical. In such a case, there is no guarantee that the operation has actually succeeded;

- ❌ - the red icon with a white cross is the error sign: it means that the operation execution has failed.

Analyzing the log can help you a lot in your everyday work with Remote Installer, because it contains all the information on the executed tasks and provides you with troubleshooting recommendations in case any problems are detected.

Toolbar Overview

🕐 ▾	**Period** The **Period** button from the **Log** view toolbar allows you to choose the time interval to display the logged events for.
📤 ▾	**Export** The **Export** button should be used to export the log to a CSV file.
🖊	**Clear** The **Clear** button should be used to delete all the logged events from the program database.
🗂	**Full Expand** The **Full Expand** button from the **Log** view toolbar should be used to expand all nodes in the table of logged events.

	Full Collapse The **Full Collapse** button from the **Log** view toolbar should be used to collapse all nodes in the table of logged events.
	Choose Columns The **Choose Columns** button should be used to choose the columns to be displayed in the table of logged events.
	Filter Editor The **Filter Editor** button should be used to define the custom filter criteria to be applied to the data displayed within the table of logged events.
	Advanced Options The **Advanced Options** button enables you to configure the **Log** view, manage the visibility of the event details pane and reset the view layout.

The options of clearing the log, expanding nodes in the tree of logged events and collapsing them are also available from the pop-up menu of the Log view.

The layout of the **Log** view, including the visible columns, the column widths, the sorting settings, the descriptions wrapping and the details pane visibility, can be easily reset to the initial defaults by choosing the **Reset Layout** option from the view menu.

All Machines View

The **All Machines** view `Pic 1` is by default located at the bottom of the program main window. This view displays information on all Machines available in the program. Using this view, you can review the available Machines, install, uninstall and repair software to/from/on them and scan them for information on installed programs and updates.
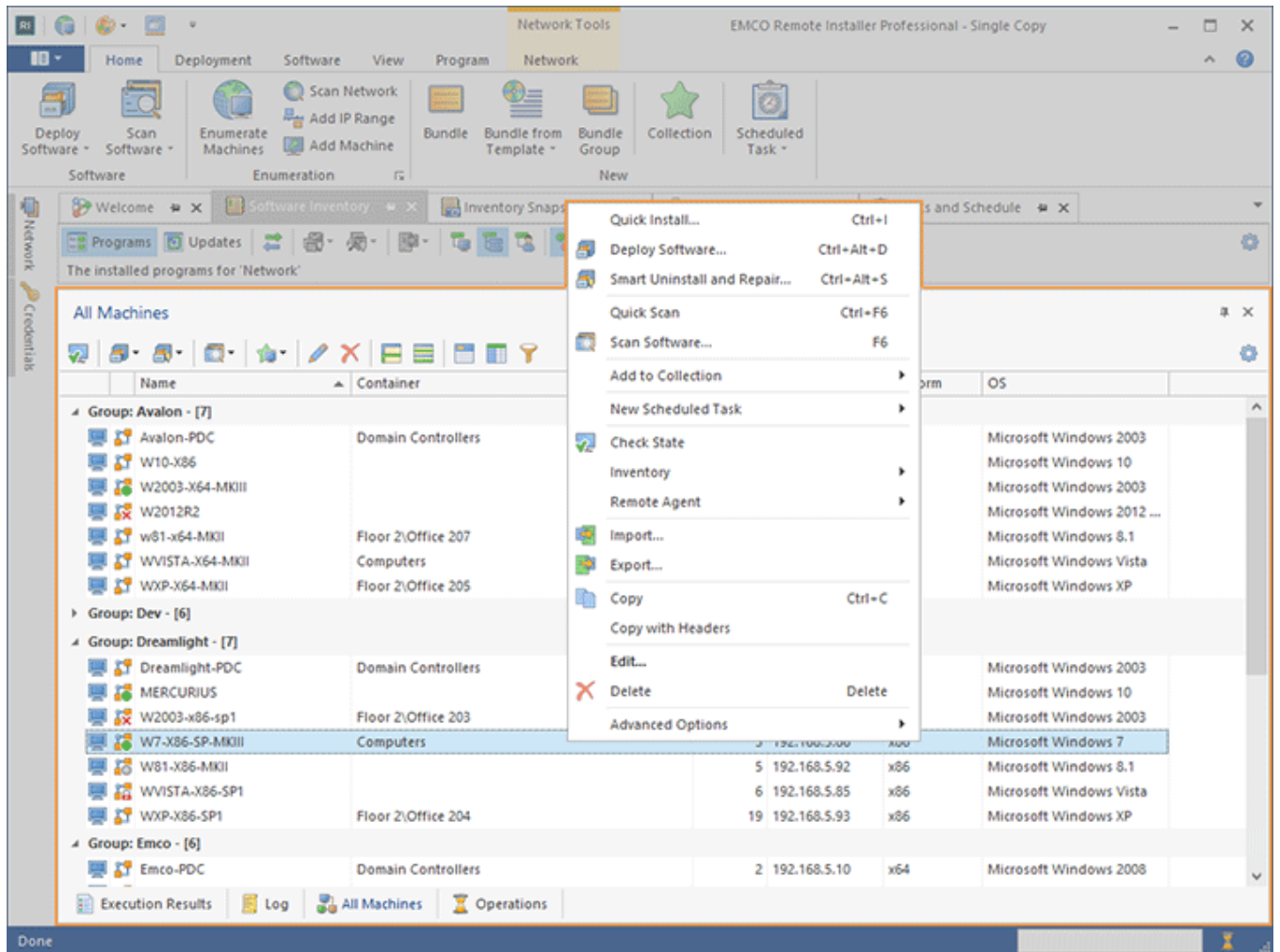
Pic 1. The All Machines view

Toolbar Overview

	Deploy Software
	The **Deploy Software** button from the **All Machines** view toolbar is a multifunctional button that allows you to perform a software deployment and create a scheduled deployment task to perform deployment in future.
	Smart Uninstall and Repair
	The **Smart Uninstall and Repair** button from the **All Machines** view toolbar is a multifunctional button that allows you to uninstall or repair software on remote Machines, choosing the products to uninstall or repair from inventory, and create a scheduled smart uninstall or repair task for future execution.

	Scan Software
	The **Scan Software** button from the **All Machines** view toolbar is a multifunctional button that allows you to perform a software scan and schedule a new scan software task.
	Check State
	The **Check State** button from the **All Machines** view toolbar should be used to check the access status for the selected Machines.
	Edit
	The **Edit** button from the **All Machines** view toolbar allows you to review and change the selected item's properties.
	Delete
	The **Delete** button from the **All Machines** view toolbar can be used to delete the selected Machines together with the all data referenced by those Machines.
	Add to Collection
	The **Add to Collection** button from the **All Machines** view toolbar should be used to add the selected Machines to a new or an already existing Collection.
	Full Expand
	The **Full Expand** button should be used to expand all the grouping rows in the table.
	Full Collapse
	The **Full Collapse** button should be used to collapse all the grouping rows in the table.
	Group By Box
	The **Group By Box** button should be used to configure the data grouping for the table.
	Choose Columns
	The **Choose Columns** button should be used to choose the columns to be displayed in the table.
	Filter Editor
	The **Filter Editor** button should be used to define the custom filter criteria to be applied to the data displayed within the table.
	Configuration
	The **Configuration** button provides access to the option of resetting the view layout.

The option of scanning remote Machines for installed programs and updates, as well as the ability to export Machines and other useful options are available on the toolbar and from the **All Machines** view pop-up menu.

By default, the Machines in the **All Machines** view are grouped by the Group they are located in, but you can easily reset this grouping or customize it to fit your needs by choosing other columns and filter data – see the Grouping and Filtering Data topic for details. You can then always roll back to the default pane layout using the **Reset Layout** item from the view configuration menu.

Operations View

The **Operations** view Pic 1 shows the detailed progress of each operation being performed at the moment and allows canceling a particular operation or all running operations. By default, it is located at the bottom of the Remote Installer main window.
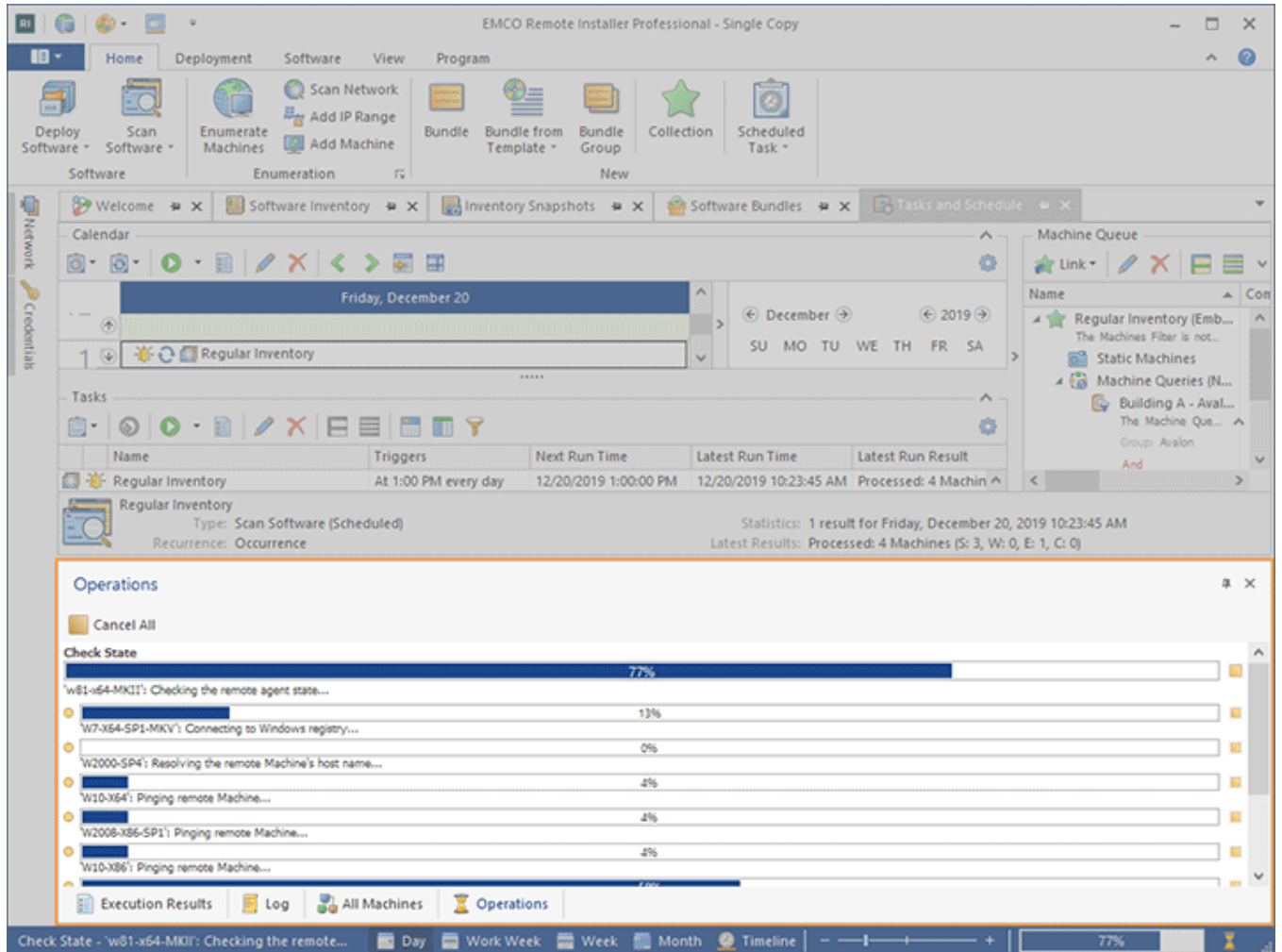
Pic 1. The Operations view

Progress information for every operation is shown in the pane with the progress bar, the operation information text and the **Cancel** button. The **Cancel** button is used to cancel individual running operations, whereas if the grouping operation is canceled, all the sub-operations are also canceled.

> **Cancel All**
>
> The **Cancel All** button from the **Operations** view toolbar can be used to cancel all the operations running in the application.

You can cancel all the running operations by clicking the **Cancel All** button on the toolbar of the **Operations** view.

Graphical User Interface features

EMCO Software provides you with a modern and intuitive graphical user interface, because we appreciate the users of our products and would like them to feel glad that they have EMCO programs installed on their PCs. Lots of resources were involved in creating this kind of an interface for you, and now we are proud we have done it. Custom DPI settings are fully supported, so that you can use EMCO programs on any display with any resolution you like. The *'Microsoft User Interface Guidelines on Layout, Icons and Sizing'* have been a powerful base for this work, and we are glad to tell you that they are fully complied with and supported. With the help of the skinning support and the Ribbon UI interface, every customer can configure the program UI to feel comfortable during each working day. EMCO also provides you with the **High Contrast** skin along with the bonus skins pack, which is an accessibility feature designed for people with vision impairment. The High Contrast color scheme can increase legibility for some users by heightening the screen contrast with alternative color combinations.

This chapter gives you a detailed description of how to fully enjoy the graphical user interface features, the skinning mechanism and the Ribbon bar features.

Skinning

Remote Installer provides you with a wide range of custom skins with unique look and feel, so that you can choose any skin you like most. If you are a fan of the Microsoft Office interface, you have no reason to complain either, since Remote Installer also gives you an option of choosing this type of skin. There are not only formal skins but also some informal ones.

All the skins can be divided into four groups: Office Skins, Custom Design Skins, Bonus Skins and Skins for Fun. The following skins are available:

Office Skins:	"Office 2016", "Office 2016 Dark", "Office 2016 Black", "Office 2013", "Office 2013 Silver", "Office 2013 Black", "Office 2010 Blue", "Office 2010 Silver", "Office 2010 Black", "Office 2007 Blue", "Office 2007 Silver", "Office 2007 Black", "Office 2007 Green", "Office 2007 Pink".
Custom Design Skins:	"Modern Style", "Dark Style", "Blue Vision", "Blue Vision 2013", "Light Vision 2013", "Dark Vision 2013", "High Contrast", "Metropolis", "Metropolis Dark", "Seven", "Seven Classic", "McSkin", "Blue", "Black".
Bonus Skins:	"Lilian", "iMaginary", "Caramel", "Money Twins", "Sharp", "Sharp Plus", "Foggy", "Darkroom", "Dark Side", "Liquid Sky", "London Liquid Sky", "The Asphalt World", "Glass Oceans", "Stardust", "Coffee", "Blueprint", "Whiteprint".
Skins for Fun:	"Christmas", "Valentine", "Summer", "Springtime".

Let us take a brief look at some of the skins:

Office 2010 Skin look and feel example
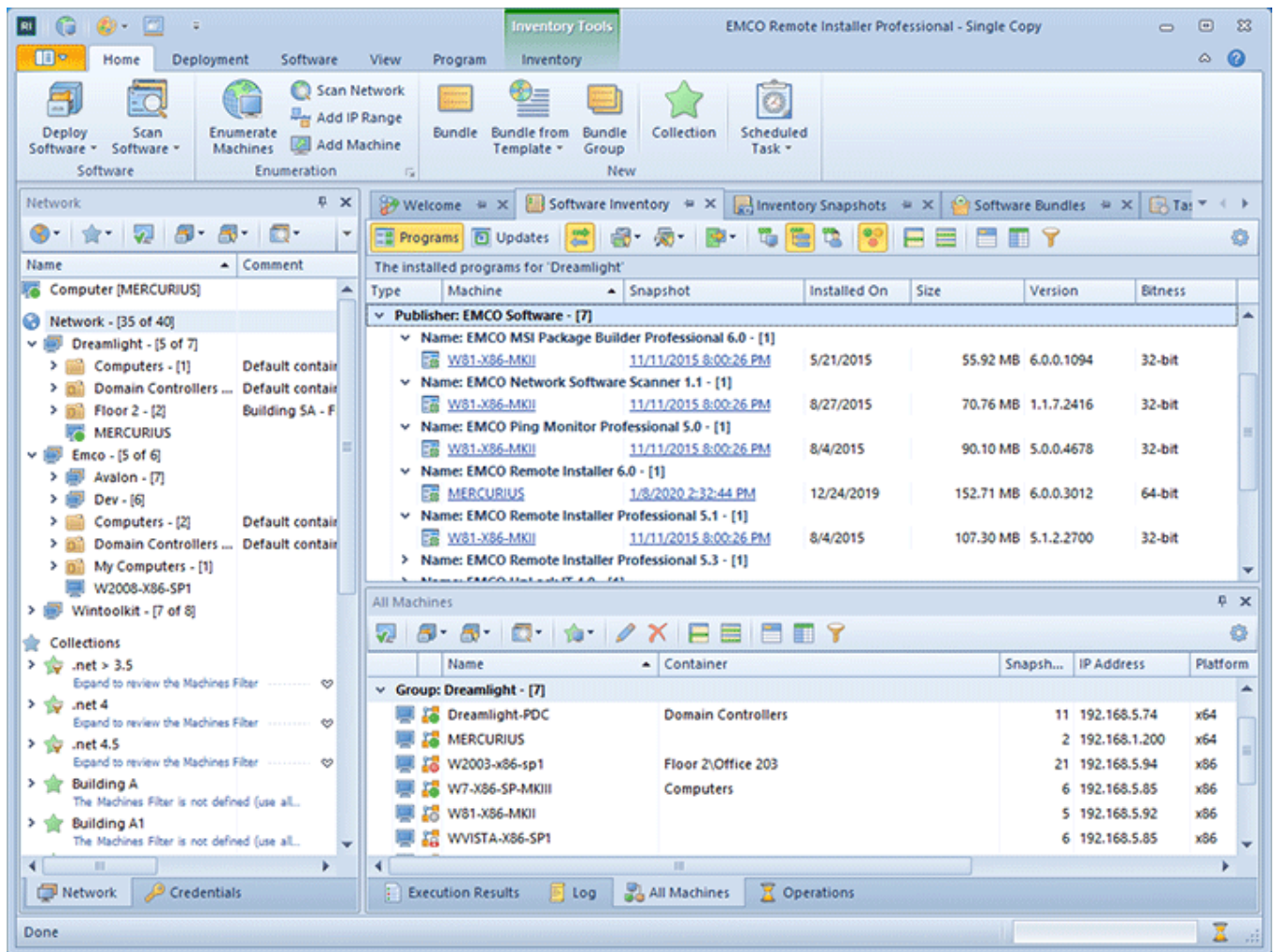
Custom Design Skin look and feel example
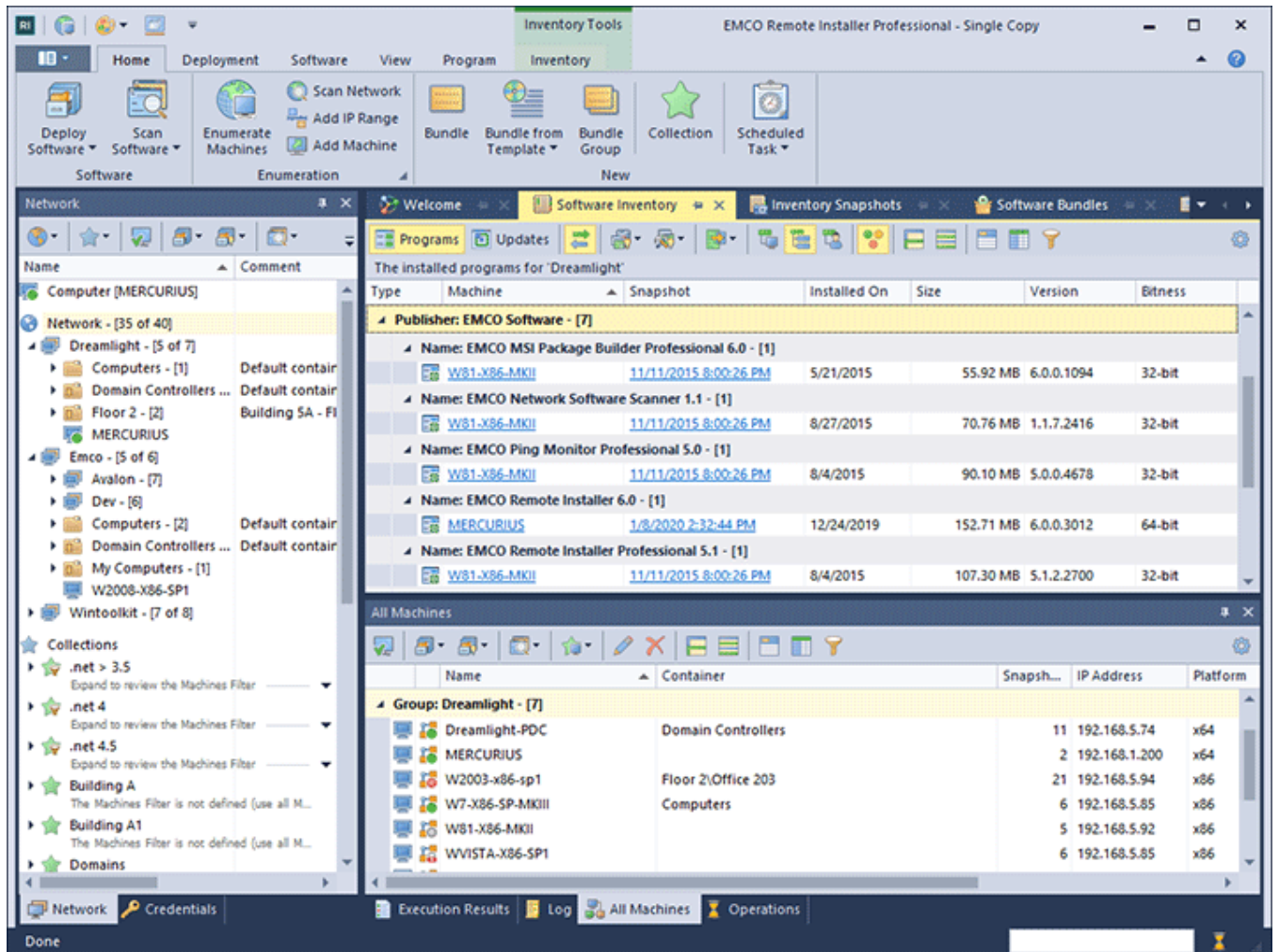
Skins for Fun look and feel example
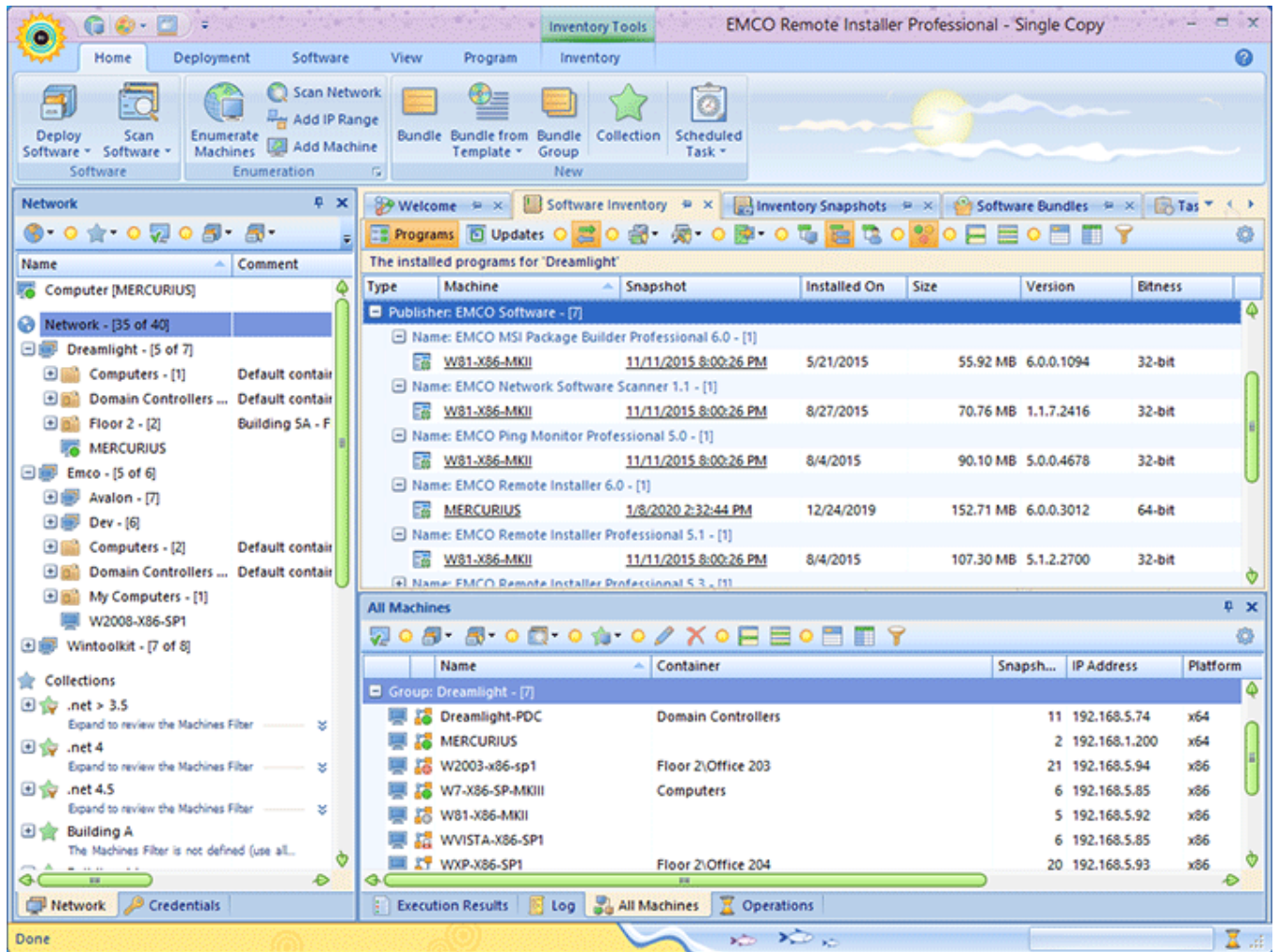
High Contrast Skin look and feel
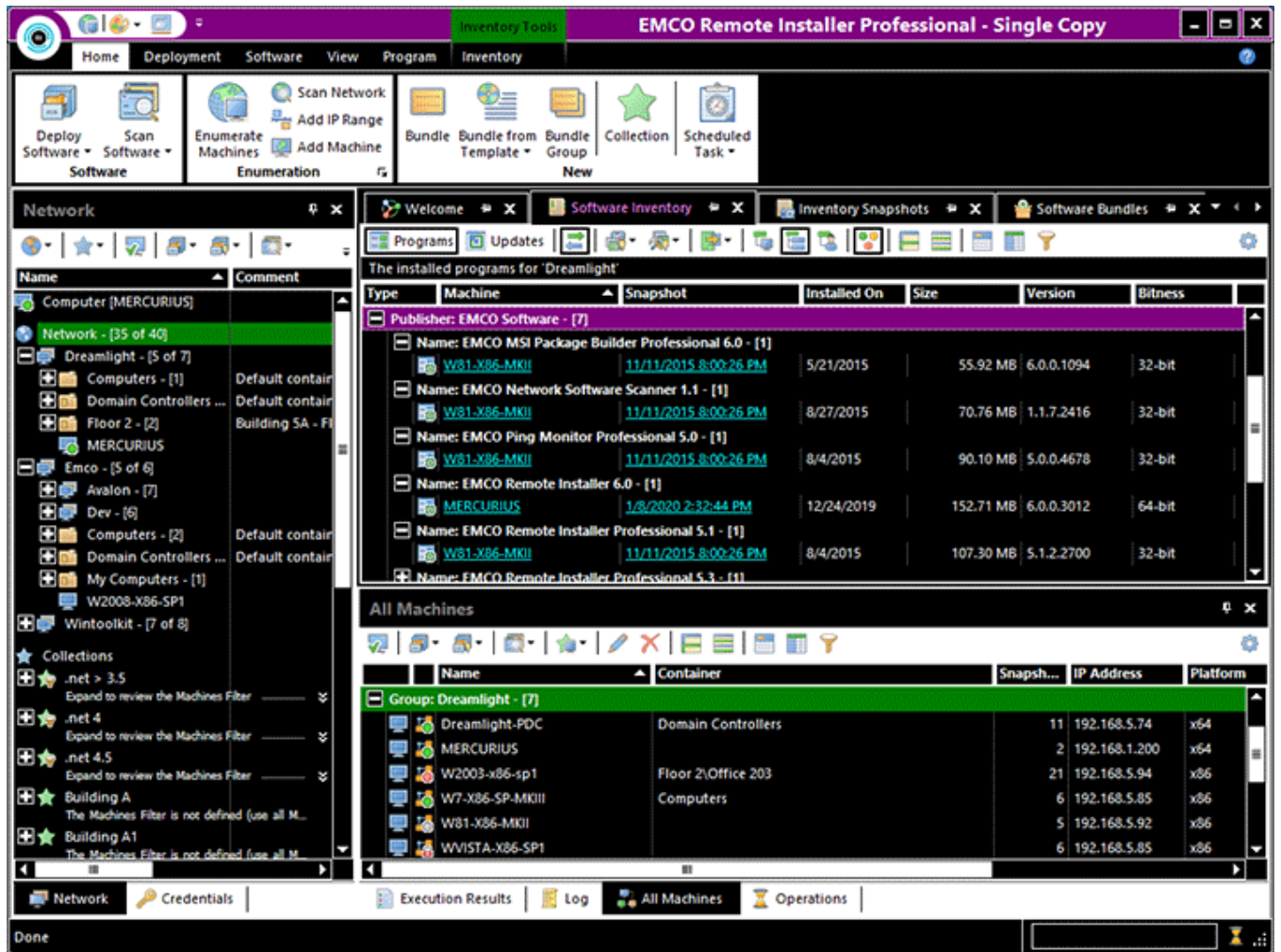
Ribbon

Ribbon is a tool that presents commands organized into a set of tabs. The tabs on the Ribbon represent commands that are most relevant for each of the task areas in the program `Pic 1`. For example, in Office Word the tabs group commands by activities such as inserting objects like pictures and tables, doing page layout, working with preferences, doing mailings, and reviewing. The Home tab provides an easy access to the most frequently used commands. Office Excel has a similar set of tabs that make sense for spreadsheet work including tabs for working with formulas, managing data, and reviewing. Those tabs simplify access to the program features, because they organize the commands in a way that reflects the tasks people perform in those programs.
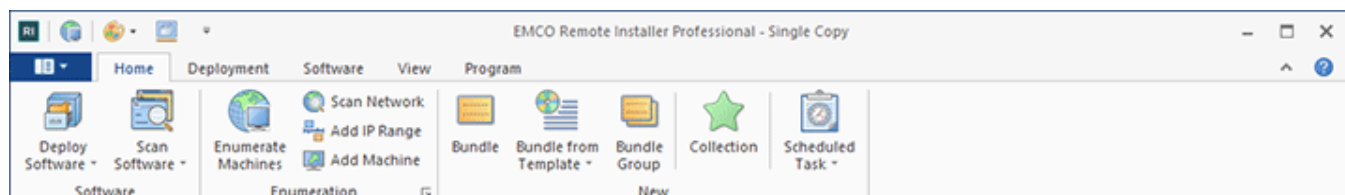
Pic 1. The Ribbon bar

We are delighted to let you know that we fully conform with *Microsoft® Ribbons Guidelines* and would like to introduce some Ribbon features to you. To learn more about Ribbon, the story of its development and its usability features, you may visit *'The Story of the Ribbon'* article from the MSDN blogs.

Application Menu

The **Application Menu** invoked using the **Application** button `Pic 2` is somewhat similar to the File menu in most programs that use a classic user interface, but it gives you more.
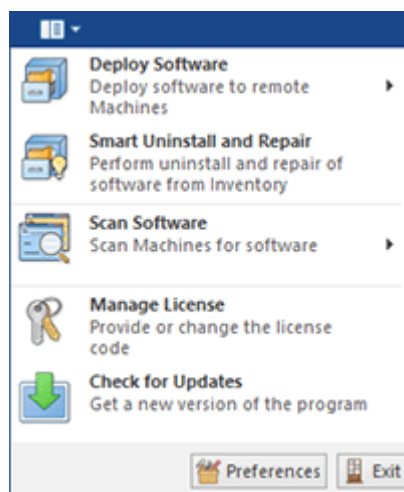
Pic 2. Application Menu

It contains links to the most helpful actions located under different tabs but made available from one access point.

Quick Access Toolbar

The **Quick Access Toolbar** `Pic 3` is an end-user customizable bar located near the **Application Menu** or below the Ribbon bar depending on the configuration. It can contain links to both Ribbon items and Ribbon groups.

Pic 3. Quick Access Toolbar

To add an action link to the quick access toolbar, right click this action and select **Add to Quick Access Toolbar** from the pop-up menu. The groups can be added in the same way, the only difference being that to add a group you should right click its caption.

Representation and Navigation Features

The representation of the Ribbon bar can also be configured to make your work more comfortable. You can minimize Ribbon so that the tab's content is only shown when the tab is clicked on, thus extending the program workspace. Also, if it is not convenient for you to have the **Quick Access Toolbar** next to the **Application Menu**, you may place it below the Ribbon bar, so that it will look just like a simple toolbar. This configuration can be accessed from the pop-up menu of the Ribbon bar `Pic 4`.
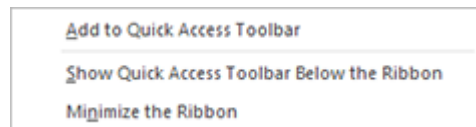
Pic 4. The Ribbon customization menu

Navigation between the Ribbon tabs can be performed not only with a mouse click on a tab but also with the help of the mouse wheel. Just place the cursor over any tab and scroll the wheel – scrolling up will switch the tabs from right to left, and scrolling down will switch the tabs in the opposite direction.

Main features of UI Elements

The graphics shell used for Remote Installer is aimed at providing a high level of usability to everyone. This topic covers main features of the graphical elements used in this program, and here you can find what puts EMCO GUI a step ahead of the others.

Docking

The Remote Installer user interface is built using the ultimate docking technology which provides for the maximum use of the program working area. It allows docking the windows that are used less often than the main one to the sides, auto hide them or even close and then open again when required. The dock panels can be docked both to the main window and to each other, thus enabling you to build such a subsidiary window layout that makes you feel comfortable while working with Remote Installer `Pic 1`.
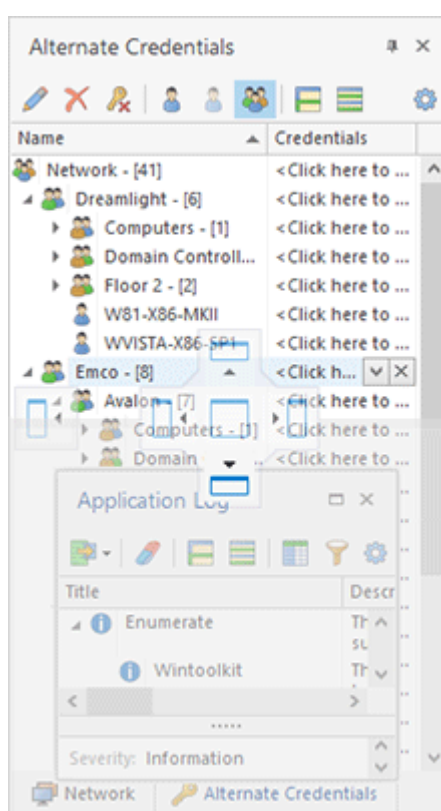
Pic 1. Docking preview

To change the position of any dock window, you should click its header and move the mouse pointer while holding the left mouse button down. Hint windows are shown to help you understand where you can drop the window dragged. When you are dragging it over another dock window, it is possible to dock both windows to each other or display them in different tabs of the same dock window. When a dock window is floating, you can expand it to full screen by either clicking the **Full Screen** button in the windows title bar or pressing **F11** on the keyboard. To exit the full screen mode, just press **F11**.

To enable the auto hide feature for a window attached to any side of a main window, click the pin button in the dock window header. Clicking the cross button results in closing of the dock window. Each view can also be closed and opened again using the checkboxes in the **Show** Ribbon group accessible from the **View** page.

Grouping and Filtering Data

The Remote Installer user interface is designed so as to make its usage as flexible as possible. The tables available in every EMCO program provide you with an easy-to-use data filtration and grouping mechanism. To group data by one of the columns, you should drag its header to the grouping box displayed over the table or choose an appropriate item from the column header pop-up menu `Pic 2`.
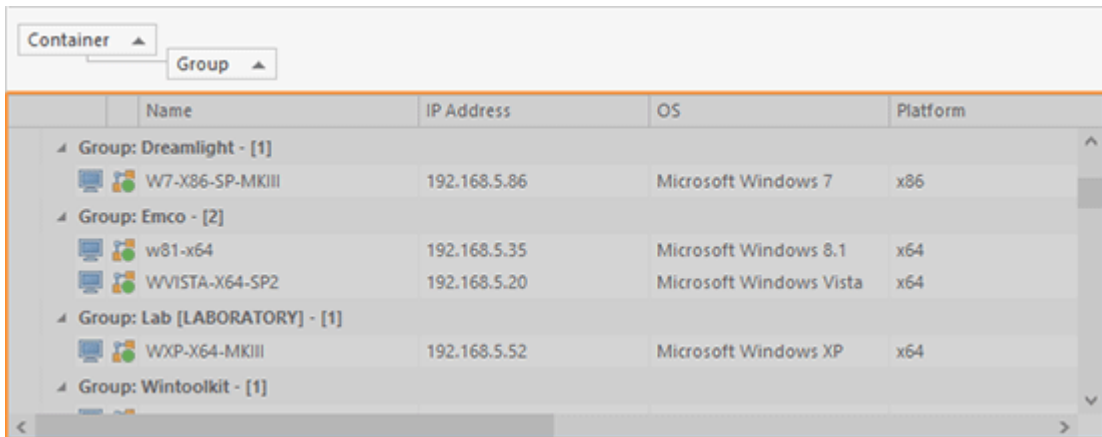
Pic 2. The grouping box of a table grouped by two columns

To group or ungroup data by any column when **Group By Box** `Pic 2` is not visible, you can have it displayed by selecting the **Show Group By Box** item from the pop-up menu of any column header.

Data filtration can be performed in two ways: by using the quick filter or the filter editor. To use the quick filter feature, just click on the glyph in the right top corner of any column header. A drop-down list appears offering you to choose one of the predefined filters or select the custom one from the filtering dialog `Pic 3`.
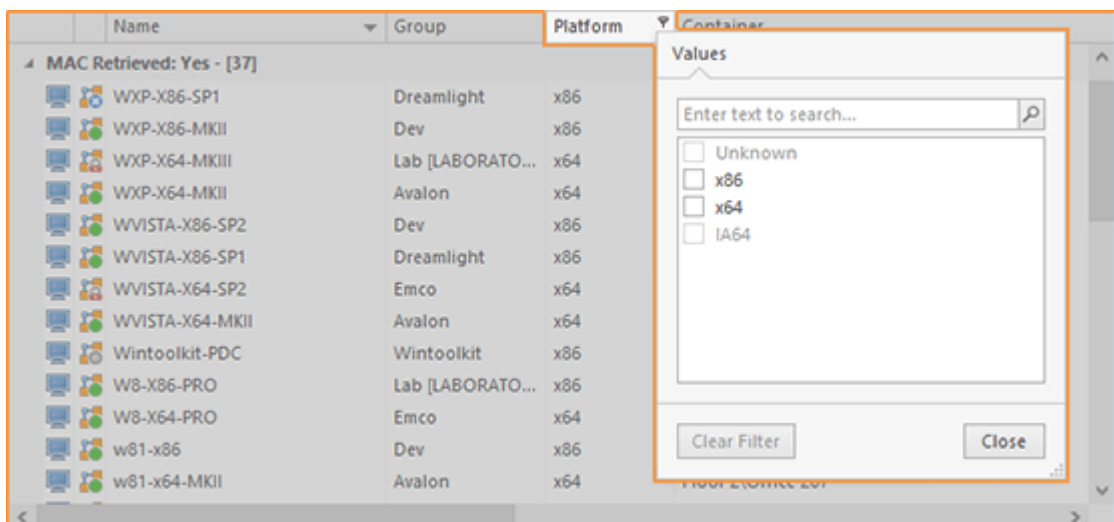
Pic 3. Accessing the quick filter abilities

     90

The **Filter Editor** shipped with Remote Installer is easy to use and allows you to build your own complex filters quickly and easily Pic 4 . To open the filter editor, choose the **Filter Editor** item from the column's pop-up menu.
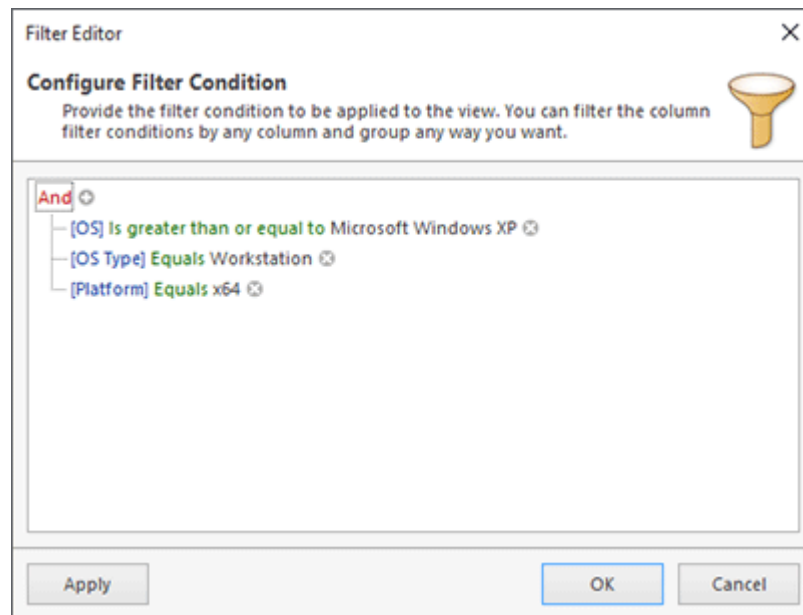
Pic 4. Using the filter editor

You can enable and disable the currently applied filter condition using the checkbox displayed next to the filter condition in the bottom of the view, inside the filter info pane Pic 5 .
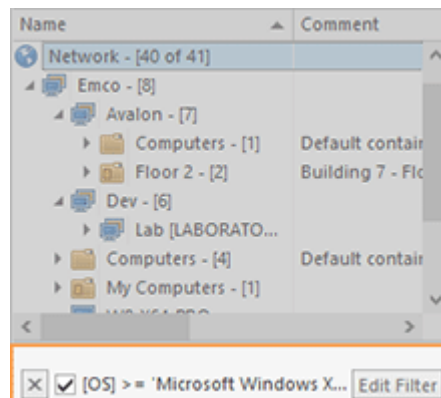
Pic 5. The filter info pane

To reset the currently applied filter use the ⊠ button from the filter info pane, and to customize it use the **Edit Filter** button from this pane.

Managing Columns in Trees and Tables

You can customize almost every table and tree in EMCO programs by moving and removing columns to make the control most informative for you. To move a column, drag it over the control's header and drop between other columns to its new position Pic 6.
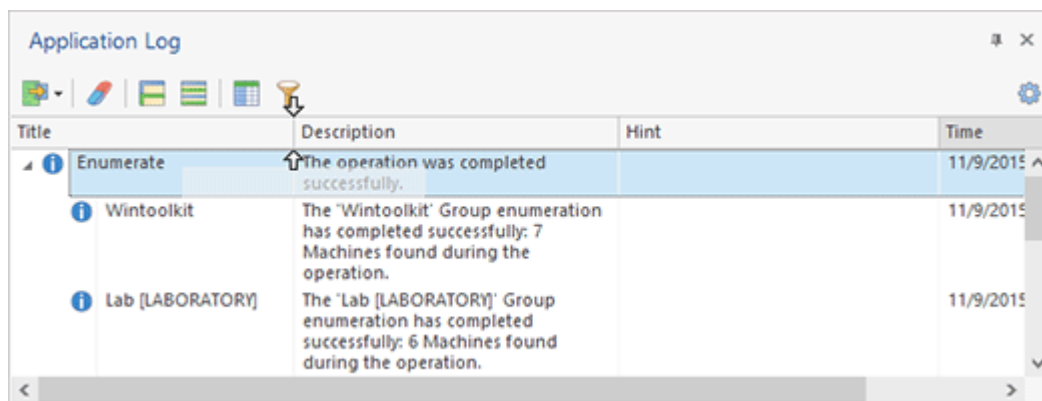
Pic 6. Moving a column

To remove a column that is of no use for you, right click the control's header and select the **Remove This Column** item from the pop-up menu. Also, you can control columns availability using the column chooser Pic 7.
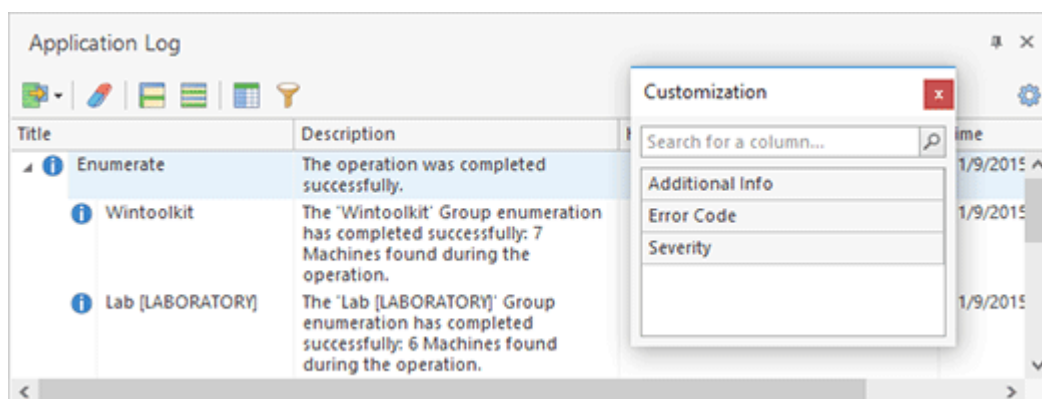
Pic 7. Using the column chooser

To show the column chooser, right click the control's header and select the **Column Chooser** menu item. After that, you can drag and drop columns from the header to the column chooser and backwards.

Automatic Saving and Restoring of Windows Layout

One of the service functions of Remote Installer user interface is its ability to save and restore the windows layout. All the changeable parameters like the windows sizes and positions; the table columns order, sizes and positions; the grouping and filtering options; the dock windows configuration, etc. are saved between sessions. Thus, you do not need to configure the program's user interface layout every time you start this program.

Chapter 4: Deployment

The main goals of Remote Installer is to equip you with easy-to-use features of installing, uninstalling and repairing software all over your network. This chapter is aimed at introducing you to the main features of Remote Installer and helping you to use them. After reading this part, you will gain a better understanding of the concept of the program and be able to use it without any problems.

Remote Installer supports installing, uninstalling and repairing of the products deployed using the following installer types: **Executable Installer**, **Windows Installer Package** and **Microsoft Software Patch**. Using an executable installer, you can install programs, updates and patches. As Remote Installer allows you to operate multiple Machines at the same time, there is a possibility that one part of the operated Machines will be running the x86 operating system and the other part will be running the x64 system. The concept of a multi-platform deployment package allows you to define a single deployment package for both target platforms and provide different deployment options, if required. For example, you can use different installation files, apply different MSI transforms and run different pre and post actions for Machines running the x86 or x64 systems.

Another important thing you should always keep in mind is that with Remote Installer you perform a silent deployment, i.e. a deployment performed without any interaction with the user. Thus, the installer should be properly configured for unattended deployment.

In this chapter, we will show you how to configure installers for silent deployment and how to check if an installer is configured correctly.

Remote Deployment Particularities

Remote Installer is designed to perform remote deployment. The process of deploying software remotely differs from regular deployment. Mostly, remote deployment is performed in a silent manner and requires a correct configuration of the installers. By default, most of the installation setup programs guide the end user through the setup wizard, thus the interaction with the user is required to complete the setup. For mass deployment, it is very important that the deployment process be performed without any interaction with the user. Installation setup programs mostly support silent execution, but the execution parameters may vary depending on the installation vendor. Another important thing for remote deployment is the account used to perform it. In this chapter, we will show you how to choose the account to be used for deployments, how to configure installers for silent deployment and how to check if the installer is configured correctly before performing a mass deployment.

How should I choose the account to be used for deployment?

Remote Installer allows you to choose the account to be used for deployments, both by default and for particular deployments, and specify if the deployment should be performed interactively. The configuration is available via deployment account settings. Let us take a closer look at each of the available options and the cases they should be used in.
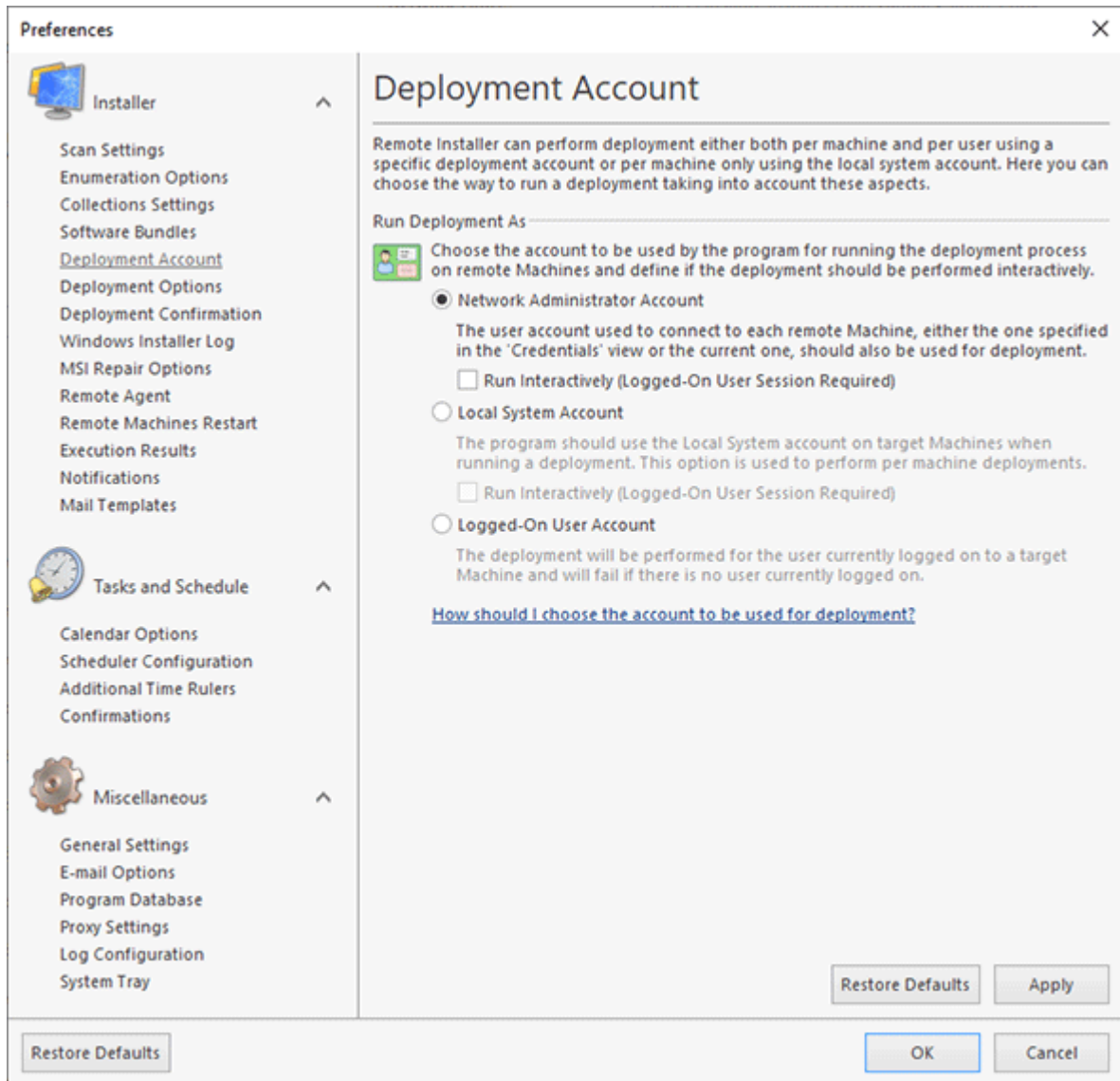
Pic 1. A sample deployment account settings configuration

Let us start with the **Network Administrator Account** option. When this option is active, Remote Installer executes deployments on target computers from the same user account as used to connect to a remote Machine. This option is suitable for the vast majority of deployments, thus is recommended for Preferences. You can perform a deployment using the network administrator account both in non-interactive and interactive sessions. Interactive deployment should be used if silent deployment is not supported, so the user input is required to complete the deployment. The same goal can be reached using the **Logged-On User Account** option. The only difference is that the network administrator mode allows you to run deployments that require administrative rights that logged-on users may not have. Since such types of deployment are more specialized and running a deployment in an interactive user session requires more operating system resources, it is recommended that you apply this option to a particular deployment operation or package only if needed. When running a deployment interactively as the deploying user, you should make sure that explicit network administrator credentials are specified. This ensures access to the desktop of the currently logged-on user starting from Windows Vista, as it is not possible to grant such an access to the account used for an implicit network logon. The administrative credentials for accessing remote Machines are provided in the **Credentials** view.

As for the **Local System Account** option, it should only be used if excessive permissions are required to perform a per-machine deployment. This type of deployment is very rare. It is recommended that you apply this option to a particular deployment operation or package only if needed. For this option, you can also enable interactive deployment to run the process in a session of the currently logged-on user, if an unattended setup is not supported.

The **Logged-On User Account** option commands Remote Installer to run a deployment interactively as the user currently logged on to a remote Machine. The deployment process will proceed in the same way as if the user had simply launched the installation setup program by himself. This option is used to deploy applications that are installed per user or when the logged-on user needs to provide information for the deployment to succeed. Such types of deployment are highly specialized. It is recommended that you apply this option to a particular deployment operation or package only if needed.

Now that you are familiar with the options available for running remote deployments as different types of users and the use cases for those options, you should be able to choose the best one for reaching your specific goals.

How to configure installers for silent deployment?

With Remote Installer, products are mostly deployed to remote Machines silently. This means that the install, uninstall and repair process is fully unattended, thus no interaction with the user is required. This concept allows using the program to perform a mass deployment. However, if the installer configuration is incorrect, the deployment process may hang, and although we have done our best to allow you to cancel the deployment process, it might be impossible to do so, and the remote Machines reboot might be required to proceed with further deployment or to try to perform the failed deployment again. In this chapter, we will describe how to configure the installers to avoid problems during a silent deployment.

Windows Installer Packages and Microsoft Software Patches are installed using the Windows Installer technology, and no additional configuration is required to perform a silent deployment, but the default silent installation scenario might differ from the required scenario. The installation scenario for Windows Installer Packages can be changed to fit your needs by using the Windows Installer Transforms or Additional Properties. Using these options, you can change the installation target directory, provide the license codes to be applied, etc. The transforms for different installation scenarios might be available together with the installation packages, and you can generate your own ones. You should contact the installation package vendor for the set of properties that can be passed to Windows Installer while deploying this or that product.

The situation with products deployed via executable installers is a little bit more complex. By default, the installation setup is performed through a wizard, and sometimes there is no default scenario. Besides, there is no common way to determine if the deployment process has actually succeeded or not, like it can be done with Windows Installer Packages. So how should you configure the installer for the deployment process to succeed? Let us try to answer this question using, for example, the installation of the product deployed via an executable installer.
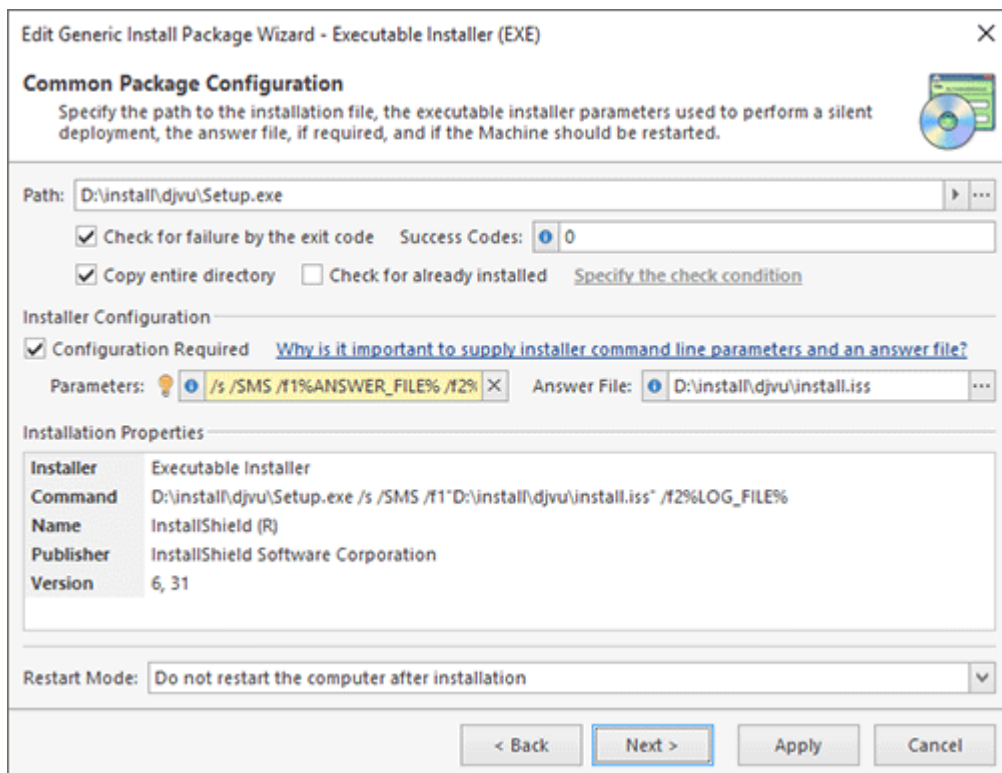
Pic 1. Configuring the executable installer

The behavior of the installation setup is commonly configured with the help of command line parameters passed to the installer. Those parameters must be provided to the **Parameters** field while defining the common configuration. Such parameters may vary depending on the installation vendor, and you should contact the vendor for proper parameters to be used during a silent deployment.

> While performing an uninstall of products installed via the known installer types, the program will fill the **Parameters** field with the required value. Nevertheless, it is still required to double-check the parameters.

The parameters can contain the *%LOG_FILE%* and *%ANSWER_FILE%* placeholders. The *%LOG_FILE%* placeholder should be used instead of the path to the log file to be passed to the installer. If you use this parameter properly, the installer log will be available in the detailed log. The *%ANSWER_FILE%* placeholder should be used instead of the path to the installation answer file. The answer file is a helper file for the installer that contains the answers to the questions the setup wizard asks on each step. You should contact the installation vendor to find out if an answer file is required and how to generate a proper answer file.

The last but not least important thing during the installer configuration is specifying the exit codes of the installer application to be interpreted as successful deployment completion. Contact the installation package vendor to find out if the installer setup supports checking for errors based on the exit code value and to get the list of exit codes.

Also, please take into account that if you would like to use the Pre & Post Actions to be executed before and/or after the deployment process, you must guarantee that those actions are executed without any interaction with a user, because if the action execution hangs, the whole deployment process also hangs.

Why is it important to supply installer command line parameters and an answer file?

As most executable installers are designed to run in a silent mode, when run using specific command line options only, a proper executable installer configuration is required for the deployment process to succeed. If the installer is configured incorrectly, the deployment process may pause to wait for user input, and as there is no user during the remote deployment process, it will hang indefinitely. Although we have done our best to let you cancel the deployment process that has hanged, there is no guarantee that it will be canceled properly and you will be able to redeploy the product or deploy other products.

Now let us look at the importance of an answer file. In some cases, the installer simply does not provide a default installation sequence without any user input, so a silent deployment without any additional configuration is impossible. Such installers commonly provide a technique for recoding an answer file to perform the deployment saving the user answers to that file. Another example is setups that use the same command for uninstall and repair and simply ask you what you would like to do on the first step of the installation wizard. If you launch an uninstall using this command with a default scenario, the installation setup may simply perform a repair and that is not what you are expecting.

As a conclusion, we should emphasize that it is always absolutely necessary to provide correct parameters to be passed to the installer setup and the answer file, if required. You should contact the installation package vendor or do Internet search to get the proper parameters to be passed to each executable installer setup.

How can I check if the installer is configured correctly?

Before performing a remote mass deployment, it is strongly recommended to check if the installer is configured correctly for silent deployment to avoid problems and to save your time. An incorrect configuration may lead to hanging of the deployment process, which might require a reboot for all Machines you are deploying the product to. In this section, we will show you how to check if the installer is configured correctly for silent deployment.

Remote Installer performs deployment with the help of a remote service, so it is not necessary for any user to be logged on a remote Machine to perform installation. To check the installer configuration, we should check if any user interaction is required during the deployment process. To perform such a check, we should use a test Machine: this may be a virtual PC running Microsoft Windows® Vista or a newer operating system. The service runs in a specific session called *Session 0*, and the operating system provides methods to access the desktops of this session.

To perform a check, we should install the remote service to this machine and enable interaction with the desktop. To enable interaction with the desktop, you should open the service properties in the computer management console and check the **Allow service to interact with desktop** option on the **Log On** tab `Pic 1`.
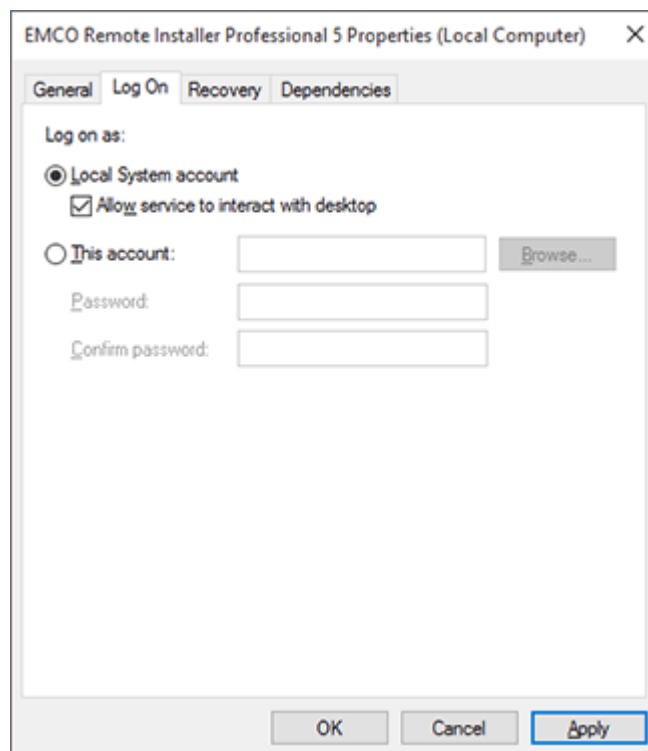
Pic 1. Configuring the remote service

The next step is enabling the Interactive Service Detection Service. If the service is started, the users are notified when a dialog box or window (including a command window) appears in *Session 0*. If more information is shown, details of each of the last ten dialog boxes appear in turn.

> Sessions on the glass — at the physical system — always receive notification as long as the feature is not disabled. In client SKUs of Windows Vista and later versions, the remote desktop session is notified when the user is remote instead of on the glass. In server SKUs of Windows Server 2008 and later versions, the remote administration sessions are notified if they are in use. When a Microsoft Terminal Services application server role is on the system, only the administrative sessions are notified and regular user sessions are never notified.

To enable this service, run the command prompt as administrator and type in the following commands:

sc config ui0detect start=demand

sc start ui0detect

If you prefer to configure the service via the user interface, you should open its properties in the computer management console and choose the **Manual** startup type on the **General** tab. After that, select this service and choose **Start** from the pop-up menu.

Now that the Interactive Service Detection Service is running, it will notify you each time a window appears in *Session 0*. Optionally, you can switch to *Session 0* manually using the following command:

rundll32 winsta.dll,WinStationSwitchToServicesSession

In the next step, let us try to perform remote deployment to the test Machine. If any window is displayed, you will get the following notification box `Pic 2`.
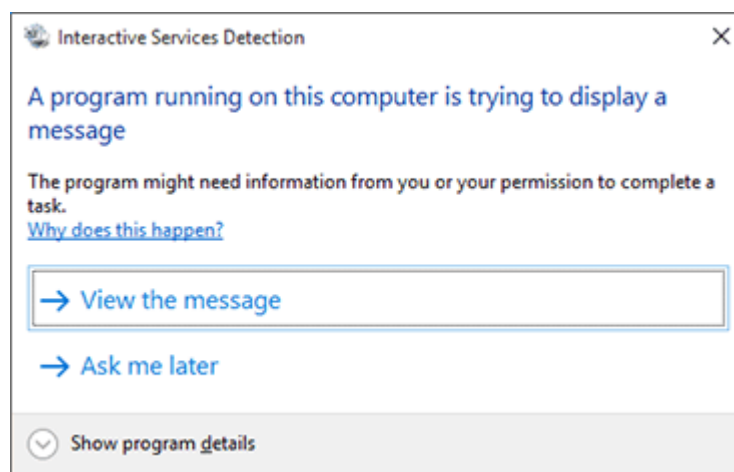
Pic 2. Interactive Services Detection notification

Choose the **View the message** option to switch to *Session 0*. As soon as you have switched to *Session 0*, you will be able to see the window displayed by the installer setup. This may be a simple progress window, which is not a problem, but if the window is waiting for user input, then the installer is configured incorrectly. If this is the case, you can cancel the deployment manually using the setup wizard and press the **Return Now** button in the Interactive Services Detection window on the *Session 0* desktop. Next, you should make corrections to the installer configuration and try running the deployment process again until it is successful.

As soon as you are satisfied with the testing results, you can disable the Interactive Service Detection Service on the test Machine and deploy the correctly configured package to remote Machines.

We hope you will find this information useful and helpful for configuring of your deployment operations.

Deployment from Network Share

Remote Installer supports two deployment kinds, those are local and network. The deployment kind is detected automatically depending on path to the setup file. When a UNC path is used, the installer is launched from a network share, whereas it is copied to each remote Machine before performing the installation when an absolute local path is used. In any case, the user account used for deployment should have sufficient privileges to perform all deployment steps. The account used is configured within the deployment account settings. You can either configure Remote Installer to use the account that can access the network share and has administrative privileges on a remote Machine or configure the access to the network share so as to grant access to a **Local System** account if you choose to use it for deployment. Let us take a closer look at both approaches.

Using an administrative user account

Using an administrative user account is the preferred method for performing remote deployment. You can either use the domain administrator credentials or create a special user account that will be used only for performing remote deployment. The requirement to that account is that it should have administrative privileges on each target Machine and be able to access the network share with the installations repository.

⚠️ In case you have not provided the network administrator credentials during the initial program configuration or within the **Credentials** view, the current user account is implicitly used for deployments. Even if the current user account is the administrative one, it is strongly recommended that the administrative credentials be defined explicitly since only the minimum necessary information on a connecting user is passed to a remote Machine by the operating system when performing network authentication. Otherwise, the following limitations arise: the process run as an implicitly retrieved user account won't be able to authenticate for accessing network shares unless a domain environment is used and both the user and computer accounts are trusted for Kerberos delegation.

The account used for deployment is the same as the one used for connecting to a remote Machine. It is provided in the **Credentials** view. You can provide a single account for the entire network or specific accounts for groups or individual Machines Pic 1 .

Pic 1. Providing credentials for a domain and a workgroup

Within a domain environment, it is sufficient to use any user account that is a member of the **Domain Administrators** group. Inside a workgroup environment, there are no user accounts shared between Machines, so it is required that each Machine should to have an account that is a member of the local **Administrators** group with the same credentials as specified to be able to use the described approach.

> In the provided example for the domain environment settings, it is supposed that the *installer@wintoolkit.local* is a domain administrator account within the *wintoolkit* domain, and for the workgroup environment settings, the *.\installer* notation means that for each Machine its local user is used. Thus, target Machines and the Machine containing a network share with the installations repository must have the local *installer* user that belongs to the *Administrators* group.

In case your configuration is meant to run deployments as the user currently logged on to a remote Machine, you should configure the network share to allow access for that user.

Using the Local System account

The approach of using the **Local System account** to perform deployments from network shares can be used only within a domain environment. Such an account has extensive privileges on the local computer and acts as a computer on the network, so the network share should be configured so as to allow access for each target computer.
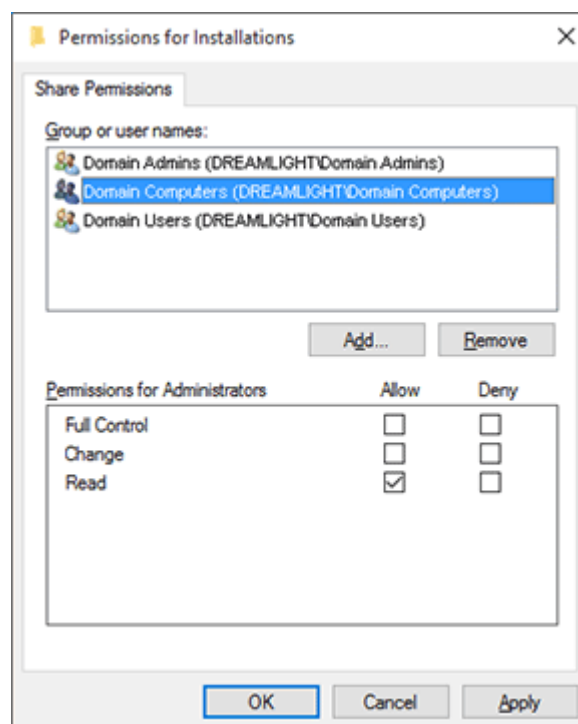
Pic 2. Configuring a network share to allow access for domain Machines

To reach the goal, you should grant access for the **Domain Computers** group. Optionally, you can grant access to **Everyone**, if applicable. To configure the share permissions, you should open the share properties, switch to the **Sharing** tab and press the **Permissions** button.
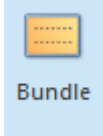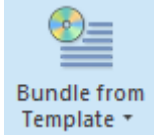
As you can see, the ability to deploy from a network share depends on the environment configuration. Now that you have been introduced to the approaches used to enable this option under different environments, you should be able to use this feature without any difficulties.

Software Bundles

Bundles are used to configure and distribute software. A bundle consists of deployment packages that define how to install, uninstall and/or repair a specific piece of software. Each deployment package within a bundle consists of all the files, configuration settings, installation instructions, etc. required to deploy and manage an application on a remote Machine. Bundles can be grouped logically within Bundle Groups. Creating Bundle Groups supports administration efforts by letting you deploy group rather than each individual Bundle to remote Machines. For example, a Bundle Group may contain an application and a set of patches for it. Bundle Groups may contain both Bundles and other Bundle Groups, so you can, for example, create a Bundle Group defining a group of applications for graphical designers, including all application with their patches grouped within other Bundle Groups. All Bundles and Bundle Groups are displayed in the **Software Bundles** view and are used for software deployment.

Bundles Management

Bundles and Bundle Groups are managed in the **Software Bundles** view. In this section of the document, we will explain how to create Bundles and Bundle Groups, edit them and delete when they are no longer needed.

Bundle	**Bundle** The **Bundle** button from the **New** Ribbon group on the **Home** page and on the **Software Bundles** contextual page from the **Software Bundles Tools** category should be used to create a new Bundle and add it to the Software Bundles repository.
Bundle from Template	**Bundle from Template** The **Bundle from Template** button from the **New** Ribbon group on the **Home** page and on the **Software Bundles** contextual page from the **Software Bundles Tools** category allows you to create a Bundle from an already defined or new template.

You can create generic Bundles or create Bundles from templates. Bundle templates are configured in the program preferences and already contain a set of predefined preferences most commonly used by applications vendors. When creating a Bundle from a template, you are going through a simple wizard and configure only required settings for install, uninstall and repair packages within a bundle. Any additional configuration, such as pre and post actions, can be done in future when editing the created Bundle. To create a Bundle from a template, you can use the **Bundle from Template** button from the **New** Ribbon group on the **Home** page, the **Bundle from Template** item from the **New** button drop-down on the **Software Bundles** view toolbar or the corresponding item in the pop-up menu. You can either choose a template from those available or create a new one.

Creating a generic Bundle is a more complex task, but it allows you to configure each and every aspect of deployment packages during the Bundle creation process. To create a new Bundle, you can press the **Bundle** button from the **New** Ribbon group on the **Home** page or on the **Software Bundles** contextual page. Alternatively, you can use the **New > Bundle** item from the **Software Bundles** view pop-up menu or the **Bundle** item from the **New** button on the toolbar. The **New Bundle** dialog will appear on the screen for you to configure the Bundle being created `Pic 1`.

Pic 1. Creating a Bundle

When creating a Bundle, you should define a name for the bundle, an optional comment, a publisher, a version and the install, uninstall and/or repair packages for managing the software represented by this Bundle, if applicable. The name, the publisher and the version can be filled with corresponding properties of the installation automatically while it is being added if they have not been changed manually. The install package should be defined if you are going to install this Bundle to remote Machines. The same requirement also applies to uninstall and repair packages. At least one of the deployment packages must be defined to create a Bundle. To define a deployment package, you should use the hyperlink on the appropriate tab page. When a deployment package is defined, the deployment package summary is displayed on the page, and you can either edit or reset it using the hyperlinks. Resetting is required if you would like to change either the type or the kind of the deployment package. After the Bundle has been configured, press **Create** to add it to the Software Bundles repository to be used in future deployments.

Bundle Group

The **Bundle Group** button from the **New** Ribbon group on the **Home** page and on the **Software Bundles** contextual page from the **Software Bundles Tools** category should be used to create a new Bundle Group and add it to the Software Bundles repository.

To create a new Bundle Group, you can press the **Bundle Group** button from the **New** Ribbon group on the **Home** page or on the **Software Bundles** contextual page from the **Software Bundles Tools** category. Alternatively, you can use the **New > Bundle Group** item from the **Software Bundles** view pop-up menu or the **Bundle Group** item from the **New** button on the toolbar. The **New Bundle Group** dialog will appear on the screen for you to configure the Bundle Group being created Pic 2.
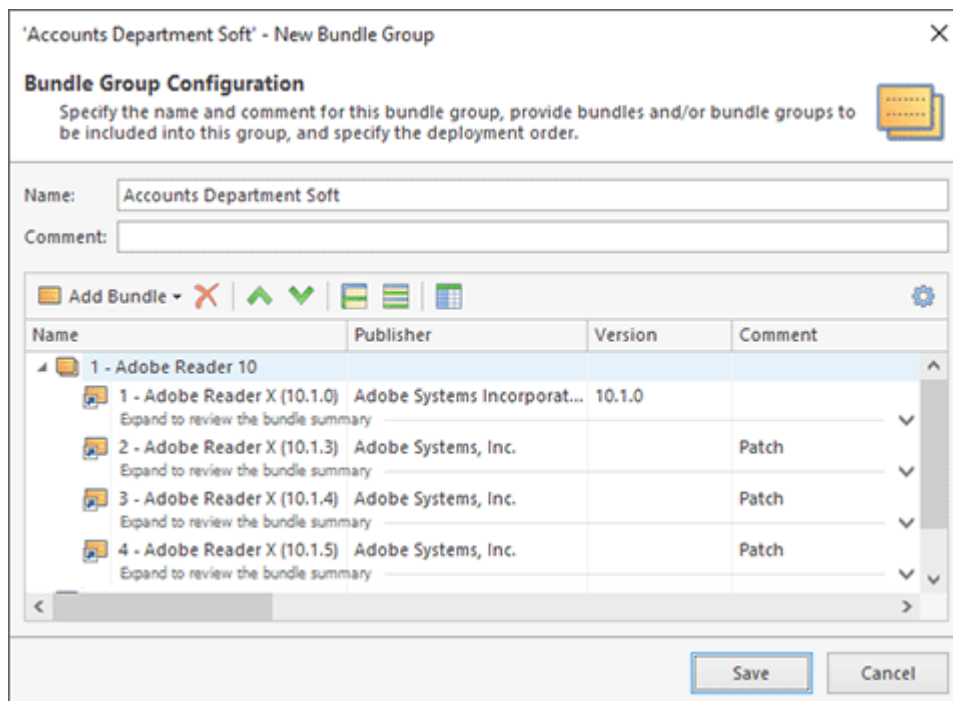
Pic 2. Creating a Bundle Group

When creating a Bundle Group, you a proposed to define the group name and comment as well as the set of Bundles and Bundle Groups to be included into the Group being created and their deployment order. The name and comment are used to make it easier for you to identify in the future the Bundle Group being created. The defined deployment order is used during install and repair operations, and it is reversed for uninstall operations. To add a Bundle or a Bundle Group to the Bundle Group being created, use the **Add Bundles** button from the bundles table toolbar or choose an appropriate item from the pop-up menu. The pop-up menu will be displayed to let you choose the Bundles to be added. The Bundles and Bundle Groups that are already in the Bundle Group being created are filtered from those available. It is also possible to create a new Bundle to be added to the Group. The **Remove Bundles** button and menu item are used to remove the selected Bundles and Bundle Groups from the Bundle Group being created. The deployment order is controlled using the **Move Up** and **Move Down** items from the toolbar and pop-up menu. After the Bundle Group is configured, press **Create** to add it to the Software Bundles repository to be used in future deployments.
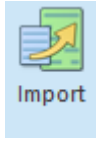
To edit any Bundle or Bundle Group, select it in the **Software Bundles** view and either choose the **Edit** button from the **Organize** Ribbon group on the **Program** page or use the **Edit** items from the **Software Bundles** view toolbar and pop-up menu. The editing process is similar to that of creation. When some Bundles or Bundle Groups are no longer needed, you can delete them using either the **Delete** button from the **Organize** Ribbon group on the **Program** page or the **Delete** items from the **Software Bundles** view toolbar and pop-up menu. The **Delete** button can also be used to remove Bundles from Bundle Groups. When you delete Bundles and Bundle Groups, they are also deleted from all the deployment tasks they are currently included into. You can preview the affected references within the deletion confirmation dialog.

Within the **Software Bundles** view, it is also possible to copy and move Bundles and Bundle Groups among other Bundle Groups, as well as create their duplicates. This can be done either via the drag and drop technique or via the copy/paste method. The **Cut**, **Copy**, and **Paste** items from the **Clipboard** Ribbon group on the **Program** page can be used, as well as the appropriate items from the pop-up menu. It is also possible to use the export feature for Bundles and Bundle Groups. For details on import and export, refer to the Importing and Exporting Bundles section of this document.

Now that you have been introduced to the Software Bundles management process, you should be ready to prepare Bundles and Bundle Groups for solving your remote deployment tasks.

Importing and Exporting Bundles

With Remote Installer, you can easily import and export Bundles and Bundle Groups any time you want. You can export one or all of the available Software Bundles to use the exported data as a backup, to share data with your colleagues or simply to import the objects to another instance of the program. The import feature can be used both to import Bundles and Bundle Groups to a Software Bundles repository or into specific Bundle Groups.

	Import
Import	The **Import** button from the **Organize** Ribbon group on the **Program** page can be used to import Bundles and Bundle Groups from an XML file with the help of the wizard.

If you want to import Bundles and Bundle Groups into Remote Installer, press the **Import** button from the **Organize** Ribbon group on the **Program** page when the **Software Bundles** view is focused on. Optionally, you can use the **Import** button from the pop-up menu of the **Software Bundles** view. If the Bundle Group is selected, the Bundles and Bundle Groups will be added to that group after being imported. The import wizard will appear on the screen to guide you through the import process `Pic 1`.

Pic 1. The Import Bundles wizard welcome page

The first page of the **Import Bundles** wizard is the welcome page used to introduce you to the feature the wizard is supposed to help you with. After reading the welcome information, press **Next** to continue with import.

On the next page of the **Import Bundles** wizard, you are offered to choose the file you are going to import Bundles from Pic 2 . The file path should be provided to the **Import From** field. The encoding of the XML file with Bundles is detected automatically.
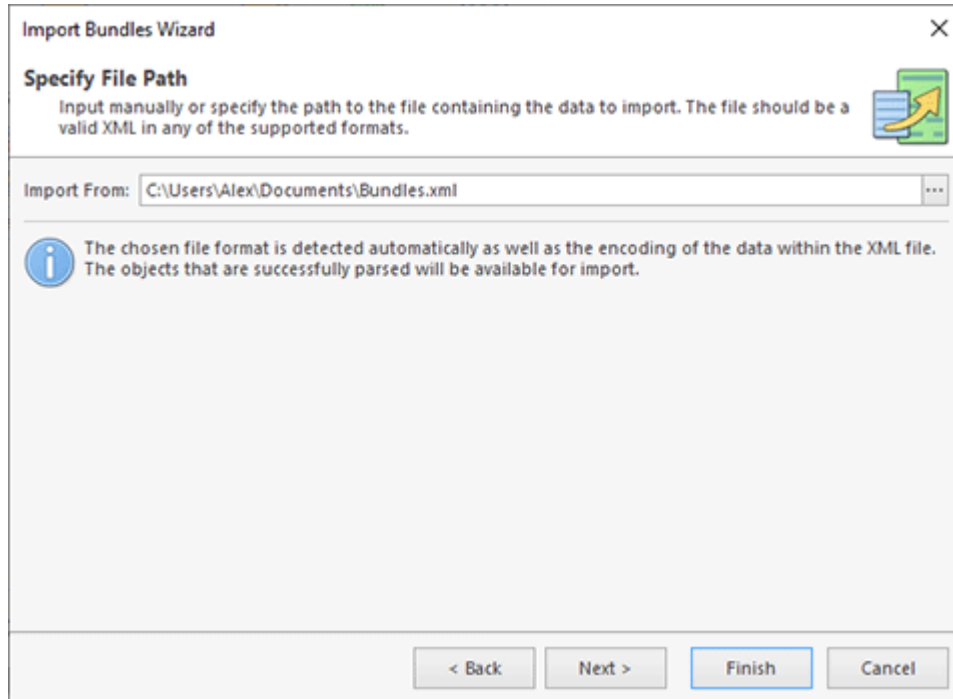
Pic 2. Choosing the import source file

After the path to the required file is provided, press **Next**. The program will check if the file contains valid Bundles data and will display the parsed Bundles to choose from **Pic 3**. In case the file contains the same bundles that are already present in the repository, they won't be checked for import automatically. If you still want to import those Bundles, you can check them manually and choose the conflicts resolution mode. If the **Use existing items for conflicting entries** is chosen, the existing Bundles are used. So if you import the Bundles into a repository, the conflicting entries are skipped, and if you import them into a Bundle Group, the Bundles that currently exist in the program are added. In case the **Create new items for conflicting entries** is chosen, the conflicting entries are imported as new items.
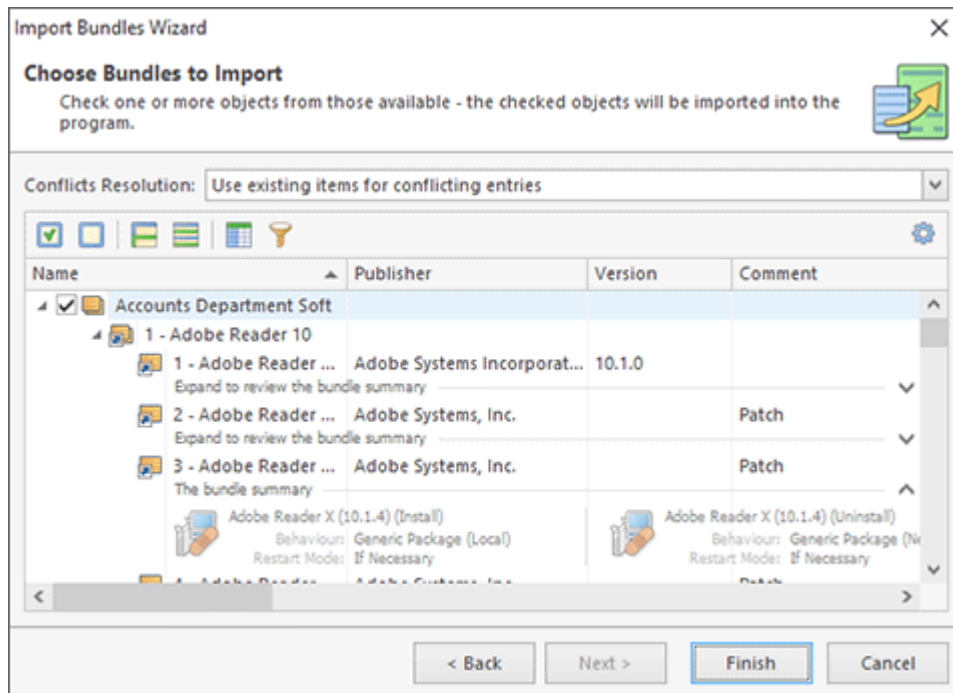
Pic 3. Choosing Software Bundles to import

After the Software Bundles to import and the conflicts resolution mode have been chosen, press the **Finish** button to proceed with import. As soon as the import is completed, the imported Bundles are added to the **Software Bundles** view.

Export

The **Export** button from the **Organize** Ribbon group on the **Program** page can be used to export the Bundles and Bundle Groups from the program to an XML file that can be used in the future for import.

To perform export, select the Bundles and/or Bundle Groups to export and press the **Export** button from the **Organize** Ribbon group on the **Program** page. Alternatively, you can use the **Export Selected** and **Export All** items from the **Software Bundles** view pop-up menu. The **Export Bundles** wizard appears on the screen `Pic 4`.
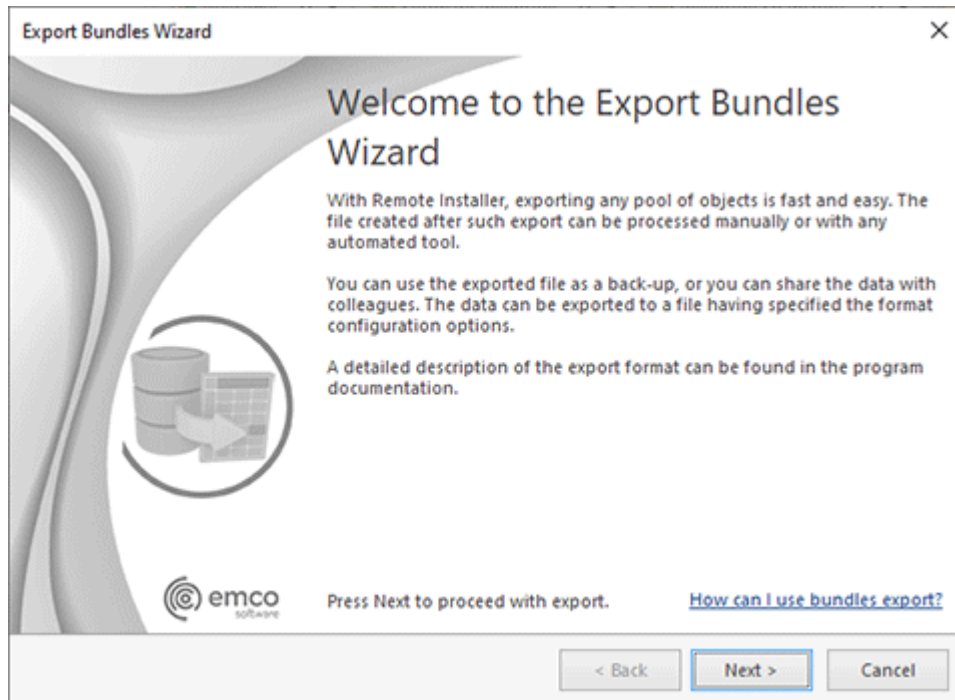
Pic 4. The Export Bundles wizard welcome page

The first page of the export wizard is the welcome page used to introduce you to the feature the wizard is supposed to help you with. After reading the welcome information, press **Next** to continue with export.

On the next page of the **Export Bundles** wizard, you are offered to choose the file you are going to save the Software Bundles to and the file format options `Pic 5`. The file path should be provided to the **Export To** field. You can choose the encoding to be used for saving the objects.

Pic 5. Configuring the export options

              110
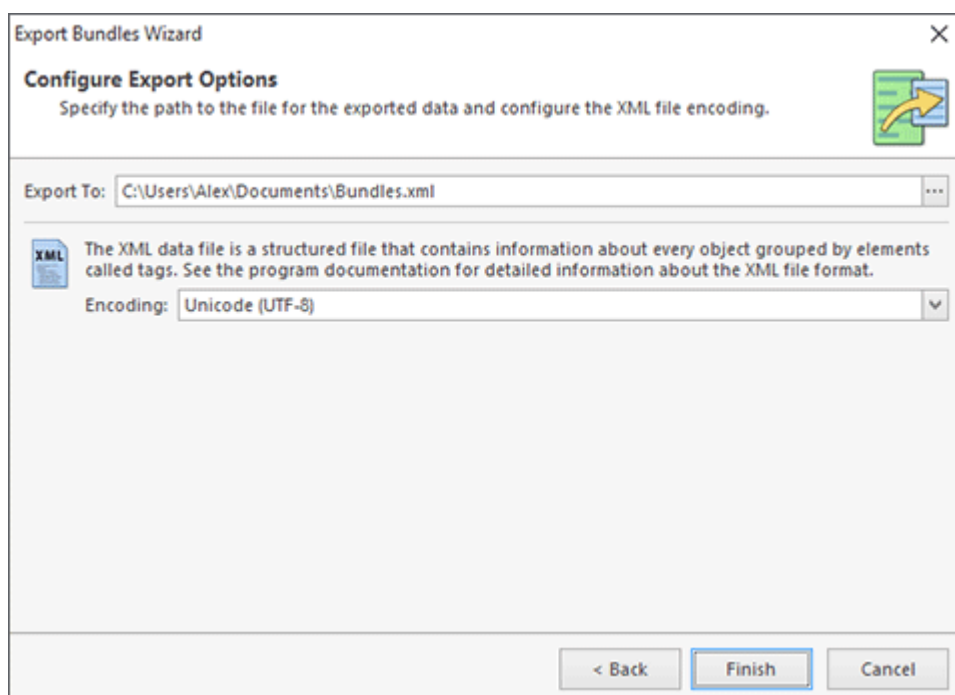
After the file path and the export format have been chosen, press **Finish** to proceed with export. A file containing the exported Software Bundles will be created in the specified path. The file created during export can be used in the future to import the Software Bundles back to the program.

Now that you have been fully introduced to the Software Bundles export and import options available in Remote Installer, you can use them in the future to solve your tasks.

Deployment Packages

The deployment process in Remote Installer is always described by deployment packages. Each deployment package defines the actions to be performed to install, uninstall or repair a single piece of software. The following deployment operations are available: **Install**, **Uninstall**, **Repair**, **Smart Uninstall** and **Smart Repair**. Although you can create new deployment packages for each deployment operation, install, uninstall and repair packages of a single instance of software can be grouped into a **Bundle** that is persisted to the program database. Using Bundles can significantly simplify the deployment operations configuration and the installed software management. Smart uninstall and smart repair packages are created based on the software inventory allowing you to uninstall/repair software only from/on specific Machines.

When configuring a new deployment package, a special attention should be paid to its proper initialization to proceed with its configuration. That is why it is required to answer some simple questions before providing the action deployment options. The first thing to specify for the deployment package is the installer type. You can choose among the **Executable Installer**, **Windows Installer Package** and **Microsoft Software Patch**. The type can also be detected automatically based on the file extension, when an install is performed, or if you choose a product from the inventory when an uninstall or repair is performed. During the next steps, you will be offered to define only those settings that are available for the selected installer type. For example, to install a product using an executable installer you should possibly provide the scenario file to be used for the installation, and for Windows Installer Packages, you can define a set of properties to be used by the installation. Another important initialization parameter is the deployment package kind; it can be either **Generic Package** or the **Multi-Platform Package**. The **Generic Package** kind is used when you are going to use the same deployment parameters for Machines running both the x86 and x64 operating systems, and the **Multi-Platform Package** kind should be used to provide different deployment parameters for Machines running the x86 and x64 operating systems. As for the uninstall and repair packages, you can choose if you would like to select the software to uninstall or repair from the inventory, or provide the required information manually.

The smart uninstall and repair packages configuration process is slightly different. When you are creating a smart package, you are offered to choose the software you would like to uninstall or repair. Then the required number of packages is created. If the packages set already contains the same product to uninstall or repair, a new package is not created; instead, the selected Machines are added to the existing package, so that each package always represents a single piece of software. The installer type is determined automatically, and the package kind is always generic. While editing packages, you can change the scope of Machines for each package.

As it has already been mentioned, the installer type determines the deployment package configuration process, but the configuration concept is always the same: you can define a common package configuration, which is required, optionally define an advanced package configuration, and review the resulting package contents. The configuration process is performed with the help of a wizard. Let us take a closer look at this process using a generic executable installation package as an example.

Pic 1. Generic executable installation package configuration

To install a product to remote Machines, you should specify the deployment package name and provide the path to the installation file (or two installation files if you are configuring a multi-platform deployment package) and the installation parameters. The deployment type is detected automatically based on the path to the installation file. When a UNC path is used, the product is installed from a network share, whereas the installer is copied to each remote Machine before performing the installation when an absolute local path is used. As for the local deployment type, it is possible to copy the entire installation directory to a remote Machine. Other options to specify are the parameters to pass to the executable installer while performing the installation and the optional answer file to be used for a successful silent installation. You can always review the installation properties in the bottom of the common configuration page. This page is quite similar to that of other installer types and deployment modes.

The next step of the deployment package configuration is defining a set of advanced parameters. The advanced configuration is optional and should only be used if required, although this chapter describes each aspect in detail. The set of advanced package configuration options depends on the installer type. Those parameters are the Pre & Post Actions, Windows Installer Transforms, Additional Properties, and the overridden MSI Repair Options and Windows Installer Log settings.

At last, having configured the deployment package, you can review the entire package on the summary page. The features available on that page are described in the Package Summary section.

Install Packages

The program enables you to create the install package for the following installer types:

Executable Installer: when configuring an executable installer package for installation, you should provide the path to the executable installation to be deployed to remote Machines, specify if you would like to check for failure using the exit code of the installer application, provide the parameters to be passed to the installer application for silent deployment and supply the answer file to be used by the installer application, if required.

Executable Installer Configuration

Windows Installer Package: while configuring a Windows Installer Package deployment package for installation, you should simply provide the path to the MSI installation to be deployed to remote Machines.

Windows Installer Package Configuration

Define Generic Install Package Wizard - Windows Installer Package (MSI)   ✕

Common Package Configuration
Specify the path to the installation file and if the Machine should be restarted for the operation to complete.

Path: | D:\Install\vs_setup.msi | ▶ | ⋯

☑ Copy entire directory   ☐ Check for already installed

Installation Properties

Installer	Windows Installer
Command	MsiExec.exe /i "D:\Install\vs_setup.msi" /qn /log %LOG_FILE% ALLUSERS="1" REBOOT="ReallySuppres...
Name	Visual Studio .NET Enterprise Architect 2003 - English
Publisher	Microsoft
Version	7.1.3088

Restart Mode: | Restart the computer only if necessary | ⌄

< Back   Next >   Define   Cancel

Microsoft Software Patch: while configuring a Microsoft Software Patch package for installation, you should provide the path to the required MSP installation and choose the product to apply the patch to. You can leave the product field empty if you wish to apply the patch to all the products it pertains to.

Microsoft Software Patch Configuration

For all installer types, it is possible to perform both quick install and install, but an additional configuration is always required for executable installer deployment packages. For such deployment packages, you must always provide the command line parameters to be used for silent deployment or specify that no parameters are required. It is also possible to check if the software you are going to deploy is already installed before actually performing the deployment to optimize the process. To enable such checking, use the **Check for already installed** option. For Windows Installer Packages and Microsoft Software Patches, the Product ID is used for software identification. As for the products installed via executable installers, the program checks the Name, Publisher and Version values from the Programs and Features list in the Control Panel to match with those defined for the deployment package. By default, the program uses the installer properties as a reference for those values, but it is recommended to define them for each deployment package explicitly using the **Specify the check condition** hyperlink.

Uninstall Packages

The program enables you to create packages to uninstall software deployed via the following installers:

Executable Installer: when configuring an executable installer package for uninstall, you should either choose the product from the inventory or provide the uninstall command manually. In both cases, you should also specify if you would like to check for failure using the exit code of the uninstaller application, provide the parameters to be passed to the uninstall command for silent operation and supply the answer file to be used by the uninstaller application, if required.

Executable Installer Configuration (Chosen from Inventory)

Executable Installer Configuration (Manual Configuration)

Windows Installer Package: when configuring a Windows Installer Package deployment package for uninstall, you should either choose the program from the inventory or provide the Product ID for the product to uninstall. The Product ID can be either typed in manually or retrieved from an MSI file.

Windows Installer Package Configuration (Chosen from Inventory)

Windows Installer Package Configuration (Manual Configuration)

Microsoft Software Patch: while configuring a Microsoft Software Patch deployment package for uninstall, you should either choose the patch from the inventory, or provide the path to the MSP file to retrieve the installation properties used for uninstall from, and choose the product to uninstall the patch from.

Microsoft Software Patch Configuration (Chosen from Inventory)

Microsoft Software Patch Configuration (Manual Configuration)

Define Generic Uninstall Package Wizard - Microsoft Software Patch (MSP)   ✕

Common Package Configuration

Specify the path to the installation file to get data from and if the remote Machine should be restarted for the operation to complete.

Path: D:\Install\Patches\KB2565063.msp   ▶ ⋯

Product: Microsoft Visual C++ 2010 x86 Redistributable - 10.0.40219   ⋯

Installation Properties

Installer	Windows Installer
Command	MsiExec.exe /uninstall {6F8500D2-A80F-3347-9081-B41E71C8592B} /package {F0C3E5D1-1ADE-321E-8...
Name	KB2565063
Publisher	Microsoft

Restart Mode: Restart the computer only if necessary   ⌄

          < Back   Next >   Define   Cancel

Repair Packages

The program enables you to create deployment packages to repair programs deployed via the following installers:

Executable Installer: when configuring an executable installer package for repair, you should either choose the program from the inventory or provide the repair command manually.

> 💡 For manual package configuration, you can provide a path to the original setup file, if it is required for a successful repair, to the **Setup** File field. You can then use the *%SETUP_FILE%* and *%SETUP_DIR%* placeholders in the **Command** field. The placeholders will be replaced by the corresponding paths during the deployment process. While providing a setup file from a local file system, it is also possible to copy the entire setup directory to a remote Machine.

In both cases, you should also specify if you would like to check for failure using the exit code of the installer application, provide the parameters to be passed to the repair command for silent operation and supply the answer file to be used by the installer application, if required.

Executable Installer Configuration (Chosen from Inventory)

Executable Installer Configuration (Manual Configuration)

Windows Installer Package: when configuring a Windows Installer Package deployment package for repair, you should either choose the program from the inventory or provide the data required for repair manually. For a manual configuration, you should choose if the setup file is available on a remote Machine. In case it is available, only the Product ID of the application to repair should be provided, otherwise you should provide a path to the MSI file used to install the application. While providing a path to the setup file from a local file system, it is possible to copy the entire setup directory to remote Machines during deployment.

Windows Installer Package Configuration (Chosen from Inventory)

Define Generic Repair Package Wizard - Windows Installer Package (MSI)   ✕

Common Package Configuration
Specify the program to repair and if the remote Machine should be restarted for the operation to complete.

Program: Paint.NET v3.5.10

Installation Properties

Installer	Windows Installer
Command	MsiExec.exe /f {529125EF-E3AC-4B74-97E6-F688A7C0F1C0} /qn /log %LOG_FILE%
Name	Paint.NET v3.5.10
Publisher	dotPDN LLC
Version	3.60.0

Restart Mode: Restart the computer only if necessary

< Back   Next >   Define   Cancel

Windows Installer Package Configuration (Manual Configuration)

Define Generic Repair Package Wizard - Windows Installer Package (MSI)   ✕

Common Package Configuration

Specify the Product ID for the program to be repaired or the setup to be used for repair and if the remote Machine should be restarted for the operation to complete.

○ The setup file used to install the product is available on remote Machines

⚠ In case you are using this options and the MSI package used for installing the product is not available on remote Machines, the repair process will fail.

Product ID: {AAF70000-22B9-4CE9-98D6-2CCF359BAC07}   ...

◉ The setup file to be used for performing a repair should be provided

Path: D:\Install\ABBYYFineReader7full\ABBYY FineReader 7.0 Professional Edition.msi   ▶ ...

☐ Copy entire directory

Installation Properties

Installer	Windows Installer
Command	MsiExec.exe /f "D:\Install\ABBYYFineReader7full\ABBYY FineReader 7.0 Professional Edition.msi" /qn /...
Name	ABBYY FineReader 7.0 Professional Edition
Publisher	ABBYY Software House
Version	7.00.522.3634

Restart Mode: Restart the computer only if necessary   ⌄
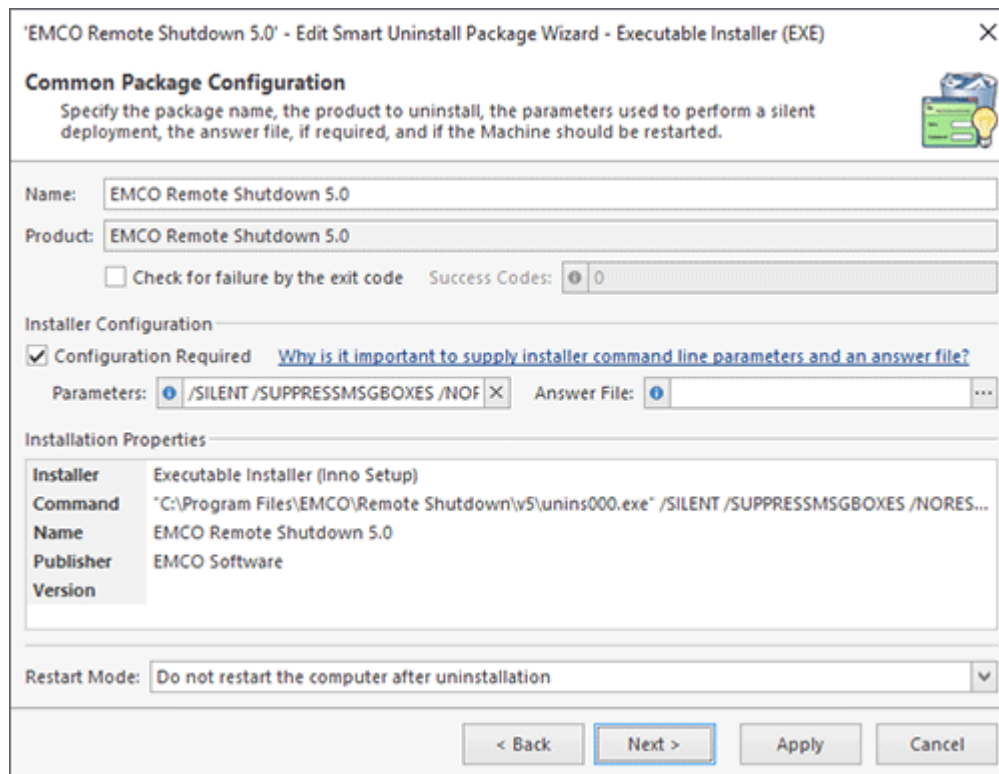
< Back   Next >   Define   Cancel

Smart Uninstall Packages

The program enables you to perform smart uninstall for the products installed via the following installers:

Executable Installer: when configuring an executable installer smart uninstall package, you should specify if you would like to check for failure using the exit code of the uninstaller application, provide the parameters to be passed to the uninstall command for silent operation and supply the answer file to be used by the uninstaller application, if required.

Executable Installer Configuration

Windows Installer Package: when configuring a Windows Installer Package smart uninstall package, you should only choose the program to be uninstalled.

Windows Installer Package Configuration

Microsoft Software Patch: when configuring a Microsoft Software Patch smart uninstall package, you should only choose the patch to be uninstalled, whereas the product to uninstall the patch from is selected automatically.

Microsoft Software Patch Configuration

If the type of the executable installer cannot be determined or an additional configuration is always required to uninstall the product, it is not allowed to perform a quick uninstall for such products. For other products, it is possible to perform both quick uninstall and uninstall.

Smart Repair Packages

The program enables you to perform smart repair for the products installed via the following installers:

Executable Installer: when configuring an executable installer smart repair package, you should specify if you would like to check for failure using the exit code of the installer application, provide the parameters to be passed to the repair command for silent operation and supply the answer file to be used by the installer application, if required.

Executable Installer Configuration

Windows Installer Package: when configuring a Windows Installer Package smart repair package, you should only choose the program to be repaired.

Windows Installer Package Configuration

If the type of the executable installer cannot be determined or an additional configuration is always required to repair the product, it is not allowed to perform a quick repair for such products. For other products it is possible to perform both quick repair and repair.

Configuring Pre & Post Actions

Remote Installer allows you to perform custom actions before and/or after install, uninstall or repair processes. Such actions are defined for each deployment package and may affect install, uninstall or repair processes and their output is also added to the detailed log.

You can choose among a wide range of action types to perform, which are the following:

- Import of a Registry File;
- Executable File;
- Script File;
- PowerShell Script;
- Shell Command;
- Message.

You can also define if the action should be executed on Machines running both x86 and x64 platforms or only one specific platform (x86 or x64) for multi-platform deployment packages.

The actions to be performed before and/or after install, uninstall or repair processes are defined during the deployment package configuration procedure on the **Pre & Post Actions** tab `Pic 1`. For each operating action, it is possible to choose if the operation should wait for the action to be completed before executing the next one and if the operation should be interrupted if the action has returned an exit code that is interpreted like a failure sign. For each message, you can also define if the deployment operation should wait for the message dialog to be closed.
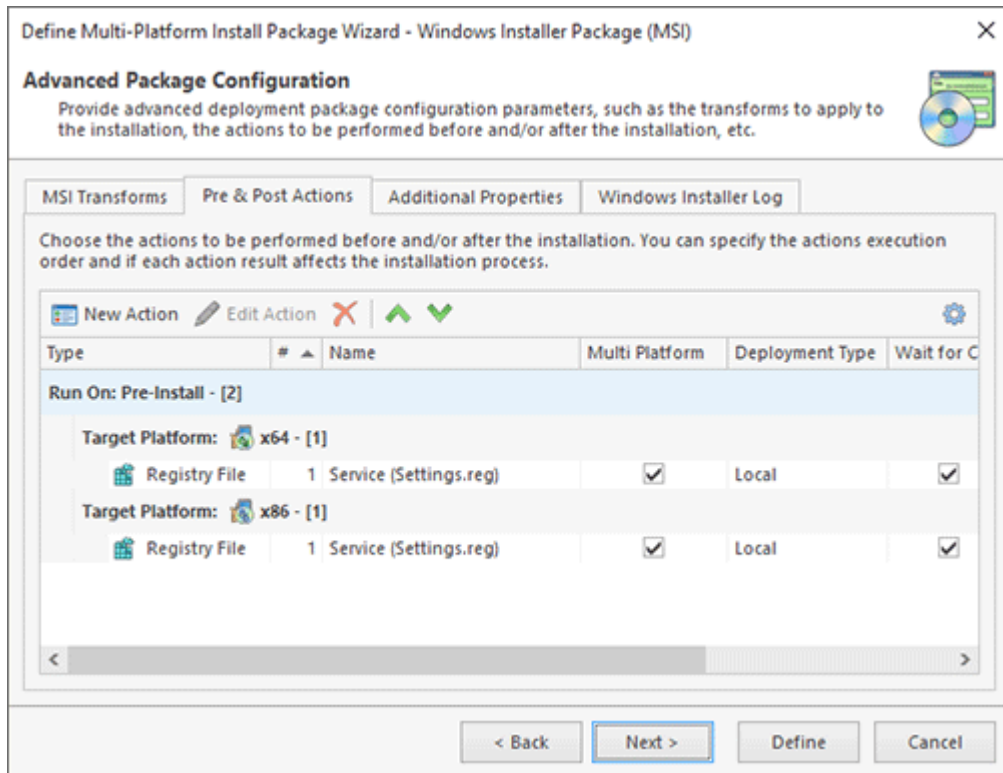
Pic 1. Configuring Pre & Post Actions

The actions are grouped in the table by their execution type, which shows if it should run before or after install, uninstall or repair processes and sorted by their execution order. When a multi-platform package is being configured, the table items are also grouped by the target platform.

Toolbar Overview

New Action	**New Action** The **New Action** button should be used to add a new action to be performed before or after the installation setup.
Edit Action	**Edit Action** The **Edit Action** button enables you to change the selected action configuration.
✗	**Delete Actions** The **Delete Actions** button can be used to delete the selected actions from the deployment package being configured.

	Move Up The **Move Up** button should be used to move the selected actions up the execution order.
	Move Down The **Move Down** button should be used to move the selected actions down the execution order.
	Configuration The **Configuration** button opens the view configuration menu, which allows you to reset the view layout to the defaults, thus displaying the columns that are initially invisible and hiding those that are initially visible.

The options of adding, editing, deleting and moving actions up and down the execution order, as long as the configuration menu, are also available in the pop-up menu of the **Pre & Post Actions** table.

You can add as many actions as needed to every install, uninstall or repair package. Regardless of how the wait for completion configuration is set, it is guaranteed that all Pre-Install/Uninstall/Repair actions, except notification messages, will be completed before the actual install, uninstall or repair process is executed and that the operation will not be finished until all Post-Install/Uninstall/Repair actions are completed and all messages are displayed.

Adding Pre & Post Actions

To add a new action to the deployment package, you should press the **New Action** button on the **Pre & Post Actions** table toolbar or choose the **New Action** item from the pop-up menu. The **New Action** wizard will be displayed on the screen.

If a multi-platform package is being configured, the first page of the wizard will offer you to choose the target platform for the action being created.

It is possible to specify if the action should be performed with the x86 and x64 installations or with a particular installation. If the deployment package being configured is a generic one, this step is skipped. Please note that the target platform cannot be changed in future when editing the action. The next step of the **New Action** wizard is choosing the action type Pic 2.
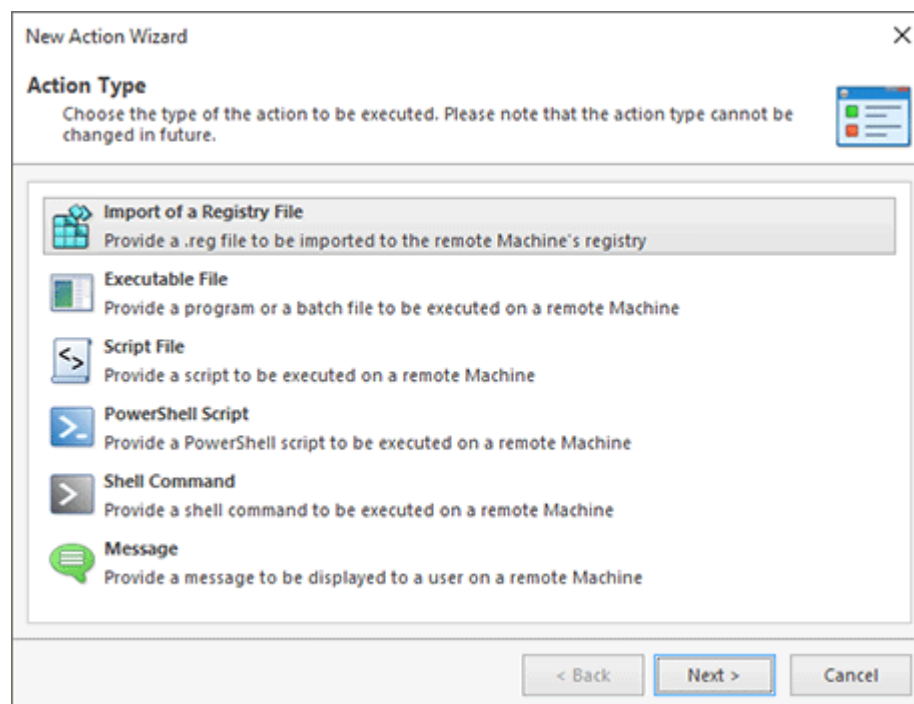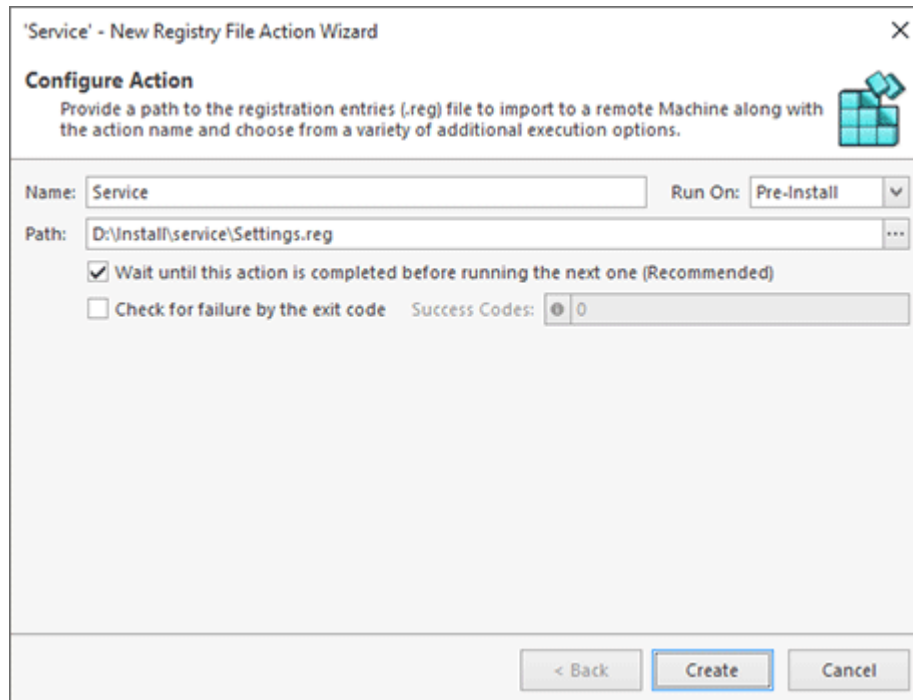
Pic 2. Choosing the action type

You can choose among the Import of a Registry File, Executable File, Script File, PowerShell Script, Shell Command and Message action types. The action type is also selected only during the action creation process and cannot be changed in future when editing the action. When the action type is chosen, click **Next** to start the actual action configuration.

Let us take a closer look at configuring each action type from those available, starting with the import of a registration entries (.reg) file.

Import of Registry File Configuration

While configuring the registration entries (.reg) file import action, you can define the action name, which can be used for easier identification in future, in the **Name** field, specify if the action should be executed before or after the install, uninstall or repair process by changing the **Run On** field value, provide the path to the registration entries (.reg) file to import to the **Path** field, and choose if the operation should wait for the action to complete before executing the next one. If you have chosen that the operation should wait for the action to be completed, it is possible to interrupt the operation if the action returns an exit code that does not belong to the successful ones, thus interpreted as a failure. The success codes should be provided to the **Success Codes** field as unsigned integers separated by semicolon, e.g. *0; 1; 10*.

The configuration principle of the next three action types, namely Executable File, Script File and PowerShell Script, is the same. Using the Executable File action type, you can run executable console applications and batch files before and/or after the install, uninstall or repair process. The Script File type should be used to execute simple console scripts, e.g. those written on Visual Basic. The PowerShell Script type should be used to execute PowerShell scripts. Let us take a closer look at the configuration process using the Executable File action type as an example.

Executable File Configuration

Script File Configuration

PowerShell Script Configuration

When configuring an action, you can enter the action name, which can be used for easier identification in future, in the **Name** field and specify if the action should be executed before or after the install, uninstall or repair process by changing the **Run On** field value. The next thing to provide is the path to the executable file to be entered to the **Path** field. If you are using a local path, the action will be copied to each remote Machine before being executed, and it is possible to copy the entire action directory together with the executable file itself. This approach should be used if the action depends on external files. The required command line arguments to be passed to the executable file should be provided to the **Parameters** field. Just like for the Import of a Registry File action, you can choose if the operation should wait for the action to be completed before executing the next one. If you have chosen that the operation should wait for the action to be completed, it is possible to interrupt the operation if the action returns an exit code that does not belong to the successful ones, thus interpreted as a failure. The success codes should be provided to the **Success Codes** field as unsigned integers separated by semicolon, e.g. *0; 1; 10*.

The next action type is the Shell Command. This action type allows you to execute any shell command before and/or after the install, uninstall or repair process. Let us take a closer look at the action configuration process.

Shell Command Configuration

When configuring the Shell Command action, you can specify the action name, which can be used for easier identification in future, in the **Name** field and specify if the action should be executed before or after the install, uninstall and repair process by changing the **Run On** field value. The actual shell command to execute should be provided to the **Command** field. As for the other action types, it is possible to choose if the operation should wait for the action to be completed before executing the next one. If you have chosen that the operation should wait for the action to be completed, it is possible to interrupt the operation if the action returns an exit code that does not belong to the successful ones, thus interpreted as a failure. The success codes should be provided to the **Success Codes** field as unsigned integers separated by semicolon, e.g. *0; 1; 10*.

The last one of the available action types is the Message. This action type allows you to display simple notification messages to users currently logged on to remote Machines. Let us take a look at the message configuration process.

Message Configuration

When configuring the Message action, you can specify the action name, which can be used for easier identification in future, in the **Name** field and specify if the action should be executed before or after the install, uninstall and repair process by changing the **Run On** field value. The message dialog title is entered into to the **Title** field, and the actual message to be displayed is typed into the **Message** field. The **Timeout** field allows you to define the time interval the message should be displayed for. By default, the deployment operation continues as soon as the message is displayed. If you want it to wait until the message dialog closes, check the **Wait until this action is completed before running the next one** option.

For the title and message definitions, you can use the following placeholders that will be replaced with actual values before displaying the message box on a remote Machine:

%SENDER%	the name of the user that initiated a remote deployment procedure.
%TIME%	the current time.
%DATE%	the current date.
%DATETIME%	the current date and time.

You can preview the dialog to be displayed to a remote user using the **Message Dialog Preview** link.

After you have configured the action to be added, press **Create** to proceed. The action you have configured will be added to the **Pre & Post Actions** table at the end of the execution order. To move it up and down the execution order, use the **Move Up** and **Move Down** items on the **Pre & Post Actions** table toolbar or in the pop-up menu.

Editing the Action

To edit an action, you should select it in the **Pre & Post Actions** table and choose the **Edit Action** menu item from the pop-up menu or press the **Edit Action** button on the toolbar. The **Edit Action** dialog will appear on the screen.

When editing the actions, it is possible to change the same configuration parameters as during the addition process, with the exception of the action type and the target platform. After you have completed configuring the action, press **Apply** to apply the changes made.

Deleting Pre & Post Actions

To delete pre and post actions from the deployment package being configured, you should select the unnecessary actions in the **Pre & Post Actions** table and press the **Delete Actions** button on the toolbar or choose the **Delete Actions** item from the pop-up menu. When selecting a multi-platform action, which is added to both x86 and x64 installations, in one of the **Target Platform** grouping rows, be aware that it will be deleted from both x86 and x64 installations.

Now you are fully introduced to the option of executing any type of actions before and/or after install, uninstall or repair processes and should be able to efficiently use this feature of **Remote Installer** for complex deployment packages.

Windows Installer Advanced Options

Remote Installer enables you to provide a set of advanced configuration parameters for each install, uninstall and repair package. The pre and post actions configuration is common for all installer types, but there is a set of properties that can be provided only while configuring the Windows Installer. Let us take a close look at those properties and see when they are applicable.

The **Windows Installer Transforms** can only be defined to perform an installation of a Windows Installer Package and are not applicable for uninstall and repair. Each transform contains a set of changes applied to an installation. By applying a transform to a base installation package, the installer can add or replace data in the installation database and change the installation scenario. The **Additional Properties** can be defined while configuring a Windows Installer Package to be installed or uninstalled, and are not applicable for repair. Using these properties, you can change the install and uninstall process scenario to fit your requirements by changing certain property values. With the Professional edition of Remote Installer, you can override the **Windows Installer Log** settings defined in the program preferences for install, uninstall or repair packages, as well as the **MSI Repair Options** for repair packages. This chapter will guide you through the configuration of advanced parameters for Windows Installer.

Windows Installer Transforms

Remote Installer enables you to apply Windows Installer Transforms to the installations being deployed to remote Machines. A transform is a collection of changes applied to an installation. By applying a transform to a base installation package, the installer can add or replace data in the installation database. You can get detailed technical information about transforms using the following link: Database Transforms.

With Remote Installer, you can provide a list of transforms to be applied to the installation while configuring the install package on the **MSI Transforms** tab Pic 1.
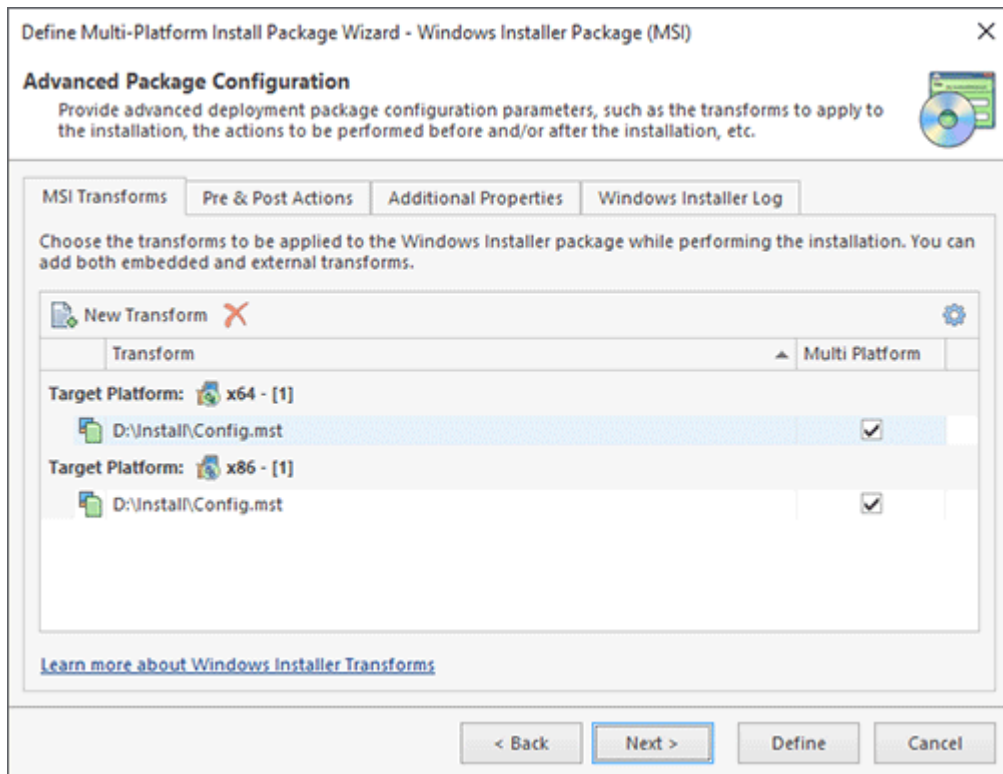
Pic 1. Providing a list of transforms

Remote Installer enables you to add both embedded and external installation transforms. Embedded transforms are stored right inside the Windows Installer Package, which ensures that the users always have the transform available when the installation package is available.

To add a transform to the installation package, press the **New Transform** button on the toolbar or choose the **New Transform** item from the pop-up menu. The **New Transform** wizard will be displayed on the screen.

If the install package being created is a multi-platform package, the first page of the **New Transform** wizard enables you to choose the target platform. You can specify, if you would like to add a transform to both x86 and x64 installations or to a specific platform installation: either x86 or x64 `Pic 2`.
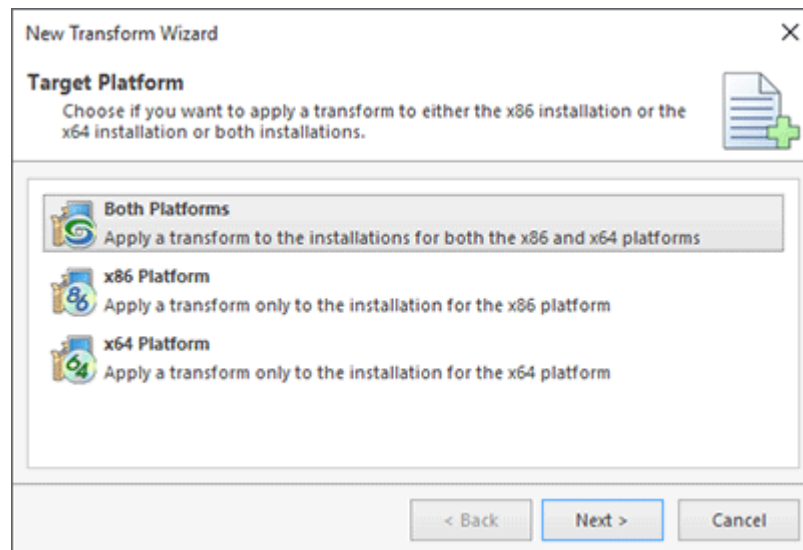
Pic 2. Choosing the target platform

The next page, that is the first one for a generic deployment package configuration, is used to provide a transform to apply to the installation `Pic 3`.
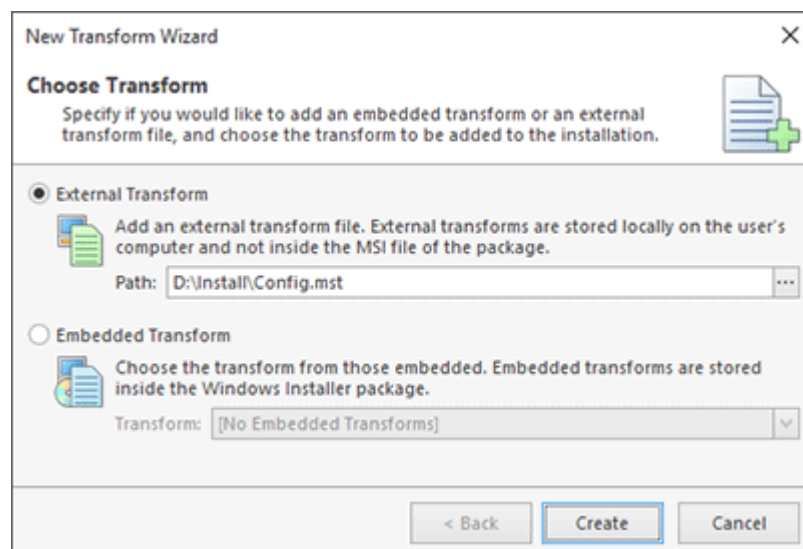
Pic 3. Providing a transform to apply to the installation

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While adding a transform, you can choose if you would like to provide an external transform file or use one of the available embedded transforms. To provide an external transform, you should select the **External Transform** radio button and provide the path to the Windows Installer transform file in the **Path** field. To select one of the embedded transforms, select the **Embedded Transform** radio button and choose the desired transform from the **Transform** field drop-down list. As soon as you have chosen the transform to add to the installation, press the **Create** button. The transform will be added to the transforms table.

To delete any transforms from the install package, select these transforms in the transforms table and choose the **Delete Transforms** button on the toolbar or select the **Delete Transforms** item from the pop-up menu.

Now you are fully introduced to the option of adding transforms to be applied to the MSI package during the installation process and should be able to use this feature of Remote Installer when required.

Using Additional Properties

Remote Installer enables you to customize the install and uninstall process by configuring additional properties. All properties that have initial values are stored in a table inside the installer database and you can change the scenario to fit your requirements by changing certain property values for the install and uninstall process. You can get detailed technical information about Windows Installer properties using the following link: About Properties.

With Remote Installer, you can provide a set of additional properties while configuring the install or uninstall package on the **Additional Properties** tab `Pic 1`.
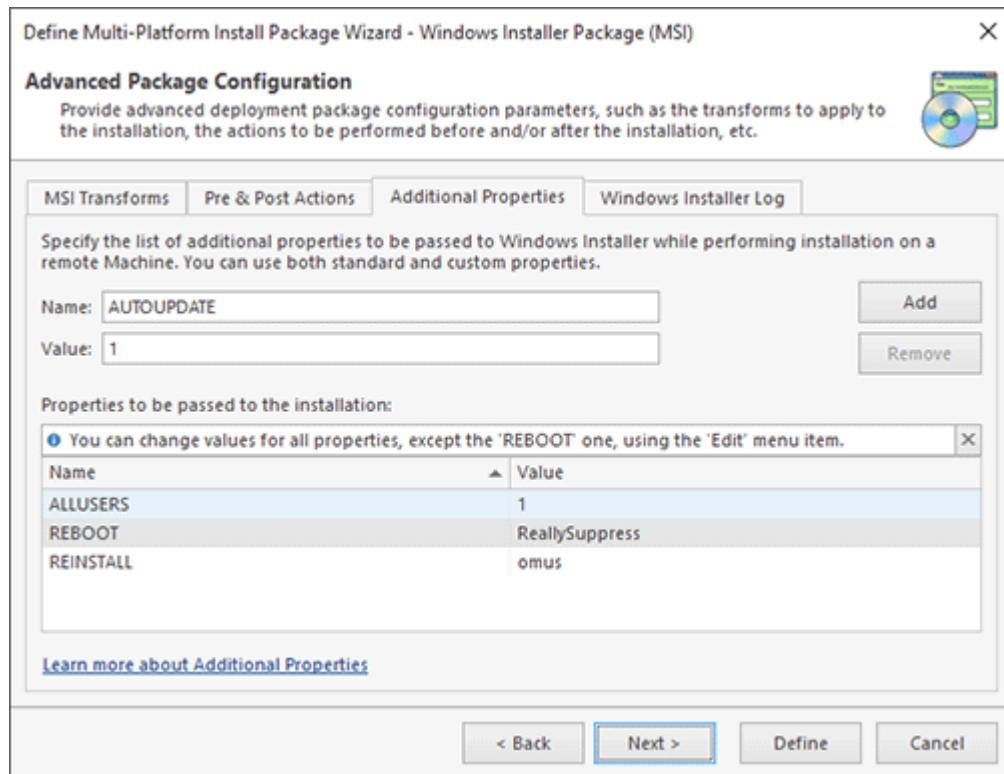
Pic 1. Providing a set of additional properties

The set of properties consists of the predefined ones and those you can add. We are using the predefined properties to help you reach proper deployment results with the default configuration.

> The predefined properties are the **ALLUSERS** and **REBOOT**. The **REBOOT** property can be neither changed nor removed and has always the **ReallySuppress** value to allow Remote Installer to complete the deployment sequence. As for the **ALLUSERS** property, you can change its value to 0, if required, but you must make sure that the deployment is performed using the user account and not that of the local system. The account used for deployment is configured on the **Deployment Account** preference page.

The process of editing the set of additional properties is intuitive. You can add a new property by providing the property name and value to the **Name** and **Value** fields and pressing the **Add** button. To change the value for an existing property, you can either provide its name and a new value or select it in the grid, click the **Edit** item from the pop-up menu and provide a new value, then press the **Change** button. To remove a certain property, select it in the properties table and press the **Remove** button. After the property is removed, the **Name** and **Value** fields are automatically filled with the name and value of the removed property.

Overriding Common Settings

Remote Installer provides you with an option to configure the Windows Installer Log settings to be used by Windows Installer while deploying Windows Installer Packages and Microsoft Software Patches, as well as the MSI Repair Options to be used while repairing Windows Installer Packages. These options are available in the program preferences. But what if you would like to use different settings for deploying specific products? The fact is that you do not need to modify the program preferences to reach this goal; hence the behavior of the scheduled deployment tasks remains the same, you can just override the common settings for specific deployment packages. Let us take a closer look at the settings overriding process using the Windows Installer Log settings as an example.

The option of overriding the log settings is available on the **Windows Installer Log** tab while advanced deployment package configuration parameters are provided. To override the Windows Installer Log options, you should check the **Override log options configuration** option, then select the types of installer events to log. To reset the settings to common, you can use the **Reset to common** link. In addition to overriding the Windows Installer Log options, it is also possible to change the default settings using the **Change common configuration** link. The same concept is used to override the MSI Repair Options. As you can see, the approach is easy and can be used to reach maximum flexibility during the deployment packages configuration process.

Package Summary

When configuring install, uninstall and repair packages with Remote Installer it is important to have an option to review the package summary. This option is available on the last page of the package configuration wizard `Pic 1`.
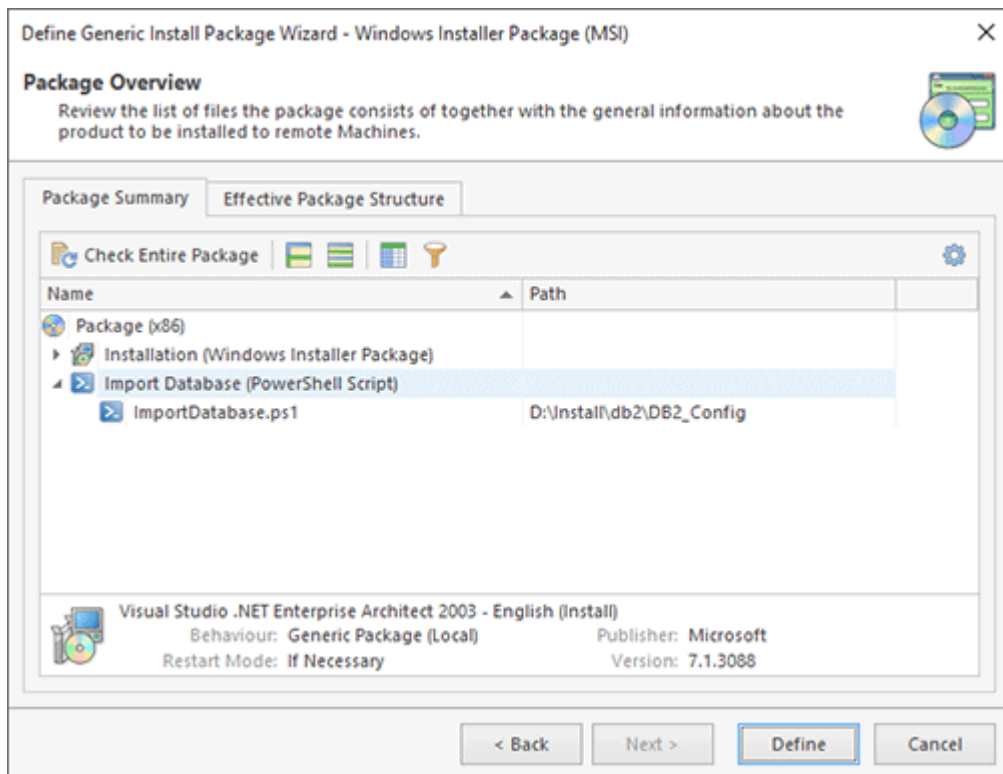
Pic 1. Package Summary for Windows Installer Package

The package overview page consists of two tabs: **Package Summary** and **Effective Package Structure**. The **Effective Package Structure** tab is displayed only if the package references one or more files. It means that if you are simply going to uninstall a product without initiating any pre and post actions, there are no files in the package and, as a result, you do not need to check if the package files are accessible, and there is no packages structure to build. Let us take a closer look at each tab using the Windows Installer Package deployment package as an example.

Package Summary

On the **Package Summary** tab, you can review the basic package structure, including all pre and post actions. At the bottom of the page, you can see brief package info, which can be hidden.

Toolbar Overview

	Check Entire Package The **Check Entire Package** button should be used to build the entire package structure, check the package integrity, including the files copied in accordance with the Copy entire directory option, and calculate the cumulative size.

	Full Expand The **Full Expand** button should be used to expand all the grouping rows in the package tree.
	Full Collapse The Full Collapse button should be used to collapse all the grouping rows in the package tree.
	Choose Columns The **Choose Columns** button should be used to choose the columns displayed in the tree.
	Filter Editor The **Filter Editor** button should be used to define the custom filter criteria to be applied to the data displayed within the tree.
	Configuration The **Configuration** button provides access to the option of resetting the view layout and hiding the summary pane.

The installation structure can be found under the **Installation** node; other child nodes for the **Package** node are pre and post actions. Building the whole package structure might be complex as the package may be quite large and it can take much time to access all the files in the package, so the package summary consists only of the specified files. To build the entire package structure, to check its integrity, including the files copied in accordance with the **Copy entire directory** option, and to calculate the cumulative size, you can use the **Check Entire Package** button from the toolbar or the **Check Entire Package** item from the pop-up menu.

The **Summary** pane at the bottom of the page displays brief information about the package, such as its name, type, etc. You can hide this pane by disabling it using the **Show Summary** option from the **Configuration** menu. You can also customize the sorting and the visible columns any way you want, and it is always possible to roll back to the default view layout using the **Reset Layout** item from the **Configuration** menu.

Effective Package Structure

The **Effective Package Structure** option should be used to build and review the entire package structure, check the whole package integrity and calculate the entire size. Besides, the **Package Log** part of the **Effective Package Structure** page displays the check result and grouping errors, if any, by package files `Pic 2`.
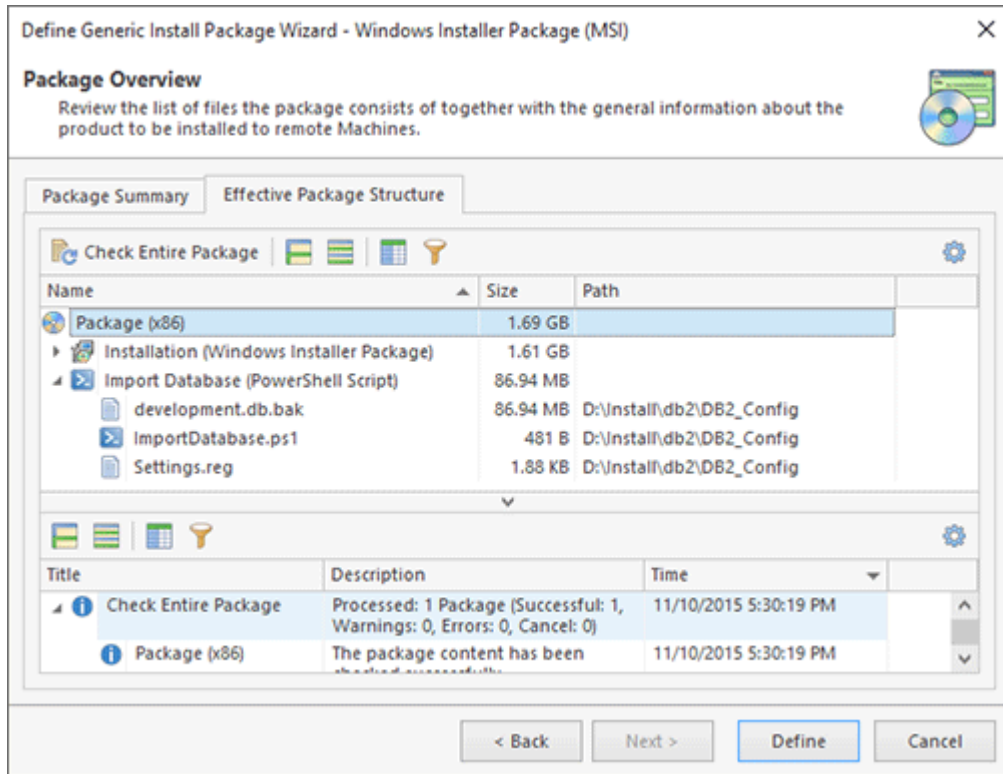
Pic 2. Entire Package Structure for Windows Installer Package

The entire structure is not built automatically to save your time, because if the installation is located on a network share or the package is quite large it can take a lot of time to build the whole package structure. After building the entire package structure, you can see the whole structure in form of a tree. The installation structure can be found under the **Installation** node; other child nodes for the **Package** node are pre and post actions. If some files were inaccessible while the package summary was built, such files are marked with an error icon and the actual error can be found in the tool tip.

Toolbar Overview

	Check Entire Package
	The **Check Entire Package** button should be used to build the entire package structure, check the package integrity, including the files copied in accordance with the Copy entire directory option, and calculate the cumulative size.
	Full Expand
	The **Full Expand** button should be used to expand all the grouping rows in the package tree.
	Full Collapse
	The **Full Collapse** button should be used to collapse all the grouping rows in the package tree.
	Choose Columns
	The **Choose Columns** button should be used to choose the columns displayed in the tree.

	Filter Editor The **Filter Editor** button should be used to define the custom filter criteria to be applied to the data displayed within the tree.
	Configuration The **Configuration** button provides access to the option of resetting the view layout.

While reviewing the effective content for the package, you can collapse the **Package Log** part and then expand it again when required. To rebuild the entire package structure, you can use the **Check Entire Package** button on the toolbar or the **Check Entire Package** item from the pop-up menu. You can configure the sorting options, the filter conditions and the visible columns any way you wish. To restore the default view layout, simply click the **Reset Layout** item from the **Configuration** menu.
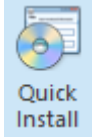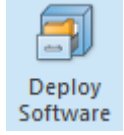
The package summary is designed to help you understand if you have configured the install, uninstall or repair package correctly and check access to all required files. We hope you will find this nice small feature helpful when deploying complex packages to remote Machines.
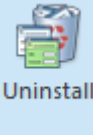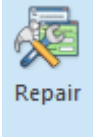
Deploying Software

The main goal of Remote Installer is equipping you with easy-to-use features of installing, uninstalling and repairing software all over you network. You can execute deployment operations immediately or create and schedule software deployment tasks. All you need to perform remote deployment is to define the scope of operated Machines and the set of deployment packages to be executed. In this chapter, we will show you all the possible methods of performing a remote deployment.

Performing Deployment

With Remote Installer, you can choose between deployment of **Software Bundles** and deployment packages defined for a particular operation. The bundles are stored in the Software Bundles repository and can be used for future deployments. The packages defined for a certain deployment operation exist as long as the operation itself and are called embedded.

	Deploy Software The **Deploy Software** button from the **Software** Ribbon group on the **Home** page can be used to perform either a quick installation or an advanced remote deployment of software to the selected remote Machines.
	Quick Install The **Quick Install** button from the **Software** Ribbon group on the **Deployment** page should be used to install software to the selected remote Machines by simply choosing the installation without providing additional deployment package configuration.
	Deploy Software The **Deploy Software** button from the **Software** Ribbon group on the **Deployment** page allows you to execute deployment of software.

Install	**Install** The **Install** button from the **Bundles** Ribbon group on the **Deployment** page and from the **Deployment** group on the **Software Bundles** contextual page from the **Software Bundles Tools** category can be used to install the selected **Software Bundles** to remote Machines.
Uninstall	**Uninstall** The **Uninstall** button from the **Bundles** Ribbon group on the **Deployment** page and from the **Deployment** group on the **Software Bundles** contextual page from the **Software Bundles Tools** category can be used to uninstall the selected **Software Bundles** from remote Machines.
Repair	**Repair** The **Repair** button from the **Bundles** Ribbon group on the **Deployment** page and from the **Deployment** group on the **Software Bundles** contextual page from the **Software Bundles Tools** category can be used to repair the selected **Software Bundles** on remote Machines.

Remote Installer provides you with several options for performing a remote deployment of software and makes it easier for you to solve deployment tasks. You are proposed to choose among a quick install, a simplified deployment of Software Bundles and the most flexible option of generic software deployment.

Quick install is the simplest way to install software to a set of Machines. The difference between quick install and adding an install package to a generic deployment operation is that in the former case you do not have to configure the advanced parameters; instead, you just select a set of Machines, provide an installation file and define only the parameters that are required to install the product. This mode allows you to install a single software product at a time. To perform a quick install, you should select the Machines you would like to install software onto in the **Network** or the **All Machines** view and choose either the **Quick Install** item in the **Deploy Software** button drop-down from the **Software** Ribbon group on the **Home** page or the **Quick Install** button from the **Software** Ribbon group on the **Deployment** page. Alternatively, you can use the **Quick Install** item from the pop-up menu or from the **Deploy Software** button drop-down on the toolbar. A dialog will be displayed to let you choose the installation. After the installation is chosen, you are offered to review and possibly change the common configuration for the installation. To proceed with the installation, press **OK**. The installation will start, and as soon as it is completed, you will be able to see the execution results in the **Execution Results** view. A detailed log for the installation is also available in the **Execution Results** view.

Remote Installer allows you to quickly execute install, uninstall or repair of specific Software Bundles. For example, to perform install, you should select the required Bundles and Bundle Groups in the **Software Bundles** view and press the **Install** button either from the **Bundles** Ribbon group on the **Deployment** page or from the **Deployment** group on the **Software Bundles** contextual page from the **Software Bundles Tools** category. Alternatively, you can use the **Install** item from the view pop-up menu and the **Install** item from the **Install** button drop-down on the toolbar. The configuration dialog of the deployment operation will be displayed on the screen with the selected Software Bundles added to be installed. Uninstall and repair of Software Bundles is executed in the same manner using the **Uninstall** and **Repair** actions.

With Remote Installer, in addition to simple install, uninstall and repair, you can combine install, uninstall and repair of both Software Bundles and embedded deployment packages within a single operation. All these features are available when configuring a deployment operation. To execute generic deployment, you can use the **Deploy** item in the **Deploy Software** button drop-down from the **Software** group on the **Home** page or the **Deploy Software** button from the **Software** group on the **Deployment** page. If the currently active view is the **Network** view or the **All Machines** view, the selected Machines and Collections are added to the operation's Machine Queue. In case the **Software Bundles** view is active, you are proposed to choose if the selected Bundles and Bundle Groups should be installed, uninstalled or repaired. The **Deploy Software** wizard will appear on the screen `Pic 1`.
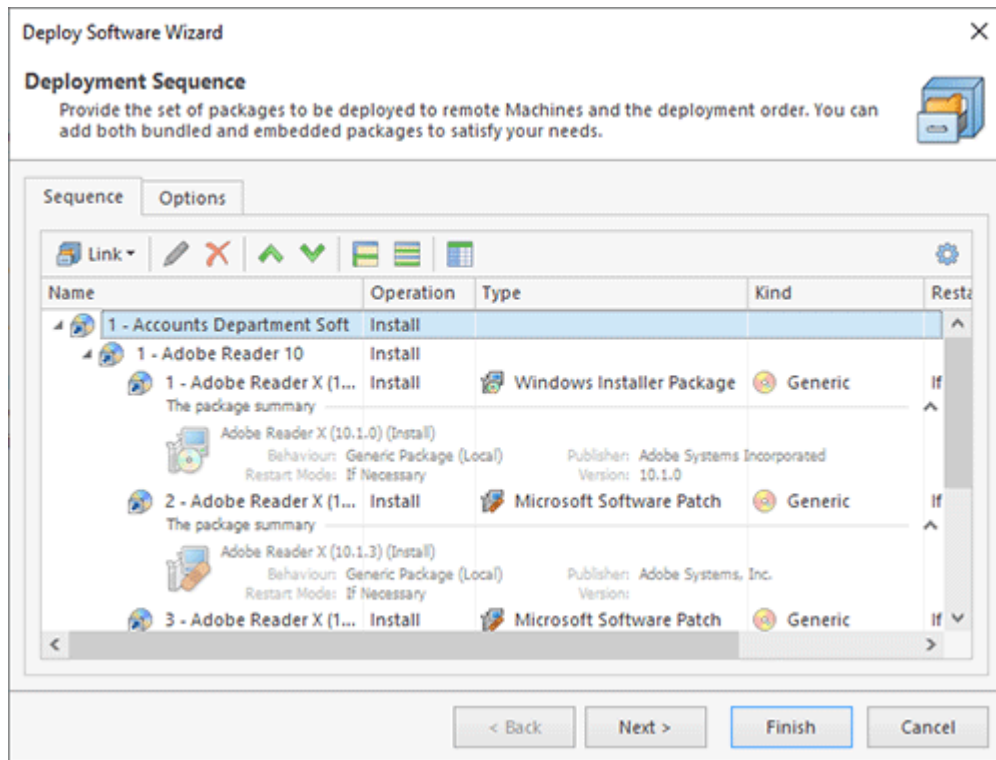
Pic 1. Configuring software deployment

When configuring a deployment process, you can provide Software Bundles and/or embedded deployment packages to be installed, uninstalled or repaired and define a set of Machines to be operated. To learn more about defining a set of deployment packages, refer to the Deployment Operation Configuration section. For information on configuring the scope of Machines, refer to the Defining Machines to Operate section of this document. Once you are done with configuring a deployment, press **Finish** to proceed. The deployment operation will start automatically, and as soon as it is completed, you will be able to see the execution results in the **Execution Results** view. A detailed log for the deployment operation is also available in the **Execution Results** view.

Creating a new Deploy Software Task

If you do not want to perform deployment of software right away, with Remote Installer you can create a preconfigured task to perform deployment in the future, at any time of your choice. When creating a new task, you can provide multiple bundles and embedded packages, if required. To create a new Deploy Software task for further execution, you should choose the **New Task > Deploy Software** item from the **Tasks** area pop-up menu. Alternatively, you may use the **New Task** button from the **Tasks** area toolbar or the **Regular Task** button from the **New** Ribbon group on the **Management** contextual page from the **Tasks and Schedule Tools** category. The **New Task** wizard will appear on the screen and guide you through the process of creating a new task. Once you are done with configuring the task, press **Create** to create it. The newly created task will be added to the **Tasks** area. A created task can be executed manually any time using the **Run** menu item from the **Tasks** area or scheduled for automatic execution. Remote Installer will store the results for all runs of this task, and you can review all of them in the **Execution Results** view.

Performing software deployment on schedule

As it has already been mentioned, with Remote Installer you can run a preconfigured Deploy Software task any time you want. However, manual task execution may not be convenient for you since in such a case you would always have to remember when you should perform this or that deployment. The scheduling engine integrated into Remote Installer can always keep this in mind for you so that you can concentrate on your other everyday tasks.

To schedule a new Deploy Software task, you should choose the **Scheduled Task > Deploy Software** item from the **New** Ribbon group on the **Home** page. This option is also available in the Scheduling area pop-up menu and on the toolbar. Alternatively, you can select the Machines you want to deploy the software to in the **Network** or the **All Machines** view and choose the **New Scheduled Task > Deploy Software** menu item from the pop-up menu to initialize the Machine Queue with the selected Machines. To schedule install, uninstall or repair of specific Bundles and/or Bundle Groups, you can select them in the **Software Bundles** view and choose either the required options from the **New Scheduled Task** pop-up menu item or the **New Scheduled Task** item from the **Install**, **Uninstall** and **Repair** buttons' drop-down from the toolbar. The described options are also available on the **Deployment** Ribbon page and the **Software Bundles** contextual page from the **Software Bundles Tools** category. The **New Scheduled Task** wizard will appear on the screen and guide you through the process of scheduling a task.

When scheduling a task, you can specify the deployment packages to be deployed and the Machines to execute the specified deployment packages on. Once you are done with configuring a task, press **Schedule** for the task to be put on schedule. The scheduled task will be added to the **Scheduling** area. A scheduled task is executed automatically when its start time comes. Remote Installer stores the results for all runs of such a task, and you can review all of them in the **Execution Results** view.

Adding Software Bundles to Tasks

You can add Software Bundles to any of the install, uninstall and repair tasks that have been created and scheduled. To reach the goal, you should select the required Bundles and Bundle Groups in the **Software Bundles** view and use the **Add to Task** button from the **Tasks** Ribbon group on the **Software Bundles** contextual page from the **Software Bundles Tools** category. Alternatively, you can use the **Add to Task** item from the pop-up menu or the **Add to Task** items from the **Install**, **Uninstall** and **Repair** buttons from the view toolbar.
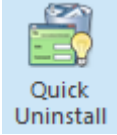
Now you are familiar with the features of executing, creating and scheduling deployment tasks and have a better understanding of the concept used in Remote Installer.

Running Smart Uninstall and Repair

Remote Installer comes with an innovative Smart Uninstall and Repair technology. In the smart mode, you can choose the products to uninstall or repair from the remote Machines' software inventory. Thus each product is uninstalled or repaired only from/on the Machine it is installed on. The Machine Queue for such tasks is maintained automatically and includes all the Machines that will be affected during the operation execution. You can execute smart uninstall and repair operations immediately or create and schedule smart uninstall and repair tasks. To perform smart uninstall and repair, all you need is to specify the set of products installed on remote Machines to operate. In this chapter, we will show you all the possible methods of performing a smart uninstall and repair.

Performing Uninstall and Repair

With Remote Installer, you can choose between a quick uninstall and/or repair of the products installed on remote Machines and an advanced uninstall/repair, which enables you to define an additional smart package configuration and a set of operated Machines for each smart package.

Quick Uninstall	**Quick Uninstall** The **Quick Uninstall** button from the **Uninstall and Repair** Ribbon group on the **Deployment** page and on the Inventory contextual page from the **Inventory Tools** category should be used to uninstall the products selected in the remote Machines' inventory from those Machines without any additional packages configuration.
Quick Repair	**Quick Repair** The **Quick Repair** button from the **Uninstall and Repair** Ribbon group on the **Deployment** page and on the Inventory contextual page from the **Inventory Tools** category should be used to repair the products selected in the remote Machines' inventory on those Machines without additional packages configuration.
Smart Uninstall and Repair	**Smart Uninstall And Repair** The **Smart Uninstall And Repair** button from the **Uninstall and Repair** Ribbon group on the **Deployment** page and on the Inventory contextual page and from the **Inventory Tools** category allows you to execute a smart uninstall or repair of software.

Remote Installer provides you with several options for performing a smart uninstall and repair of software to make it easier for you to solve deployment tasks. You can either use any inventory view as the source to perform a quick uninstall, quick repair, smart uninstall and smart repair, or execute a generic smart uninstall and repair providing the required packages while configuring a smart uninstall or repair operation.

Let us start from the smart uninstall and repair options available in the views displaying the remote Machines' inventory. For performing a smart uninstall, you are offered to choose from two options: quick uninstall and uninstall. Quick uninstall is the simplest way to uninstall software from a set of Machines. The difference between quick uninstall and uninstall is that in the former case you do not have to configure the properties of the smart uninstall packages; instead, you just select a set of installations to be uninstalled from the inventory. In the uninstall mode, you can configure a set of advanced properties for each uninstall packages and a set of Machines to uninstall the product from. If the installer type of a product cannot be determined or an additional configuration is always required to uninstall the product, it is not allowed to perform a quick uninstall for this product. For other products, it is possible to perform both a quick uninstall and an uninstall. Similar modes with the similar options and limitations are also available for performing a smart repair.

To perform a quick uninstall, all you need is to select the installations to be uninstalled in the **Software Inventory** or the **Inventory Snapshots** view and press the **Quick Uninstall** button from the **Uninstall and Repair** Ribbon group on the **Deployment** page and on the **Inventory** contextual page from the **Inventory Tools** category. The same result can be reached using the **Smart Uninstall > Quick Uninstall** item from the pop-up menu and the **Quick Uninstall** item from the **Smart Uninstall** button drop-down from the toolbar. A confirmation box will appear on the screen. If multiple installations are selected, you can review the summary for the products to be uninstalled and double-check the selection before proceeding with the uninstall process.

To perform a quick repair, you should select the installations to be repaired in the **Software Inventory** or the **Inventory Snapshots** view and press the **Quick Repair** button from the **Uninstall and Repair** Ribbon group on the **Deployment** page and on the **Inventory** contextual page from the **Inventory Tools** category. The same result can be reached using the **Smart Repair > Quick Repair** item from the pop-up menu and the **Quick Repair** item from the **Smart Repair** button drop-down from the toolbar. A confirmation box will appear on the screen. If multiple installations are selected, you can review the summary for the products to be repaired and double-check the selection before proceeding with the repair process.

In case you want to provide an additional configuration required to perform a smart deployment or if a quick deployment is not supported, you can use the **Smart Uninstall > Uninstall** and **Smart Repair > Repair** items from the pop-up menu and the corresponding buttons on the toolbar. The smart deployment configuration dialog will be displayed on the screen.

With Remote Installer, along with smart uninstall and smart repair from Machines' inventory views, you can initiate a generic smart uninstall and repair operation that can combine smart uninstall and smart repair of different products on different Machines within a single operation. All those features are available while configuring a deployment operation. To execute a generic uninstall and repair, you can use the **Smart Uninstall and Repair** button from the **Uninstall and Repair** group on the **Deployment** page and on the **Inventory** contextual page from the **Inventory Tools** category. The **Smart Uninstall and Repair** wizard will appear on the screen Pic 1.
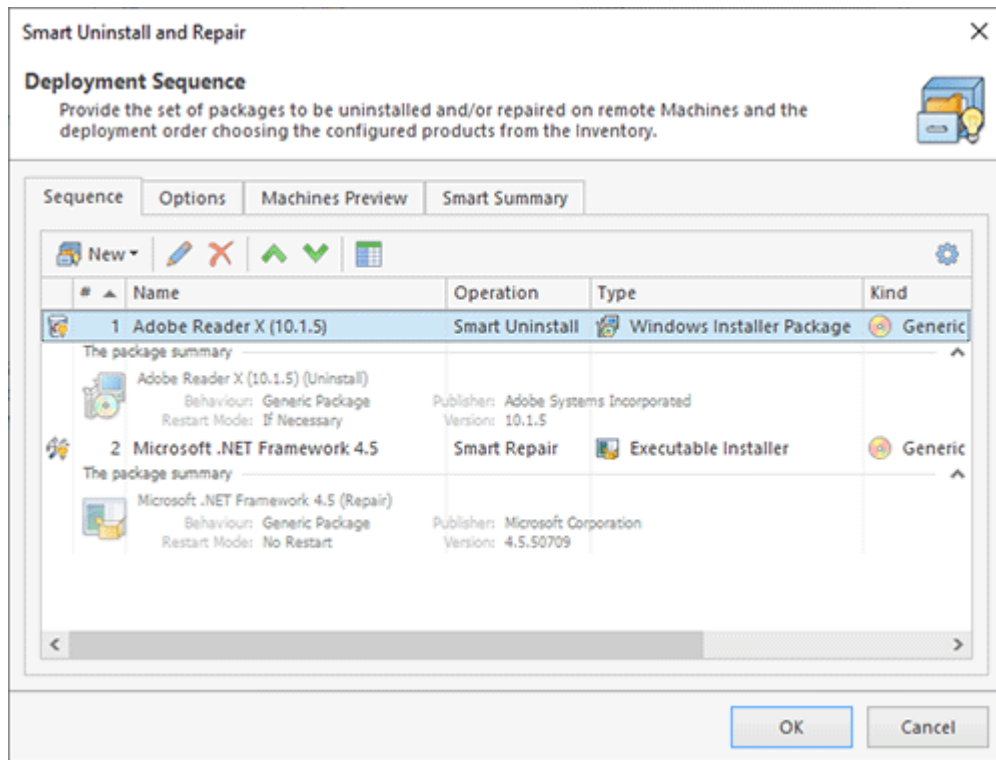
Pic 1. Configuring smart uninstall and repair

When configuring a deployment process, you can provide the products to be uninstalled or repaired on remote Machines choosing them from the inventory. To learn more about defining a set of smart uninstall and repair packages, refer to the Deployment Operation Configuration section. Once you are done with configuring a deployment operation, press **Finish** to proceed. The deployment operation will start automatically, and as soon as it is completed, you will be able to see the execution results in the **Execution Results** view. A detailed log for the deployment operation is also available in the **Execution Results** view.

Creating a new Smart Uninstall and Repair Task

If you do not want to perform smart uninstall and repair right away, with Remote Installer you can create a preconfigured task to perform uninstall and repair in the future, at any time of your choice. When creating a new task, you can provide multiple uninstall and repair packages, if required. To create a new Smart Uninstall and Repair task for further execution, you should choose the **New Task > Smart Uninstall and Repair** item from the Tasks area pop-up menu. Alternatively, you may use the **New Task** button from the **Tasks** area toolbar or the **Regular Task** button from the **New** Ribbon group on the **Management** contextual page from the **Tasks and Schedule Tools** category. The **New Task** wizard will appear on the screen and guide you through the process of creating a new task. Once you are done with configuring the task, press **Create** to create it. The newly created task will be added to the **Tasks** area. A created task can be executed manually any time using the **Run** menu item from the **Tasks** area or scheduled for automatic execution. Remote Installer will store the results for all runs of this task, and you can review all of them in the **Execution Results** view.

Performing Uninstall and Repair on schedule

As it has already been mentioned, with Remote Installer you can run a preconfigured Smart Uninstall and Repair task any time you want. However, manual task execution may not be convenient for you since in such a case you would always have to remember when you should perform this or that task. The scheduling engine integrated into Remote Installer can always keep this in mind for you so that you can concentrate on your other everyday tasks.

To schedule a new Smart Uninstall and Repair task, you should choose the **Scheduled Task > Smart Uninstall and Repair** item from the **New** Ribbon group on the **Home** page. This option is also available in the Scheduling area pop-up menu and on the toolbar. Alternatively, you may choose the **New Scheduled Task > Smart Uninstall and Repair** menu item from the **Network** or the **All Machines** view pop-up men. To schedule a smart uninstall or a smart repair of specific products, you can select them in any view displaying the Machines' inventory and choose the **New Scheduled Task** item from the **Smart Uninstall** and **Smart Repair** item's drop-down on the toolbar or the pop-up menu. The described options are also available on the **Deployment** page and the **Inventory** contextual page from the **Inventory Tools** category. The **New Scheduled Task** wizard will appear on the screen and guide you through the process of scheduling a task.

When scheduling a task, you can specify the products to be uninstalled and repaired and define a set of Machines for each smart package. Once you are done with configuring a task, press **Schedule** for the task to be put on schedule. The scheduled task will be added to the **Scheduling** area. A scheduled task is executed automatically when its start time comes. Remote Installer stores the results for all runs of such a task, and you can review all of them in the **Execution Results** view.

Adding Software to Tasks

You can add software to be uninstalled or repaired from any inventory view to an already created or scheduled task. To reach this goal, you should select the necessary products and use the **Add to Task** button from the **Tasks** Ribbon group on the **Inventory** contextual page from the **Inventory Tools** category. Alternatively, you may use the **Add to Task** option from the **Smart Uninstall** and **Smart Repair** items in the pop-up menu and from the corresponding buttons on the toolbar.

Now you are familiar with the features of executing, creating and scheduling smart uninstall and repair tasks and have a better understanding of the concept used in Remote Installer.

Deployment Operation Configuration

When configuring the Deploy Software and Smart Uninstall and Repair operations, you are offered to add one or more packages. For the Deploy Software operations, you can use embedded deployment packages, software bundles and bundle groups. The Smart Uninstall and Repair operation is configured only with smart packages. The deployment sequence is specified on the **Sequences** tab `Pic 1`.
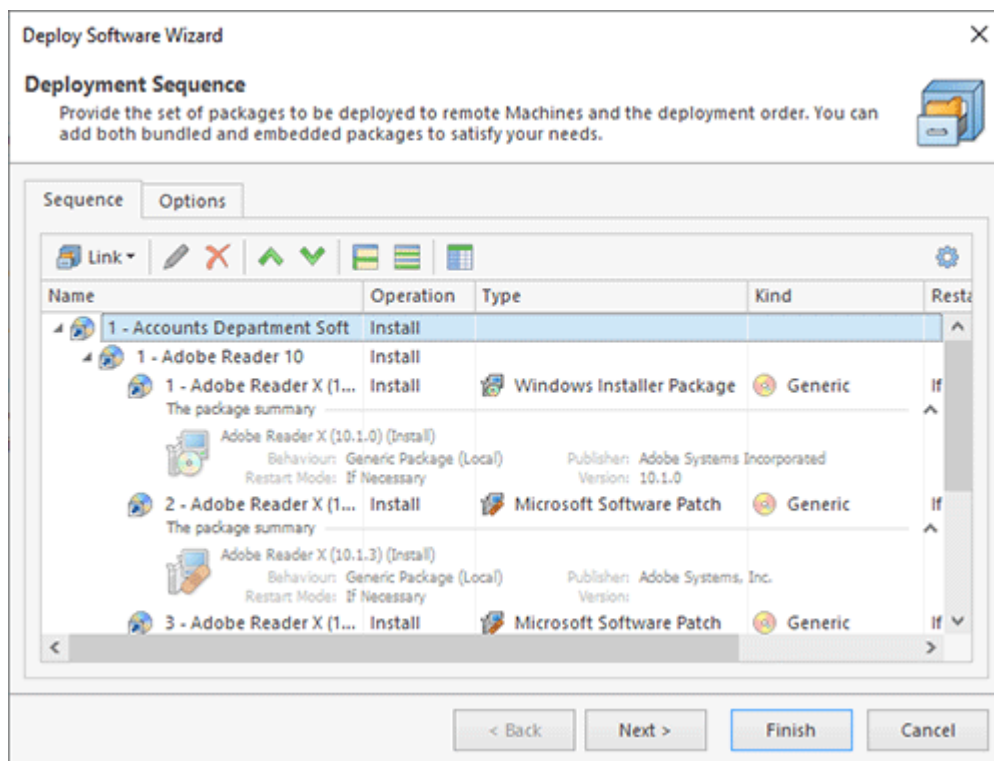
Pic 1. Deployment packages management

In the process of managing the deployment sequence, you can add and delete embedded deployment packages and bundles, edit both types of deployment packages and change the deployment order. All those options are available on the toolbar.

Toolbar Overview

Link ▾	**Link** The **Link** button is displayed if you are configuring a generic deployment operation. It should be used to add deployment packages to perform an install to, an uninstall from or a repair on remote Machines from those available in the Software Bundles repository.

New ⏷	**New** The **New** button is displayed if you are configuring a smart uninstall and repair operation. It should be used to select the software to be uninstalled from and/or repaired on remote Machines.
	Edit The **Edit** button enables you to change the selected deployment package configuration.
	Delete Using the **Delete** button, you can delete the selected deployment packages from those being installed to, uninstalled from or repaired on the remote Machines.
	Move Up The **Move Up** button should be used to move the selected packages up the deployment order.
	Move Down The **Move Down** button should be used to move the selected packages down the deployment order.
	Choose Columns The **Choose Columns** button should be used to choose the columns displayed in the deployment sequence editor.
	Configuration The **Configuration** button opens the view configuration menu, which allows you to reset the view layout to defaults, thus displaying the columns that are initially visible and hiding those that are initially invisible.

The actions for creating embedded packages, adding bundles, editing packages, deleting packages and controlling the packages deployment order are also available in the packages table pop-up menu.

You can combine different deployment operations within a single operation. For example, you can uninstall one application, repair another one and install still another one within the scope of a single operation. When adding a Bundle or a Bundle Group to a Deploy Software task, you can choose if the product defined with this bundle should be installed, uninstalled or repaired. The Bundles that are already in the deployment sequence are filtered when selecting the Bundles to be added.

When creating a smart package, you are offered to choose the products you would like to uninstall or repair from the inventory. Then the required number of packages is created. If the deployment sequence already contains the same product to uninstall or repair, a new package is not created; instead, the selected Machines are added to the existing package so that each package always represents a single product.

When configuring a deployment operation, you can see on the **Options** tab if the deployment confirmations are enabled and if there is a chance that a remote Machine will be restarted to complete the deployment. You can also review the currently applied confirmation options, the timeout and notification options to be used when a remote Machine is rebooted, if required, and the deployment account settings. Remote Installer allows you to override the common options defined in the program preferences for a specific deployment operation. To reach this goal, use the **Change Confirmation Options**, **Change Timeout and Notification Options** and the **Change Deployment Account** links.

It is possible to provide as many packages as required and configure the deployment order as needed. It is guaranteed that processing of the next packages will start only after the processing of the previous one is completed. In case of a failure during the packages execution, the deployment operation is interrupted by default; hence the subsequent deployment packages are not executed. In such cases, if you wish to continue deployment anyway, you can change the deployment options in the program preferences.

Smart Unintstall and Repair Particularities

Remote Installer comes with innovative Smart Uninstall and Repair feature. In the smart mode, you can choose the products to uninstall or repair from the remote Machines software inventory, thus each product is uninstalled or repaired only from/on the Machine it is installed on. The Machine Queue for these tasks is maintained automatically and shows all the Machines that will be affected during the task execution. But how can you determine which product is going to be uninstalled from or repaired on which machine? The feature that comes to your help is the smart summary. You can find the summary info on the **Smart Summary** tab while configuring the smart operation. Let us take a closer look at this tab `Pic 1`.
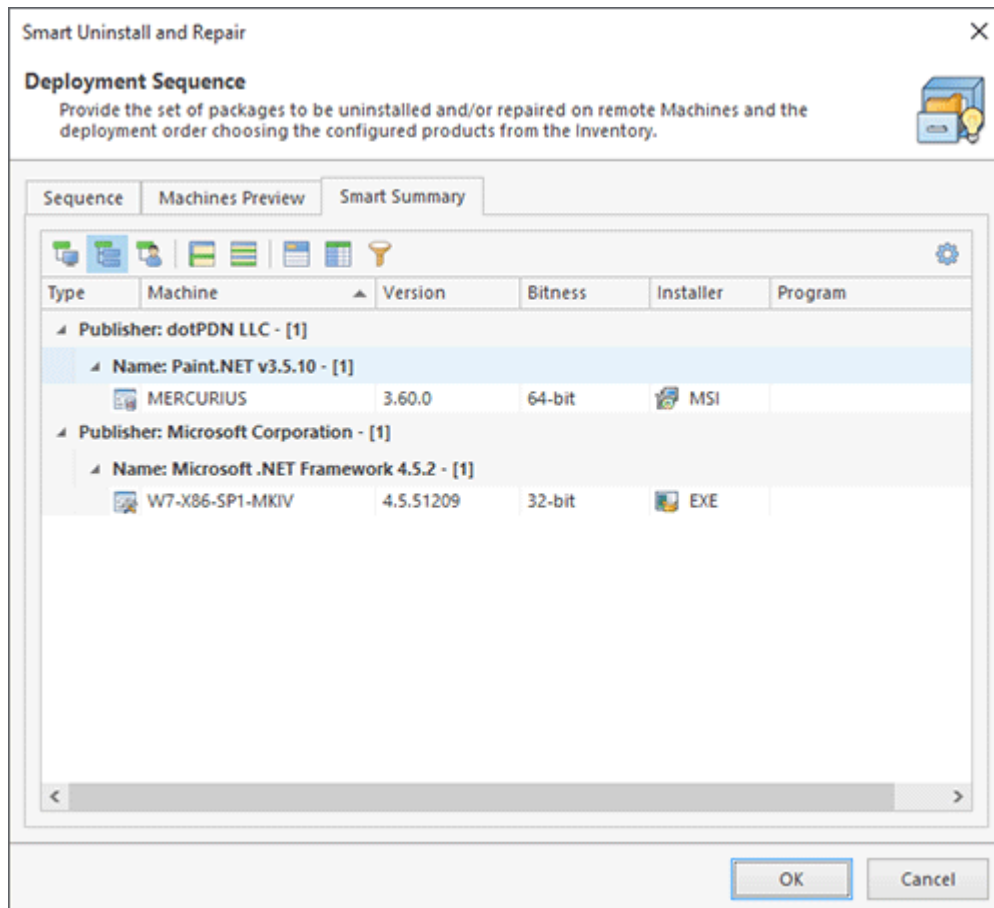
Pic 1. Smart uninstall and repair operation summary

On the **Smart Summary** tab, you can review the products to uninstall or repair associated with the operated Machines. The view is quite similar to the **Software Inventory** one, so you can regroup the displayed data any way you wish and easily understand which products on which Machines will be affected during the smart operation execution.

We hope that the Smart Uninstall and Repair feature will be useful for you, and the smart summary will be very helpful when configuring deployment operations.

Remote Agent Management

Remote Installer installs the agent on each remote Machine to be able to work with it in the future. This agent is a Windows service that is installed automatically when required, but you can also install it manually, control its state and uninstall it when you are sure it is no longer needed. All these options are available from the **Remote Agent** menu in the **Network** and **All Machines** views.

If you want to ensure the remote agent that is already installed on remote Machines is up-to-date, you can use the **Update** menu item from the **Remote Agent** menu. An update is executed only for the Machines that have the remote agent installed but it is not up-to-date. The agent won't be updated by default on Machines that have clients connected to them, therefore if you definitely want to update it anyway, you should check the **Force the remote agent update** option within the displayed confirmation dialog.

Another option available from the **Remote Agent** menu is manual agent installation. To install the remote agent, you should select the Machines you want to install the agent onto and choose the **Install** menu item from the **Remote Agent** menu.

Just as you can install the remote agent, you can also uninstall it when there is no need for it to be installed. To uninstall the remote agent, you should select the Machines you want to uninstall the agent from and choose the **Uninstall** menu item from the **Remote Agent** menu. By default, the remote agent will not be uninstalled from Machines that have clients connected to them, therefore, if you definitely want to uninstall it anyway, you should check the **Force the remote agent uninstall** option within the displayed confirmation dialog.

Along with installing and uninstalling, it is possible to reinstall the remote agent by choosing the **Reinstall** menu item from the **Remote Agent** menu. By default, the remote agent will not be reinstalled on Machines that have clients connected to them, therefore, if you definitely want to reinstall it anyway, you should check the **Force the remote agent reinstall** option within the displayed confirmation dialog.

When working with remote Machines, Remote Installer always starts the remote agent, but it is also possible to start it manually as well as stop it when there is no need for it to be running. To start the remote agent manually, you should select the Machines you want to start the agent on in the **Network** view or the **All Machines** view and choose the **Start** menu item from the **Remote Agent** menu. To stop the remote agent manually, you should choose the **Stop** menu item from the **Remote Agent** menu. By default, the remote agent will not be stopped if it is running on Machines that have clients connected to them, therefore, if you definitely want to stop it anyway, you should check the **Force the remote agent to stop** option within the displayed confirmation dialog.

The last one of the available options is the ability to restart the remote agent. To restart the remote agent, select the Machines you would like to restart the remote agent on and choose the **Restart** menu item from the **Remote Agent** menu. By default, the remote agent will not be restarted if it is running on Machines that have clients connected to them, therefore, if you definitely want to restart it anyway, you should check the **Force the remote agent to restart** options.

> ⚠ Forcing the remote agent to update, restart, stop, reinstall or uninstall will cause disconnection of all the clients working with the agent, that may lead to inconsistent operations over remote Machines.

We have done our best to cover all the aspects of the remote agent management and hope that those options will help you solve the tasks you will face while using Remote Installer.

Chapter 5: Inventory

Along with the functions of installing, uninstalling and repairing software packages, Remote Installer provides you with an easy-to-use tool for retrieving information on programs and updates installed on remote Machines with an option to compare the scan results and export the gathered inventory. The software inventory is organized based on inventory snapshots: each snapshot contains all required information on the software packages, including programs and updates installed on the set of Machines scanned for software at a specific time.

In this chapter, we will guide you through the process of gathering, organizing and analyzing software inventory information and introduce you to the option of exporting the list of installed software.

Scanning for Software

To retrieve information on programs and updates installed on remote Machines, the Remote Installer program should first be introduced to the Machines that should be scanned, so let us start with filling the **Network** view with available Machines. To do this, click the **Enumerate Machines** button on the Ribbon bar or on the **Welcome Screen**.
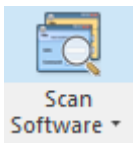
	Enumerate Machines The **Enumerate Machines** button from the **Network** Ribbon group on the **Home** page and from the **Enumeration** Ribbon group on the **Network** contextual page should be used to display the **Enumerate Machines** wizard which can help you with adding Machines to the application for further processing.

The **Enumerate Machines** wizard appears on the screen and introduces itself to you. Having familiarized yourself with the brief help information provided on the welcome page, click **Next** to continue. In the next step, you are offered to choose the enumeration type Pic 1. Keep the **Scan Network** option checked and click **Finish** to scan our network for all available Machines automatically.
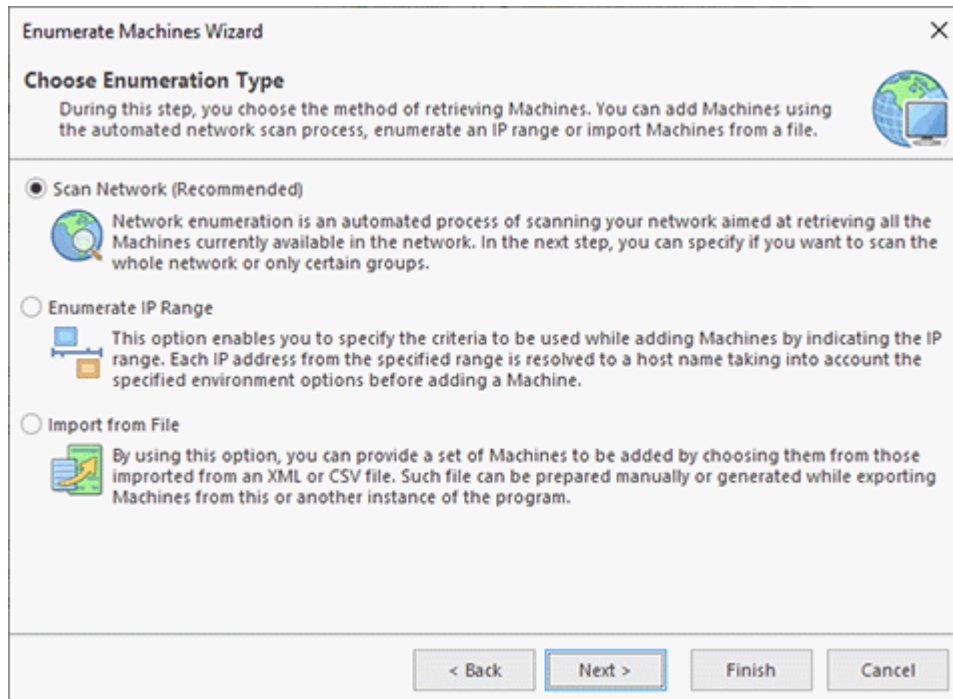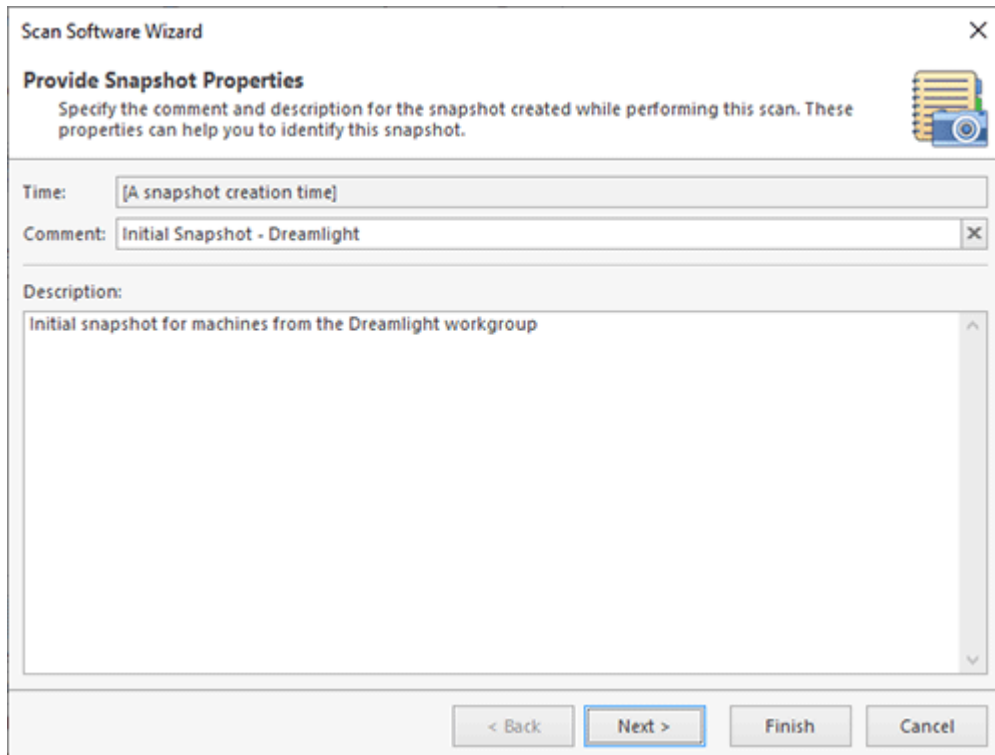
Pic 1. Choosing the enumeration type

Once the enumeration process is completed, the Machines found within the network environment will be added to the **Network** view. We have scanned the network for Machines and are now going to retrieve information on programs and updates installed on specific Machines.

Scan Software	**Scan Software** The **Scan Software** button from the **Software** Ribbon group on the **Home** page and from the **Scan** group on the **Software** page should be used to retrieve information on programs and updates installed on remote Machines.

> ℹ️ If you have the **Scan software automatically** option enabled (it is enabled by default) and no specific credentials are required to access the remote Machines, you may have already retrieved information on installed programs and updates during the network scan process.

Select the Machines for which you want to retrieve information on installed programs and updates in the **Network** view and choose **Scan Software** from the pop-up menu or **Scan Software > Scan** from the Ribbon bar. The **Scan Software Wizard** will appear on the screen `Pic 2`.

Pic 2. Specifying the snapshot properties

On the first page of the **Scan Software Wizard**, you are offered to provide the comment and the description to apply to the snapshot that will be created as a result of this software scan. It is recommended, although not required, to provide a meaningful comment if you are going to work with this snapshot in the future to make it easier to distinguish this snapshot from others. During the next wizard steps, it is possible to change the scope of Machines to be scanned for software. The Machine Queue consists of **Collections** that define the Machines to process. As you can see, the Collection containing the Machines you have selected is created automatically. Once the required settings are provided, press **Finish** to proceed.

The progress bar in the bottom right part of the Remote Installer main screen will show you the progress of this operation, and, as soon as it is completed, the operation results will appear in the **Execution Results** view. From the **Execution Results**, you can learn if the list of installed programs and updates has been retrieved and if there were any problems while retrieving it.

With Remote Installer, you can also perform a software scan on schedule or simply create a preconfigured task to scan software in the future. Refer to the **Creating Task** and **Scheduling Task** sections for details.
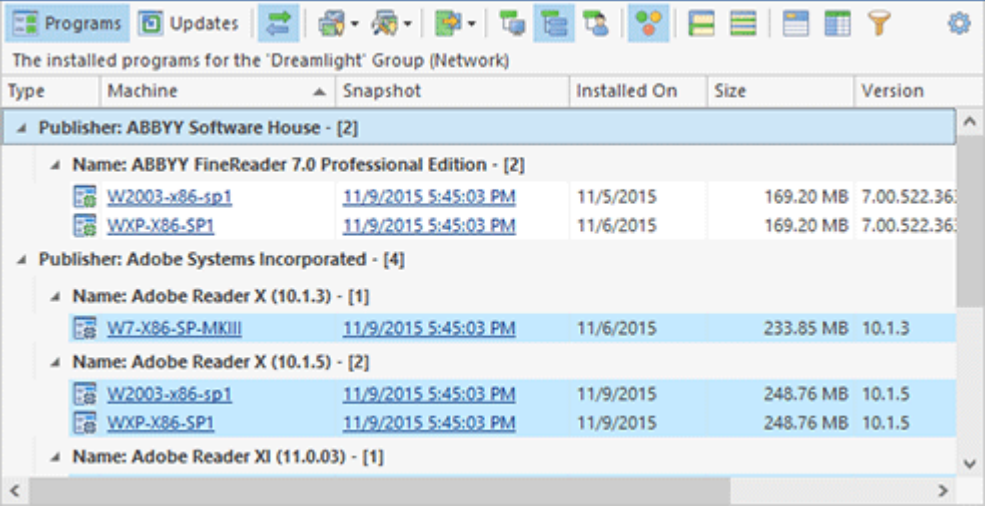
Software Inventory

Having scanned Machines for installed software, we would like to review relevant information on programs and updates installed on any of the Machines, and the **Software Inventory** view is there to help us `Pic 1`.

Software Inventory	**Software Inventory** The **Software Inventory** button from the **Inventory** Ribbon group on the **Software** page should be used to review the software inventory for the selected Machines.

> ℹ️ This section assumes that the **Link with Selection** mode is enabled for the **Software Inventory** view; otherwise, the **Software Inventory** view is not updated after the selection changes and scans completes, and you have to use the **Software Inventory** button to update the view.

Let us scan any set of Machines we have not scanned yet, and after which select all Machines we have scanned and switch to the **Software Inventory** view.

Pic 1. Software inventory for the selected Machines

The **Software Inventory** view now displays relevant information on programs and updates for the selected Machines. As you can see, it displays results for different scans, which include different scopes of remote Machines, merged in one view, where each program and update is taken from the most recent scan of every Machine. You can export the list of installed programs and updates to a CSV file to be used as a software inventory report. To get detailed information on the features available in this view refer to the **Software Inventory View** section.

Inventory Snapshots

In Remote Installer, software inventory is grouped by snapshots, and a new snapshot is created for each software scan. You can review the available snapshots pertaining to the selection in the **Network** view or the **All Machines** view, as well as all the snapshots ever created, within the **Inventory Snapshots** view.

Inventory Snapshots	**Inventory Snapshots** The **Inventory Snapshots** button from the **Inventory** Ribbon group on the **Software** page should be used to review the available snapshots for the selected Machines.

> ℹ This section assumes that the **Link with Selection** mode is enabled for the **Inventory Snapshots** view and the **Specific Snapshots** view mode is active; otherwise, the Inventory Snapshots view is not updated after the selection changes and scans completes, and you have to use the **Inventory Snapshots** button to update the view.

For each snapshot in the **Inventory Snapshots** view, it is possible to review the list of installed programs and updates retrieved during the scan this snapshot stands for Pic 1.
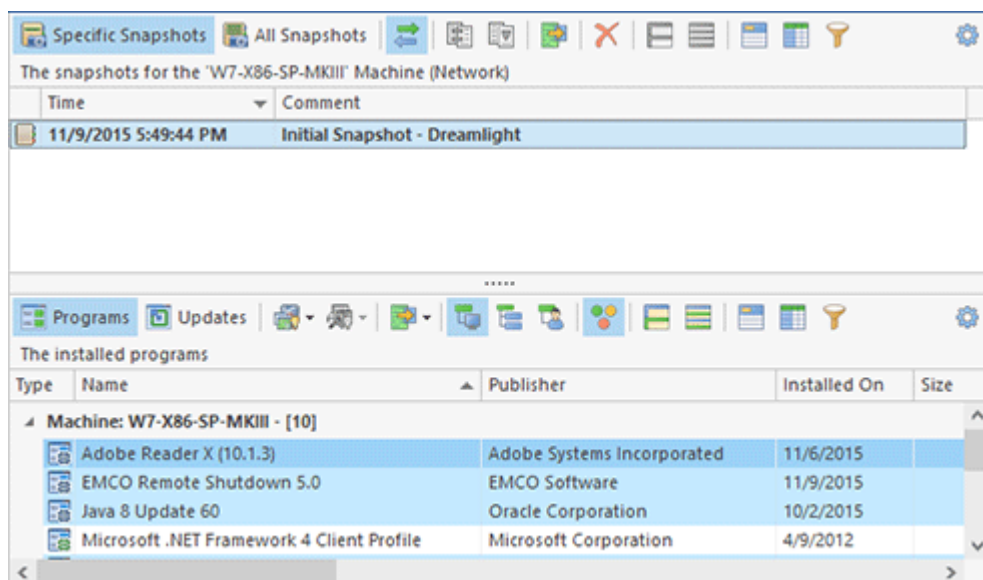
Pic 1. The list of installed programs retrieved from remote Machines

You can switch between the lists of installed programs and updates using the **Programs** and **Updates** buttons on the toolbar. By default, the table with programs displays the same columns as the operating system in the **Programs and Features** section of the **Control Panel**, but you can choose more columns from those available using the **Choose Columns** button on the toolbar. In addition to choosing columns, you can filter the displayed data using the **Filter Editor** button. Feel free to configure the view any way you need – you can then always roll back to the default view layout using the **Reset Layout** item from the view configuration menu.

Remote Installer comes with a built-in snapshots comparison engine, which helps you to review changes made between the scans to the installed programs and updates on each remote Machine. Let us take a closer look at this feature.

Let's assume we have installed new programs to the same Machines we scanned in the previous section and have scanned them again. The **Inventory Snapshots** view now displays two snapshots. To compare these snapshots, we simply select both of them in the **Inventory Snapshots** view and choose the **Compare with Each Other** item from the pop-up menu. Now, the table in the bottom part of the view displays the snapshots comparison result **Pic 2**.
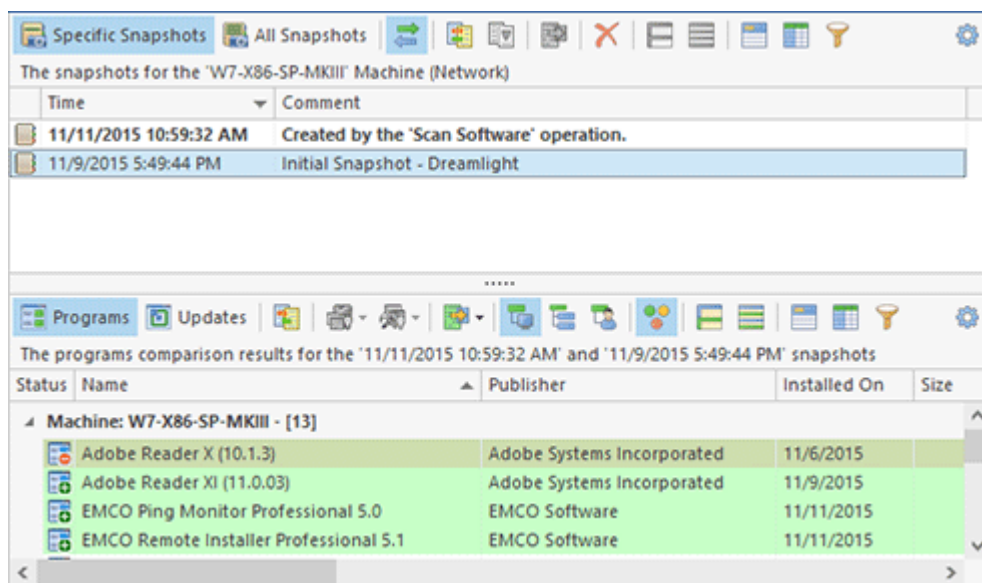
Pic 2. The snapshots comparison result

The programs we have installed are highlighted in green and are marked with a special icon that means the program was installed between the scans. The programs and updates that have been changed or removed are represented in a similar manner.

> To compare programs from the selected snapshot with those from the previous snapshot, there is no need to select both snapshots – you can just select the newer snapshot and choose the **Compare with Previous** item from the pop-up menu.

For detailed information on the snapshots review and comparison features, address the **Inventory Snapshots View** section of the document.

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Exporting Programs and Updates

With Remote Installer, you can easily export the list of installed programs and updates together with the comparison results to a CSV file for future analysis or processing by an automated tool. To execute such an export, click the **Export** button in the toolbar of either the **Software Inventory** view or the details part of the **Inventory Snapshots** view. Alternatively, you can use the **Export** button from the **Organize** Ribbon group on the **Program** page, as well as the items available in the pop-up menu. You are proposed to choose between exporting the selected entries and all the entries.

> 💡 If you wish to export all programs or updates from a specific snapshot, you can select this snapshot in the **Inventory Snapshots** view and press the **Export** button.

The corresponding wizard will appear on the screen and guide you through the export process. Let us take a closer look at the export process on the example of the programs export **Pic 1**.

Pic 1. The Export Programs Wizard welcome page

The first page of the **Export Programs Wizard** is the welcome page used to introduce you to the feature the wizard is supposed to help you with. After reading the welcome information, press **Next** to continue with export.

On the next page of the **Export Programs Wizard**, you are offered to choose the file you are going to save the programs to and the CSV format options. The file path should be provided to the **Export To** field `Pic 2` . You can choose the encoding to be used for saving the data as well as the field delimiter and the text qualifier. While performing export, you may also define if you would like the column header to be present in the resulting file, which would make it easier for you to identify each column – this feature can be enabled using the **Include column header** option.

Pic 2. Configuring the export options

After you are ready with configuring the export options, press **Finish** to proceed with export. The file containing the exported programs will be created in the path specified.

The CSV file with exported programs or programs comparison results consists of twenty-two columns, which are the following:

Column Index	Header	Description
1	Type	The entry type. It has the value of 'Program'. For comparison results export, the comparison status is also included.
2	Machine	The name of the Machine the program is installed on.
3	Name	The program name.
4	Publisher	The program publisher.
5	Installed On	The installation date.
6	Size	The program size.
7	Version	The program version.
8	Platform	The platform the program is targeted at: x64 or x86.

Column Index	Header	Description
9	Installer	The installer used for deploying the program.
10	Comment	The program comment.
11	Contact	The program vendor contact.
12	Help Link	The help link for the program.
13	Readme	The location of the program readme file.
14	Registered Company	The company the program is registered to.
15	Registered Owner	The person the program is registered to.
16	Source	The location of the installation package used for deploying the program.
17	Support Link	The program support web-site link.
18	Support Telephone	The program support telephone.
19	Update Info Link	The location of the program update info.
20	Allow Modify	The sign showing that the program can be modified using the **Programs and Features** section of the **Control Panel**.
21	Allow Repair	The sign showing that the program can be repaired using the **Programs and Features** section of the **Control Panel**.
22	Allow Remove	The sign showing that the program can be removed using the **Programs and Features** section of the **Control Panel**.

Sample exported programs in the CSV format

"Type","Machine","Name","Publisher","Installed On","Size","Version","Bitness","Installer","Comment","Contact","Help Link","Readme","Registered Company","Registered Owner","Source","Location","Support Link","Support Telephone","Update Info Link","Allow Modify","Allow Repair","Allow Remove"

"Program","Avalon-PDC","Microsoft .NET Framework 2.0 Service Pack 2","Microsoft Corporation","2011-10-28 00:00:00","361.64 MB","2.2.30729","64-bit","MSI","","","http://go.microsoft.com/fwlink/?LinkId=98073",,,,"d:\71a340210b69ab373465\dotnetfx20\","","","","http://go.microsoft.com/fwlink/?LinkId=98074","yes","yes","yes"

"Program","Avalon-PDC","Microsoft .NET Framework 3.0 Service Pack 2","Microsoft Corporation","2010-10-05 00:00:00","388.54 MB","3.2.30729","64-bit","MSI","","","http://go.microsoft.com/fwlink/?LinkId=98075",,,,"d:\71a340210b69ab373465\dotnetfx30\","","","","http://go.microsoft.com/fwlink/?LinkId=98076","yes","yes","yes"

"Program","Avalon-PDC","Microsoft .NET Framework 4 Client Profile","Microsoft Corporation","2010-10-05 19:35:39","38.80 MB","4.0.30319","64-bit","EXE",,,,,,,,"C:\WINDOWS\Microsoft.NET\Framework64\v4.0.30319\SetupCache\Client","http://go.microsoft.com/fwlink/?LinkId=164164",,"http://go.microsoft.com/fwlink/?LinkId=164165","yes","yes","yes"

"Program","Avalon-PDC","Microsoft .NET Framework 4 Extended","Microsoft Corporation","2010-10-05 19:43:24","51.99 MB","4.0.30319","64-bit","EXE",,,,,,,,"C:\WINDOWS\Microsoft.NET\Framework64\v4.0.30319\SetupCache\Extended","http://go.microsoft.com/fwlink/?LinkId=164164",,"http://go.microsoft.com/fwlink/?LinkId=164165","yes","yes","yes"

The following twenty-five columns are available in the CSV file with the exported program updates:

Column Index	Header	Description
1	Type	The entry type. It has the value of 'Update'. For comparison results export the comparison status is also included.
2	Machine	The name of the Machine the update is installed on.
3	Program	The program the update is for.
4	Name	The update name.
5	Publisher	The update publisher.
6	Installed On	The installation date.
7	Size	The update size.
8	Version	The update version.
9	Platform	The platform the update is targeted at: x64 or x86.
10	Installer	The installer used for deploying the update.
11	Comment	The update comment.
12	Contact	The update vendor contact.
13	Help Link	The help link for the update.
14	Readme	The location of the update readme file.
15	Registered Company	The company the update is registered to.
16	Registered Owner	The person the update is registered to.
17	Source	The location of the installation package used for deploying the update.

Column Index	Header	Description
18	Support Link	The update support web-site link.
19	Support Telephone	The update support telephone.
20	Update Info Link	The location of the update info.
21	Allow Modify	The sign showing that the update can be modified using the **Programs and Features** section of the **Control Panel**.
22	Allow Repair	The sign showing that the update can be repaired using the **Programs and Features** section of the **Control Panel**.
23	Allow Remove	The sign showing that the update can be removed using the **Programs and Features** section of the **Control Panel**.
24	Update ID	The unique identifier for the update.
25	Release Notes	The release notes available for the update.

Sample exported program updates in the CSV format

"Type","Machine","Program","Name","Publisher","Installed On","Size","Version","Bitness","Installer","Comment","Contact","Help Link","Readme","Registered Company","Registered Owner","Source","Location","Support Link","Support Telephone","Update Info Link","Allow Modify","Allow Repair","Allow Remove","Update ID","Release Notes"

"Update","Avalon-PDC","Microsoft .NET Framework 2.0 Service Pack 2",".NET Framework 2",,"2010-10-05 00:00:00","",,"64-bit","MSI",,,"http://www.microsoft.com",,,,,,,,,,"no","no","no","{2F3AB6ED-951C-4CE7-8AC9-8546FDCF1F5A}",

"Update","Avalon-PDC","Microsoft .NET Framework 3.5 SP1","Hotfix for Microsoft .NET Framework 3.5 SP1 (KB953595)","Microsoft Corporation","2010-10-05 17:37:26","","1","32-bit","EXE","This hotfix is for Microsoft .NET Framework 3.5 SP1.

If you later install a more recent service pack, this hotfix will be uninstalled automatically.

"Update","Avalon-PDC","Microsoft .NET Framework 4 Client Profile","Security Update for Microsoft .NET Framework 4 Client Profile (KB2478663)","Microsoft Corporation","2011-10-28 11:42:06","","1","32-bit","EXE","This security update is for Microsoft .NET Framework 4 Client Profile.

If you later install a more recent service pack, this security update will be uninstalled automatically.

Now you are fully introduced to the function of exporting programs and updates to an external file and can use this feature in your everyday work, e.g. for generating software inventory reports.

Snapshot Properties

Remote Installer groups software inventory using a snapshot object. A new snapshot is created each time you scan remote Machines for programs and updates. A snapshot properties set consists of the scan time, comment and description. The scan time is maintained automatically and simply represents the date and time the scan was executed on, the other properties are user-defined and can be used for easier snapshot identification in future `Pic 1`.

> 💡 You can provide a comment and a description to be applied to the snapshot to be created before executing the software scan. It can help you to identify the snapshots while performing software inventory.

Pic 1. Changing snapshot properties

To change properties of any snapshot, you should select it in the **Inventory Snapshots** view and choose the **Edit** item from the pop-up menu. The changes to the snapshot properties in any of these views are applied to this snapshot in another view automatically.

Chapter 6: Tasks and Schedule

With Remote Installer, you can easily create a prefigured task for future execution. Furthermore, the program is provided with a powerful engine for executing tasks and scheduling their execution using the mechanism similar to that of Microsoft® Office Outlook Calendar. This ensures the same scheduling functionality that you are used to work with.

> ℹ️ Tasks and schedule are not available in the Free edition of the program. If you need to use tasks, you should purchase a license for a commercial edition of the program.

The set of features connected with scheduling includes the options of scheduling both one-time and recurrent tasks, switching between different views, zooming views, a convenient navigation and the possibility of reviewing a detailed report on every task execution regardless of whether the task is scheduled or not.
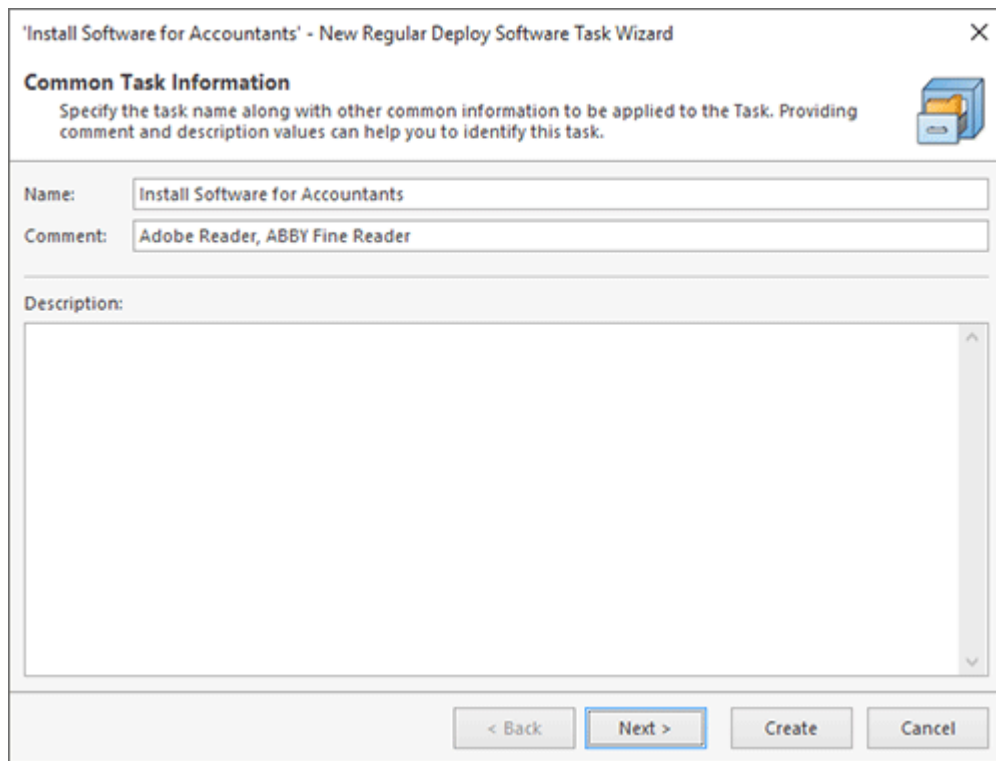
Creating Tasks

Along with a simple deployment and software scan, Remote Installer provides you with an option of creating preconfigured tasks to be used in the future. Such tasks are displayed within the **Tasks** area and can then be scheduled for an automatic execution or executed manually. The results of such tasks execution are displayed in the **Execution Results** view.

You can create the following tasks:

- **Deploy Software** – allows you to install, uninstall and repair any number of programs and updates on remote Machines;

- **Smart Uninstall and Repair** – should be used to uninstall or repair software on remote Machines choosing the products to be uninstalled or repaired from the inventory;

- **Scan Software** – should be used to perform a software inventory.

It is possible to create a task directly from the **Tasks** area using the **New Task** menu item from the pop-up menu or on the toolbar. The **New Task Wizard** will appear on the screen to guide you through the process `Pic 1`.

Pic 1. Creating a new Deploy Software task

For each task, you can provide the task name, comment and description. Providing the comment and description values can help you to mark the task as the one to be executed in the future. The other wizard steps are used to configure additional task properties, which vary depending on the task type, along with the scope of Machines to operate. For example, while creating a new **Deploy Software** task, you can provide a list of deployment packages to be executed on remote Machines, and for a new **Scan Software** task, you can define the properties to be applied to the snapshot created while executing the task.

> ℹ️ You can proceed to creating a new task on any step of the **New Task Wizard** by pressing **Create**. Any aspect of the task configuration can be changed in future by editing the created task.

Detailed information on configuring deployment packages is available in the Deployment Operation Configuration section of this document; and for information on editing the Machine Queue, refer to the Defining Machines to Operate section.

Once you are done with configuring the task, press **Create** for the task to be created. The newly created task will be added to the **Tasks** area Pic 2.
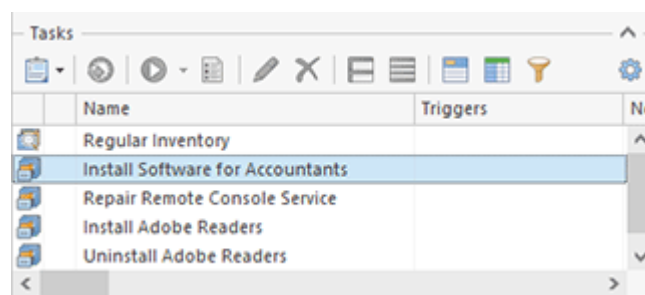
Pic 2. The created Deploy Software task in the Tasks area

A created task can either be executed manually using the **Run** menu item from the **Tasks** area pop-up menu or scheduled for execution using the **Schedule Task** menu item. Both actions are also available from the Tasks area toolbar.

Scheduling Tasks

Along with the option of creating preconfigured tasks for performing installs, uninstalls, repairs or software scans, Remote Installer comes with a range of features targeted at automated execution of preconfigured tasks on schedule. The tasks can be scheduled to be executed either once or on a regular basis. The results of such tasks execution are displayed in the **Execution Results** view.
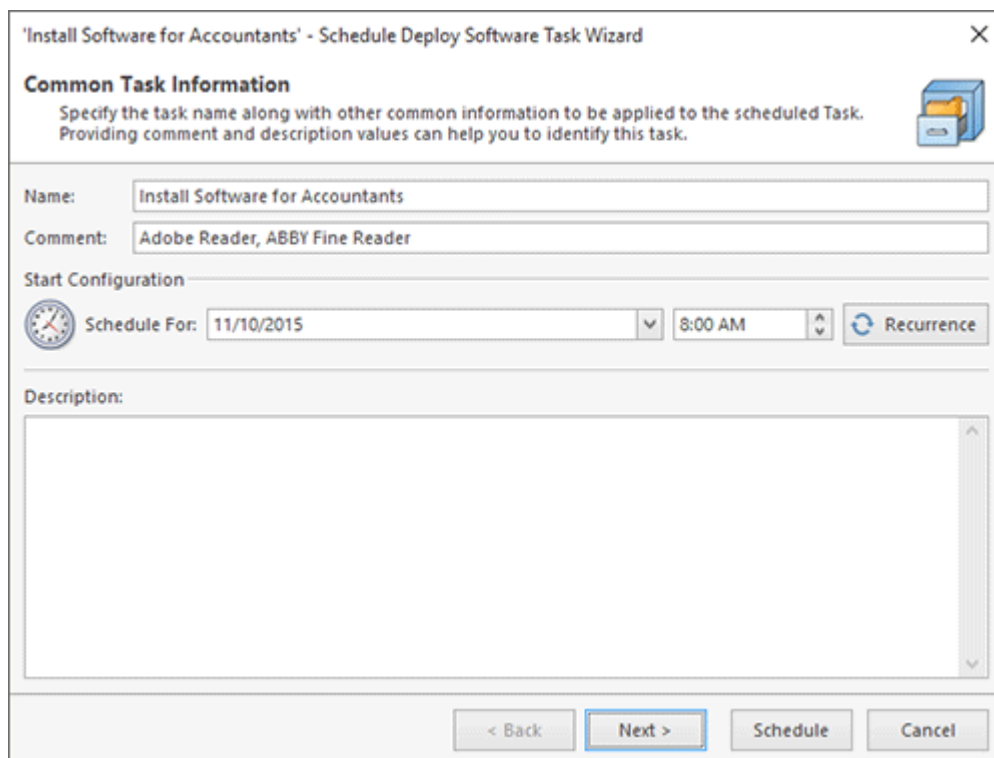
You can schedule the following tasks:

- **Deploy Software** – allows you to install, uninstall and repair any number of programs and updates on remote Machines;

- **Smart Uninstall and Repair** – should be used to uninstall or repair software on remote Machines choosing the products to be uninstalled or repaired from the inventory;

- **Scan Software** – should be used to perform a software inventory.

It is possible to schedule a task directly from the **Scheduling** area using the **New Task** or **New Recurring Task** menu item from the pop-up menu or on the toolbar. Another way of scheduling tasks is using the **Scheduled Task** buttons from the **New Ribbon** group on the **Home** page or on the **Deployment and Software** pages. For example, if you would like to schedule a **Deploy Software** task, you should use the **Deploy Software** item from the **Scheduled Task** button drop-down list. Also, it is possible to schedule a new task from any view that displays available Machines, i.e. the **Network** view or the **All Machines** view. The actions for scheduling tasks of specific types are available from the **New Scheduled Task** pop-up menu item; so to create a new **Deploy Software** task, you should choose the **New Scheduled Task** > **Deploy Software** menu item. If you would like to schedule a task to install, uninstall or repair a specific **Bundle or Bundle Group**, you can use the **New Scheduled Task** item from the **Software Bundles** view pop-up menu. For example, to schedule a task for installing a Bundle, you should select that bundle and choose the **New Scheduled Task** > **Install** menu item. **Smart Uninstall** and **Smart Repair** tasks can also be scheduled based on the scanned software using, for example, the **Smart Uninstall/Repair** > **New Scheduled Task** menu items from the **Software Inventory** view.

Along with scheduling a new task, you can also schedule any task from those already created but not scheduled yet. To schedule such a task, select it in the **Tasks** area and choose the **Schedule Task** menu item or press the corresponding button on the view toolbar.

In any case, the wizard will appear on the screen to guide you through the process **Pic 1**.

Pic 1. Scheduling a Deploy Software task

For each task, you can provide the task name, comment and description. Providing the comment and description values can help you to mark the task as the one to be executed in the future. You can schedule the task to run once or on a regular basis. The task recurrence is configured using the **Recurrence** button on the first page of the wizard. To get more information on the recurrence options, refer to the Configuring Recurrence section. The other wizard steps are used to configure additional task properties, which vary depending on the task type, along with the scope of Machines to operate. For example, while creating a new **Deploy Software** task, you can provide a list of deployment packages to be executed on remote Machines, and for a new **Scan Software** task, you can define the properties to be applied to the snapshot created while executing the task.

> ℹ️ You can proceed to task scheduling on any step of the wizard by pressing **Schedule**. Any aspect of the task configuration can be changed in future by editing the scheduled task.

Detailed information on configuring deployment packages is available in the Deployment Operation Configuration section of this document; and for information on editing the Machine Queue, refer to the Defining Machines to Operate section.

Once you are done with configuring the task, press **Schedule** to proceed to its scheduling. The scheduled task will be added to the **Scheduling** area `Pic 2`.
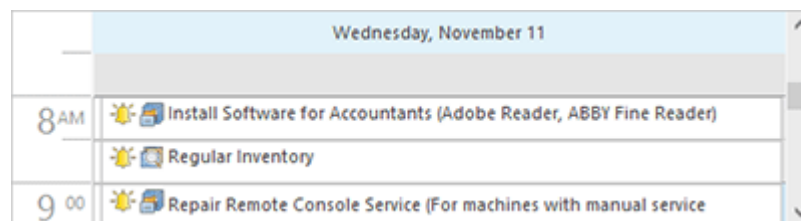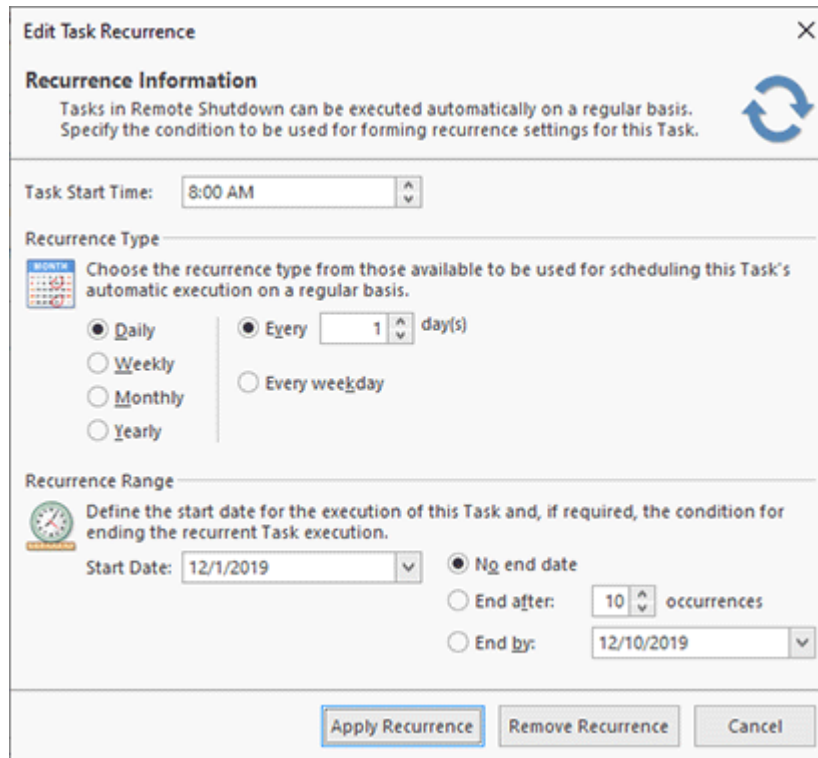
Pic 2. The created Deploy Software task in the Scheduling area

A scheduled task is executed when its start time comes. It can also be executed manually using the **Run** menu item from the **Scheduling** area pop-up menu.

Configuring Recurrence

The scheduling engine of Remote Installer allows you to schedule recurring tasks quickly and easily. The purpose of this chapter is to introduce you to the range of the recurrence types to be used and describe each of them. The recurrence options are available from the **Edit Task Recurrence** `Pic 1` dialog while the task is being scheduled.
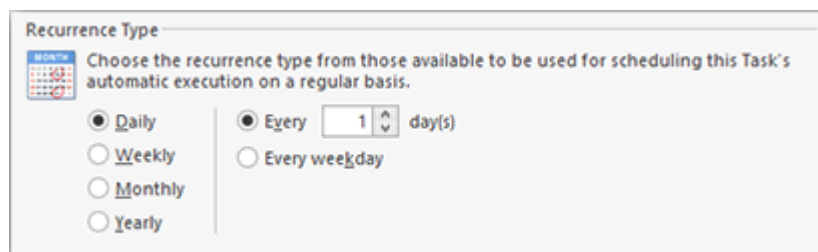
Pic 1. The recurrence types in the Edit Task Recurrence dialog

There are four recurrence types available: Daily, Weekly, Monthly and Yearly. Let us take a closer look on each one of them.

Daily Recurrence Type

The Daily recurrence type should be used if the recurrence condition is based on the number of days between the task execution instances. You can choose to execute the task every N days, where N is the number of days constituting the task execution interval, or every weekday.

Example

Weekly Recurrence Type

The Weekly recurrence type should be used if the recurrence condition is based on a particular day of the week and the interval in weeks. You can choose to execute the task, for example, on Mondays and Wednesdays every second week.

Example

Monthly Recurrence Type

The Monthly recurrence type should be used if the recurrence condition is based on a particular day of the month and the interval in months. You can choose to execute the task, for example, every second Friday of every month or every sixteenth day of every third month, etc.

Example

Yearly Recurrence Type

The Yearly recurrence type should be used if the recurrence condition is based on a yearly range. You can choose to execute the task, for example, every November the sixteenth, every third Wednesday in July, etc.

Example

Task Execution Confirmations

There are three types of tasks that require confirmation before execution. Those are Past Tasks, the tasks created in the past, or those moved to the past, or the ones that have already been postponed by snooze. The execution of the first three types of tasks should be confirmed because it might be unexpected. As for snoozing, it is the process initiated when you request the scheduling engine to remind you again of the need to confirm the task execution in a defined period of time. In all these cases the **Confirm Execution** dialog is displayed `Pic 1`.
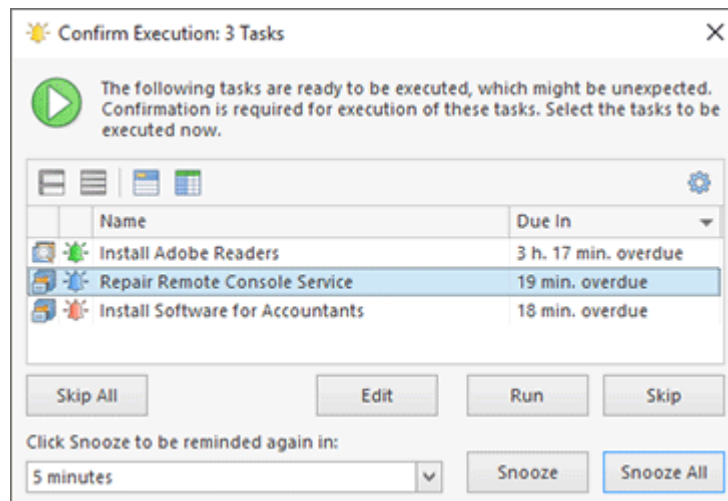
Pic 1. The Confirm Execution dialog

Within the **Confirm Execution** dialog, you can choose which task to run, which task to skip and which task to snooze. Snoozing is the process that allows you to receive a reminder again in a defined period of time. The snoozed tasks are displayed with a red reminder icon over them.

The reason for the **Confirm Execution** dialog being displayed before the task execution is represented by one of the following icons:

- the task is either created in the past of moved to the past and is configured to ask for a confirmation before being executed.

- the task is a Past Task. It should have been executed on schedule but the program was not running, and it is configured to ask for a confirmation before being executed.

- the decision regarding the task execution was postponed by snooze and the snooze interval has elapsed.

It is possible to open each task for edit, run, skip or snooze by using the table pop-up menu in the **Confirm Execution** dialog.

You can change the confirmations configuration right from this dialog by choosing the **Configure Execution Confirmations** item from the **Configuration** menu. Also, it is possible to open each task for review or editing.

Importing and Exporting Tasks

With Remote Installer, you can easily import and export Tasks any time you want. Exported Tasks include the whole Task configuration except the scheduling data. You can export one or all of the available Tasks to use the exported data as a backup, to share data with your colleagues or simply to import the Tasks to another instance of the program.
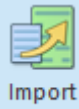
Import

The **Import** button from the **Organize** Ribbon group on the **Program** page can be used to import **Tasks** from an XML file with the help of the wizard.

If you want to import **Tasks** into Remote Installer, press the **Import** button from the **Organize** Ribbon group on the **Program** page when the **Tasks** area is focused. Optionally, you can use the **Import** button from the pop-up menu of the **Tasks** area. The import wizard will appear on the screen to guide you through the import process `Pic 1`.
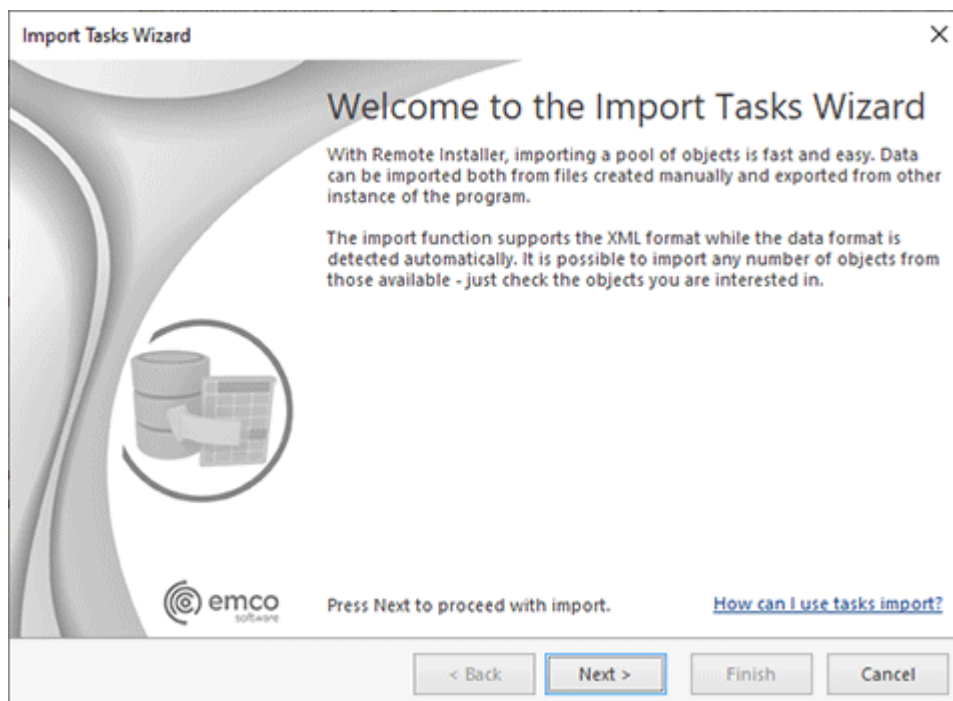
Pic 1. The Import Tasks wizard welcome page

The first page of the **Import Tasks** wizard is the welcome page used to introduce you to the feature the wizard is supposed to help you with. After reading the welcome information, press **Next** to continue with import.

On the next page of the **Import Tasks** wizard, you are offered to choose the file you are going to import **Tasks** from Pic 2. The file path should be provided to the **Import From** field. The encoding of the XML file with Tasks is detected automatically.
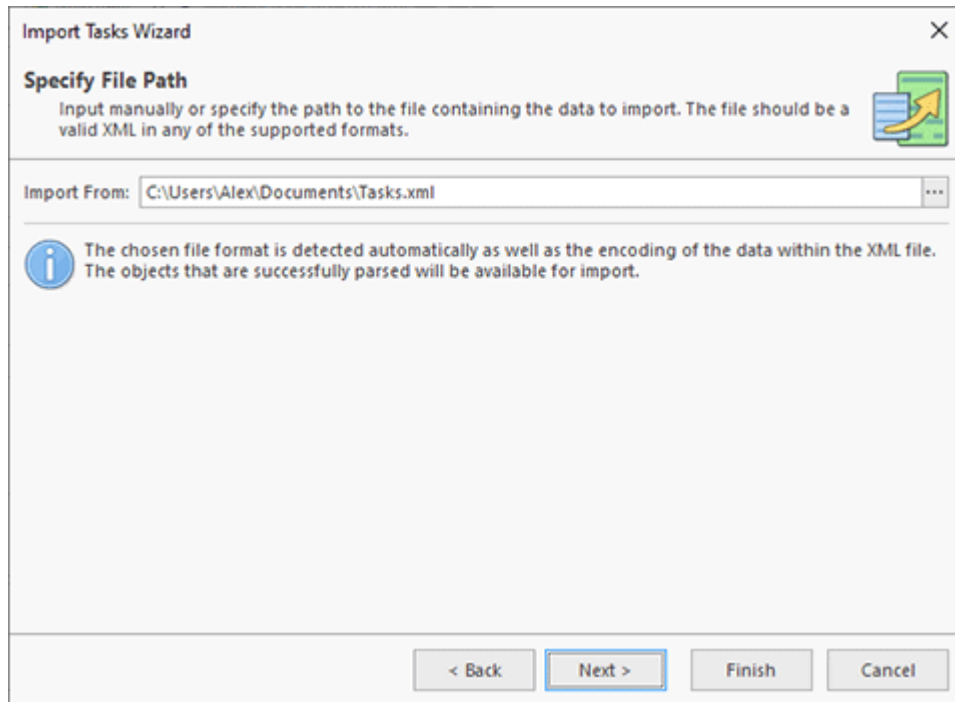
Pic 2. Choosing import source file

After the path to the required file is provided, press **Next**. The program will check if the file contains valid Tasks data and display the parsed Tasks to choose from **Pic 3**. In case the file contains the same **Tasks** that are already present in the program, they won't be checked for import automatically. However, if you still wish to import those **Tasks**, you can check them manually and choose the conflicts resolution mode. If Use existing items for conflicting entries is chosen, the existing **Tasks** are used. Thus, when you import Tasks into the program, conflicting entries are skipped. In case **Create** new items for conflicting entries is chosen, conflicting entries are imported as new items. The conflicts resolution mode is also taken into account when importing the Task's configuration data, e. g. the Collections included into the Task's Machine Queue.
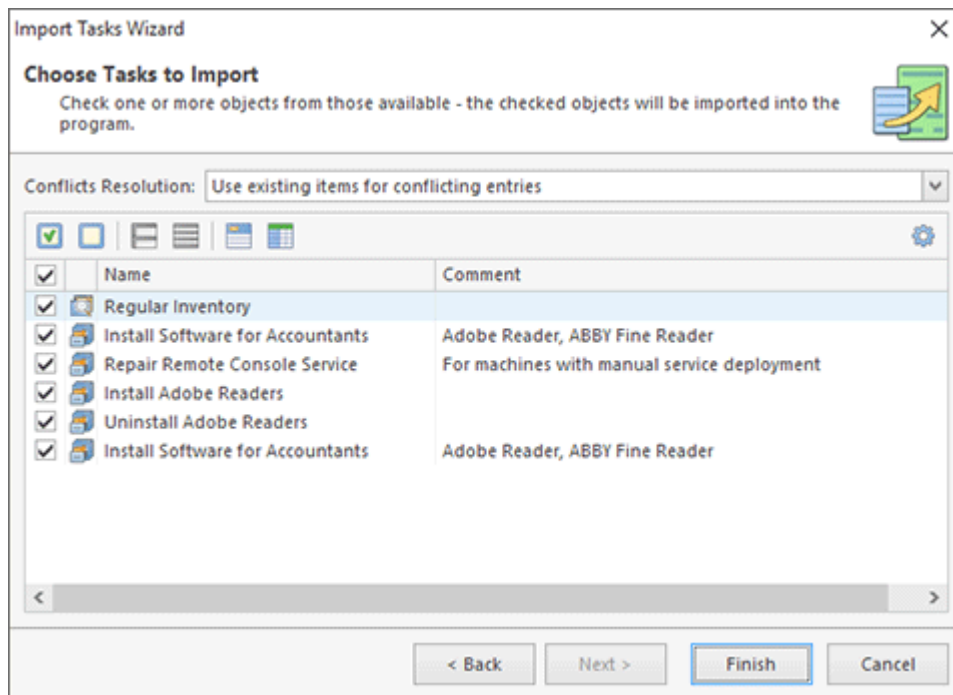
Pic 3. Choosing Tasks to import

When the Tasks to import and the conflicts resolution mode have been chosen, press the **Finish** button to proceed with import. As soon as the import has been completed, the imported Tasks are added to the **Tasks** area.
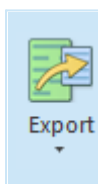
Export

The **Export** button from the **Organize** Ribbon group on the **Program** page can be used to export the Tasks from the program to an XML file that can be used in the future for import.

To perform export, select the **Tasks** to export and press the **Export** > **Export Selected** button from the **Organize** Ribbon group on the **Program** page. Alternatively, you can use the **Export** item from the **Tasks** area pop-up menu. To export all tasks, you can use the **Export All** items. The **Export Tasks** wizard appears on the screen Pic 4 .
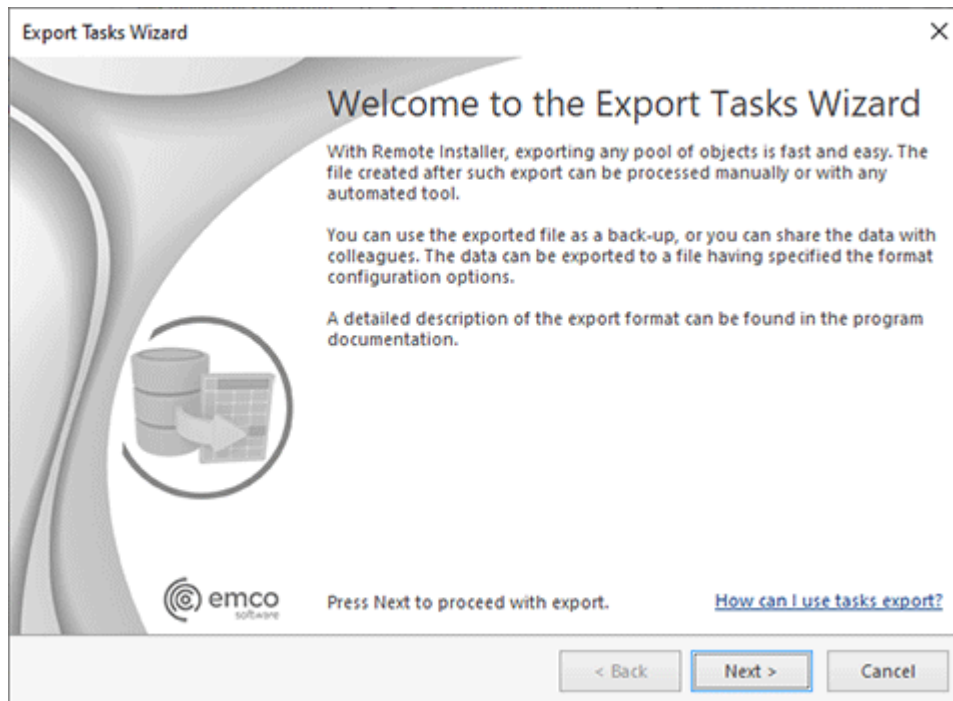
Pic 4. The Export Tasks wizard welcome page

The first page of the export wizard is the welcome page used to introduce you to the feature the wizard is supposed to help you with. After reading the welcome information, press **Next** to continue with export.

On the next page of the **Export Tasks** wizard, you are offered to choose the file you are going to save the **Tasks** to and the file format options Pic 5 . The file path should be provided to the **Export** To field. You can choose the encoding to be used for saving the **Tasks**.
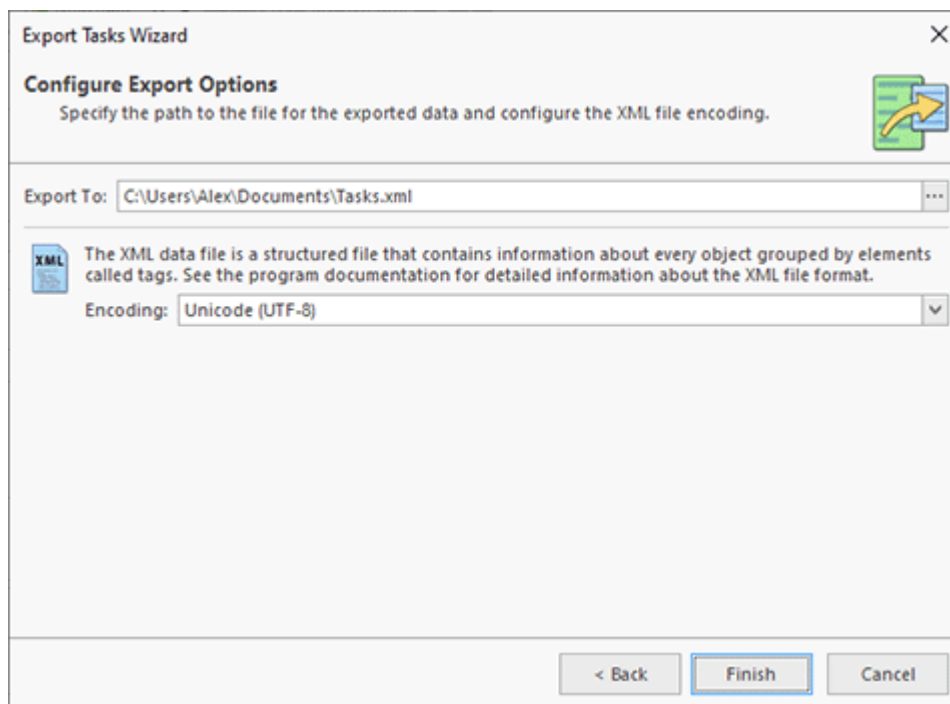
Pic 5. Configuring the export options

When the file path and the export format have been chosen, press **Finish** to proceed with export. A file containing the exported Tasks will be created in the specified path. The file created during export can be used in the future to import the Tasks back to the program.

Now you are fully introduced to the Tasks export and import options available in Remote Installer and can use them to solve your tasks.

Notification E-mails

Remote Installer can send notification messages to a preset e-mail address on tasks start and/or finish. These messages are sent using the mailbox configuration defined on the **E-mail Options** preference page to the specified addresses. This part of the guide describes the placeholders that can be used in the templates for notification messages sent by e-mail on task start and finish, if defined on the **Notifications** preference page. The following placeholders can be used in notification e-mail messages templates defined on the **Notification Templates** preference page.

Notification On Task Start

The following placeholders can be used for notification messages sent on task start:

%TASK_NAME%	the name of the started task.
%LOCAL_HOST%	the name of the machine hosting the program.

%RUNNING_PRODUCT%	the running program name.
%PRODUCT_VERSION%	the current version of the running program.
%TIME%	the current time.
%DATE%	the current date.
%DATETIME%	the current date and time.

Notification On Task Finish

The following placeholders can be used for notification messages sent on task finish and containing brief information on the task execution results:

%TASK_NAME%	the name of the started task.
%SUCCEEDED%	the number of machines processed successfully.
%WARNINGS%	the number of machines processed with warnings.
%ERRORS%	the number of machines not processed due to errors.
%CANCELED%	the number of machines with canceled processing.
%PROCESSED%	the number of machines that took part in the operation.
%SUCCEEDED_LIST%	the list of machines processed successfully.
%WARNINGS_LIST%	the list of machines processed with warnings.
%ERRORS_LIST%	the list of machines not processed due to errors.
%CANCELED_LIST%	the list of machines with canceled processing.
%PROCESSED_LIST%	the list of machines that took part in the operation.
%DURATION%	the time spent for performing the operation.
%RESULTS%	the per machine execution results table.
%LOCAL_HOST%	the name of the machine hosting the program.
%RUNNING_PRODUCT%	the running program name.
%PRODUCT_VERSION%	the current version of the running program.
%TIME%	the current time.
%DATE%	the current date.
%DATETIME%	the current date and time.

Chapter 7: Network Management

Remote Installer interaction with the network is designed in a way that enables a fast and easy search for Machines all over the network and their subsequent processing. Remote Installer saves the network structure in its database and shows it in form of a tree. Automatic scan results are displayed within the **Network** node in the **Network** view and can be used to create **Collections**. The Collections group Machines and Queries used to fetch Machines to define the scopes of Machines to be operated. All available Machines are also displayed in the **All Machines** view as long as there is any data referenced by those Machines. If the current user account does not have sufficient rights to access the remote Machines, the ability to specify network credentials comes to your help. You are enabled to provide specific credentials for both domains and individual Machines.

The purpose of this chapter is letting you know how to manage the representation of your network structure in the program, how to provide credentials to access specific Machines and how to operate remote Machines.

Configuring Machines to allow remote access

Remote Installer is used to manage Machines available in your network remotely, so it requires a remote access to the Machines to be enabled. The necessary requirements for the Machines to be accessed are described in the **Requirements section** of the document. Let us take a closer look at each one of them.

As mentioned in the requirements, **NetBIOS over TCP/IP** should be enabled on the network adapter. This option is configured in the WINS settings of the TCP/IP protocol configuration. In the **NetBIOS settings** group, you should either choose the **Enable NetBIOS over TCP/IP** value or leave the **Default** value if a static IP is used or the DHCP server in your domain is configured to enable NetBIOS.

The next requirement to check is that the **File and Printer Sharing** and **ADMIN$** shares are enabled. In the domain environment, you can use the group policies to enable sharing (it is enabled for domain by default). As for workgroup environments, **File and Printer Sharing** should be enabled on each Machine separately either in the network and sharing center, for Microsoft Windows Vista and newer, or directly in the Windows Firewall for Windows XP. The **ADMIN$** shares are not enabled on workgroup PCs even if you have enabled the file and printer sharing, so additional configuration steps are required. Let us take a closer look at those steps.

For Microsoft Windows Vista and newer operating systems, you should disable UAC remote restrictions. To achieve this, you should create the **LocalAccountTokenFilterPolicy** value and set it to *1* within the following registry key:

HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\System

You can use *this* Microsoft support article as a reference.

For Machines running Windows XP, you should set the **Network access: Sharing and security model for local accounts** policy within the **Local Policies** > **Security Options** to the **Classic: Local users authenticate as themselves** value. You can refer *this* acricle to learn more about this policy.

The next thing to check is that the network discovery is enabled for Machines and it is allowed to ping Machines. The ping functionality should be enabled either in Windows Firewall or in the firewall you are using on your Machines. You should also check that the firewall allows access to TCP ports *135*, *139* and *445*, as well as *137* and *138* UDP.

If your Machines are located in multiple subnets, you should ensure that the remote scope of outbound rules from the **File and Printer Sharing** and **Network Discovery** groups in the advanced firewall settings is set to **Any** for the currently applied network profile.

To check if the Machine is configured properly, you can use Windows Registry Editor and Windows Explorer. Within the registry editor, you should be able to connect to the remote registry and browse through any administrative section of the **Local Machine** hive, e.g. **SYSTEM**. Windows Explorer can be used to check access to administrative shares, such as *\\MACHINE\C$*.

Network Enumeration

Network enumeration means adding Machines for their further processing by Remote Installer either via an automated scan process or manually. Automatic network enumeration can be performed using either Active Directory, Computer Browser or IP ranges enumeration. You can also add a single Machine manually, if required, or import a set of Machines from a file.

> ℹ️ The current user credentials, just like the specified credentials, might not give access to the Active Directory data during an automatic network enumeration process. In such case, an authentication dialog `Pic 1` is displayed to input the credentials for the domain being connected to. The **Remember my credentials** option allows saving the provided credentials as the credentials for this domain. If this option is not enabled, the provided credentials are cached for the current session only.
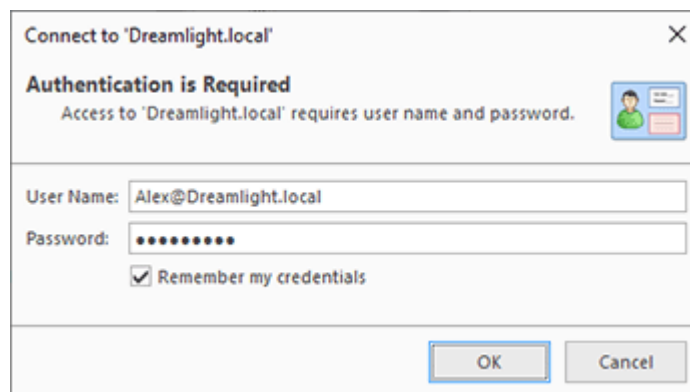
Pic 1. Providing credentials to connect to the Active Directory domain

This chapter contains a detailed description of the network enumeration process and of all the options you can specify for this process.

Enumerate Machines Wizard

The **Enumeration Wizard** `Pic 1` is designed to provide you with a single entry point for adding Machines to the program and is intended to make the process of building the network structure quick and easy. It allows performing an automatic network scan, enumerating an IP range and importing Machines to the program.

Enumerate Machines	**Enumerate Machines** The **Enumerate Machines** button from the **Network** Ribbon group on the **Home** page and from the **Enumeration** Ribbon group on the contextual **Network** page should be used to display the **Enumerate Machines** wizard, which can help you with adding Machines to the program for further processing.

After Remote Installer has built the network structure, it can be used to operate remote Machines and create **Collections** for further processing. The **Enumerate Machines** wizard welcome page `Pic 1` displays built-in help information on when this wizard should be used and how it may help you, as well as a warning of possible situations that might be unexpected for you.

Pic 1. The Enumeration Wizard welcome page

During the first step, you are offered to specify the method to be used for fetching Machines `Pic 2`. You can choose among scanning the network automatically, enumerating an IP range and importing Machines from a file.
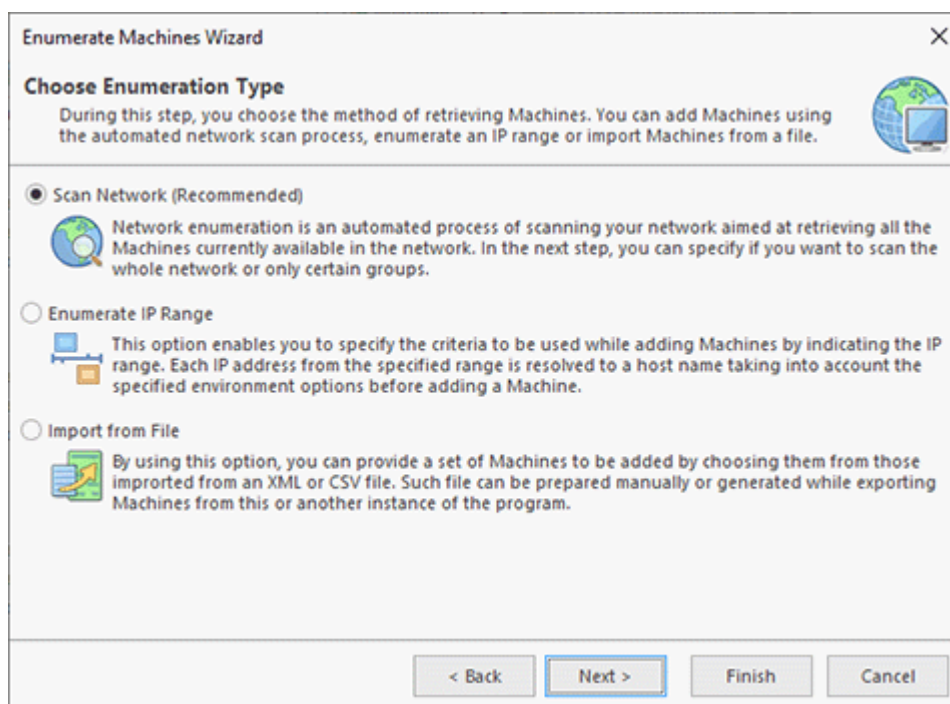
Pic 2. Choosing the enumeration type

If you have chosen the **Scan Network** option, on the next page you are required to specify the scope of operation for the automatic enumeration process `Pic 3`. You can scan the entire network or only particular Groups for available Machines. When scanning specific groups, it is possible to define a filter condition to constrict the scope of fetched Machines. See the **Network Scan** topic for details. Having selected the appropriate options, press **Finish** to proceed with enumeration.
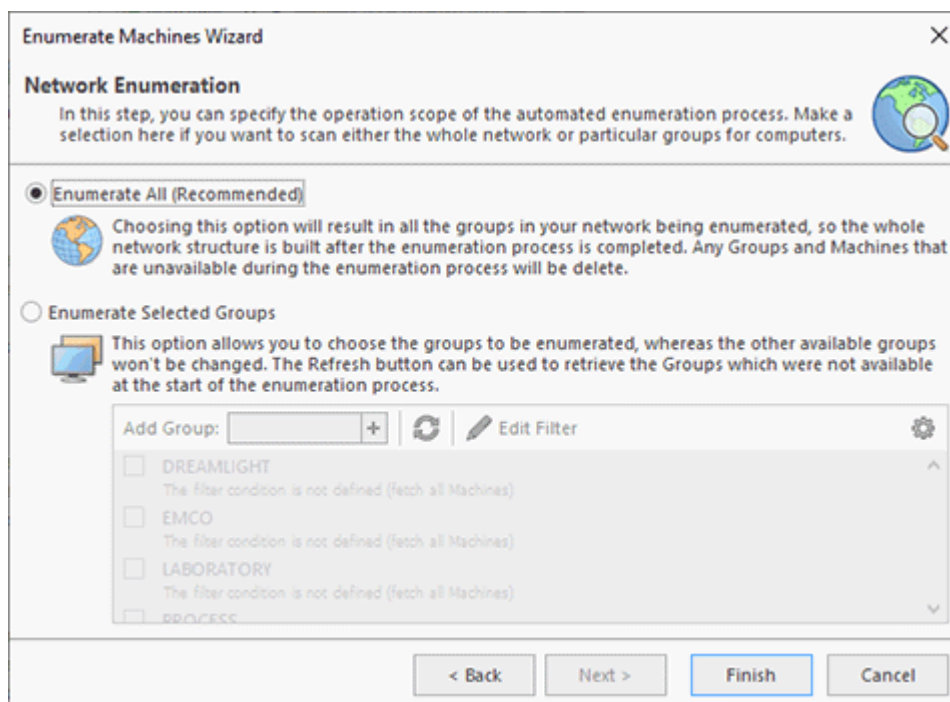
Pic 3. Selecting the network scan scope

If the **Enumerate IP Range** option is chosen, you are offered to specify the environment options, the Group to add Machines to and the IP range to scan `Pic 4`. See the **IP Range Enumeration** section for details. Having specified the required configuration options, press **Finish** to proceed.

Pic 4. Configuring the IP range enumeration

In case you have chosen the **Import** option, the routine to follow is the same as used for import with the help of the **Import Machines** wizard.

After you have passed all the steps of the **Network Enumeration Wizard** and pressed the **Finish** button, the process of adding Machines to the program is initiated. As soon as it is completed, you can see the result within the **Network** view Pic 5 .
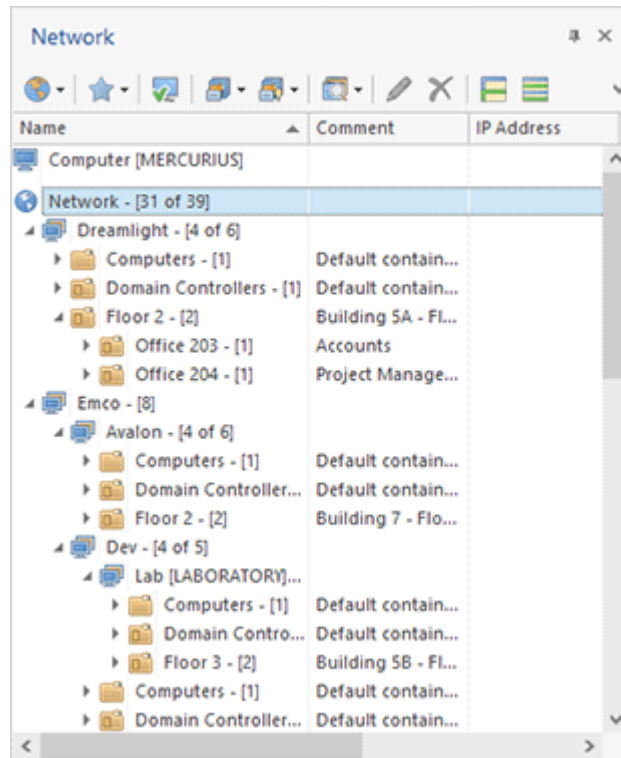
Pic 5. Network enumeration result

The added Machines can be processed in the future with Remote Installer and used for creating Collections for further processing.

Network Scan

Network scan is an automated process of searching a network for available remote Machines to be later processed by Remote Installer. The scan is performed in accordance with the specified enumeration options. The network scan feature is available via the **Enumerate Machines** wizard, the **Scan Network** button within the **Network** Ribbon group on the **Home** page, and the **Enumeration** Ribbon group on the contextual **Network** page. These actions are available from the toolbar and the pop-up menu of the **Network** view.

Two modes of network scan are available; those are **Enumerate New** and **Enumerate**. In the **Enumerate New** mode, the program only performs a search for new Machines without removing those that were not found during the scan process. Also, the automatic software scan is executed only for new Machines and that found ones that have not been scanned for installed programs and their updates yet. The **Enumerate** mode means that the program performs a scan for Machines, removing those that were not found during the scan process from the **Network** node. All found Machines are scanned for installed programs and their updates

> The network scan available in the **Enumerate Machines** wizard and the **Scan Network** dialog is performed in the **Enumerate** mode, thus the Machines that are not found during the enumeration process are removed from the **Network** node.

Scan Network	**Scan Network** The **Scan Network** button from the **Network** Ribbon group on the Home page and from the **Enumeration** Ribbon group on the contextual **Network** page should be used to scan the entire network or specific Groups for Machines and add them to the program for further processing.
Enumerate	**Enumerate** The **Enumerate** button from the **Enumeration** Ribbon group on the contextual **Network** page should be used to scan the selected containers for Machines removing those not available during the enumeration process.
Enumerate New	**Enumerate New** The **Enumerate New** button from the **Enumeration** Ribbon group on the contextual **Network** page should be used to scan the selected containers for Machines leaving those not available during the enumeration process.

The pane for configuring network enumeration displayed within the **Enumerate Machines** wizard and the **Scan Network** dialog, allows you to specify the enumeration scope `Pic 1`. Here you can specify if you wish to search for Machines available in the entire network or in particular Groups only.
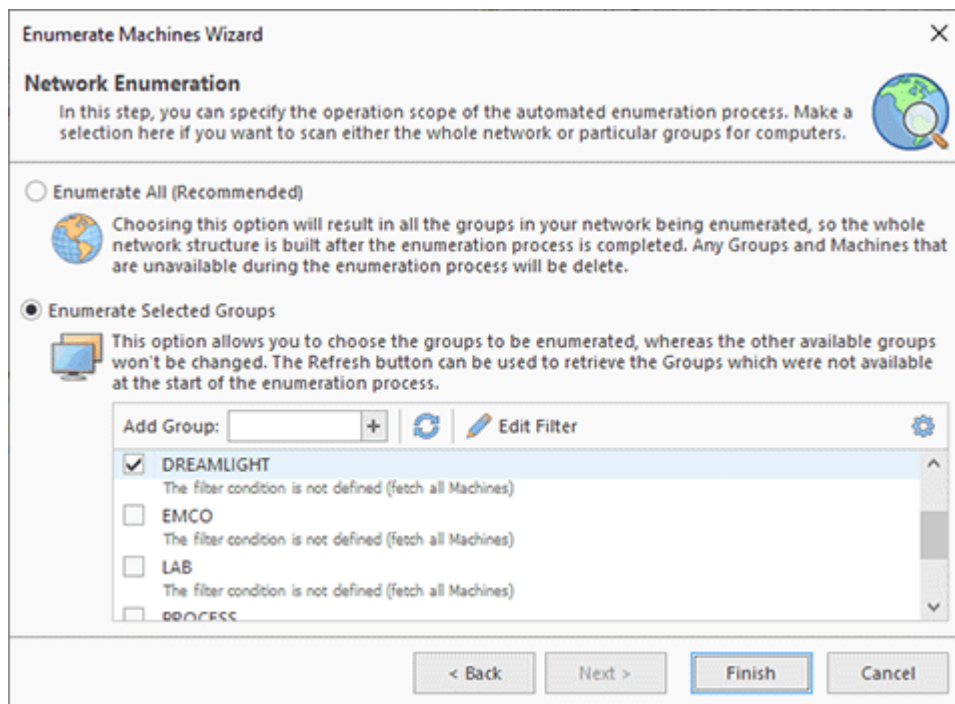
Pic 1. Configuring the network scan process

As for the entire network enumeration, the program tries to detect all the Groups available in the network and fetch all Machines from those Groups. If you only want to scan specific Groups, they should be checked within the Group list. The **Refresh** button should be used to synchronize the Group list displayed with the current network state. If the Group you want to scan cannot be detected automatically, you can add it to the list of groups by typing its NetBIOS name to the **Add Group** field on the toolbar and pressing the [+] button.

When scanning specific Groups only, it is possible to define a filter condition used for constricting the scope of fetched Machines. If the query condition is left empty, all Machines from the checked Group will be queried. To specify the condition, you should either double-click the required Group or select it and press the **Edit Filter** button on the toolbar. The filter condition editor `Pic 2` is similar to the filter editor used for data filtering. The condition can be applied to the Machine name, the Container and the Last Logon timestamp. The Container condition should contain the Active Directory container path, where '\' is used as a separation for path elements, e.g. *Computers\Office 203*. If the container name contains the '\' character, it should be replaced with '\\'.
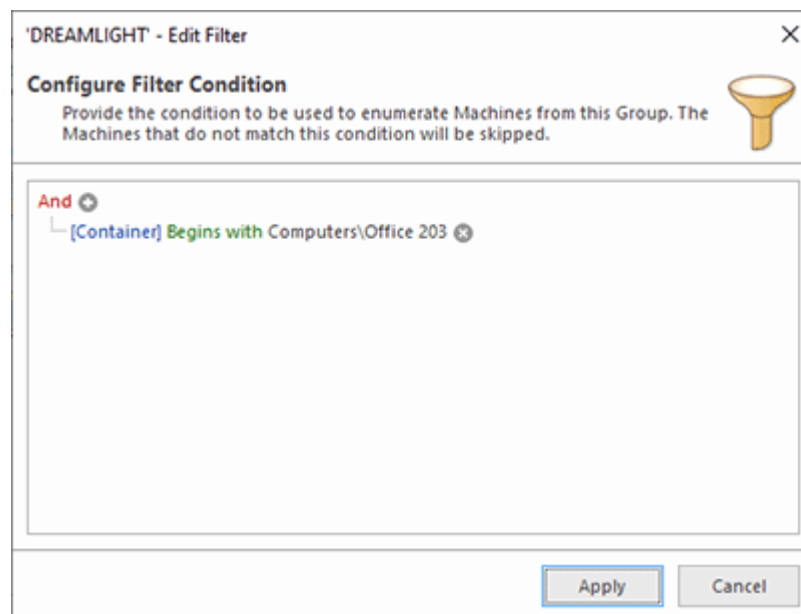
Pic 2. Specifying the enumeration filter condition

The specified condition, if any, can be reviewed without opening the filter editor by expanding the row displayed under each group. You can expand and collapse this preview by either double-clicking the preview row or using the arrow on the right of the row. If you are not interested in this preview, you can hide it by disabling the **Show Details** option in the **Configuration** menu.

As soon as you have configured the network scan process to fit your needs, press the **Scan** button and the scan will be initiated. As a result, the **Network** node is filled with Machines found during the scan `Pic 3`.
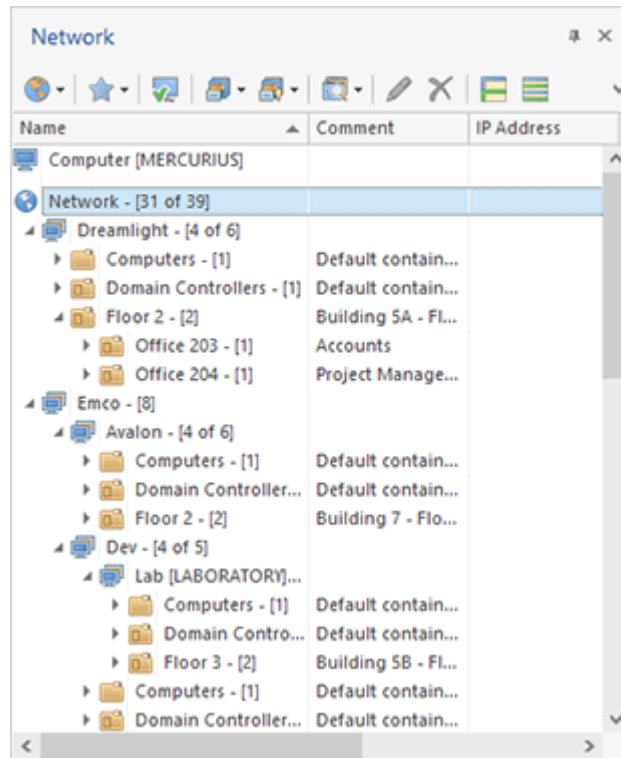
Pic 3. The result of an automatic network enumeration

When the program is already introduced to the network structure, you can enumerate any group or active directory container by selecting it and pressing the **Enumerate** or **Enumerate New** button from the **Enumeration** Ribbon group on the contextual **Network** page. Use the corresponding items in the pop-up menu or the **Enumeration** button on the toolbar. This approach can be used to enumerate specific containers with a single click.

The fetched Machines can be processed in the future with Remote Installer and used for creating Collections for further processing.

IP Range Enumeration
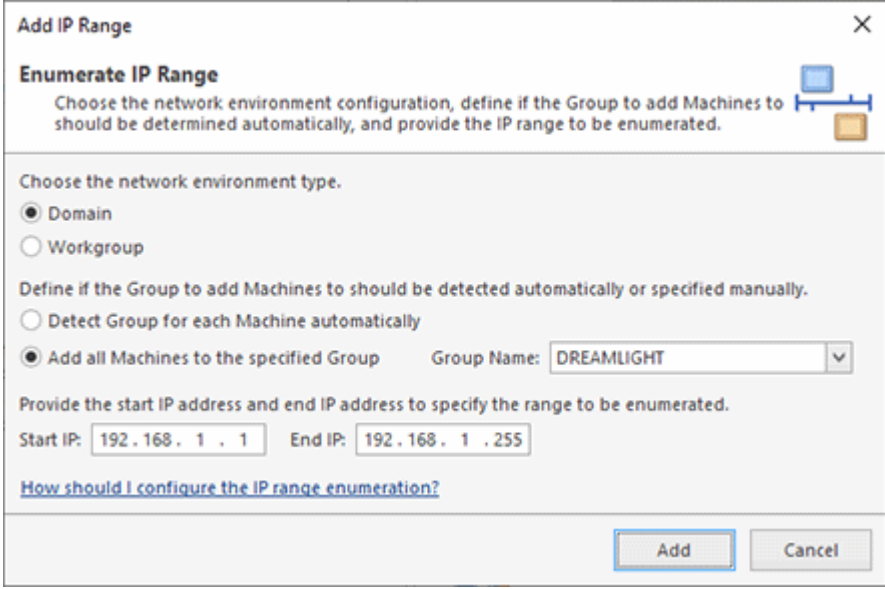
Remote Installer provides you with an option of adding Machines to the program by enumerating a specific range of IP addresses. Each IP address from the range is resolved to a host name and, in case of a successful reverse name resolution, the Machine is added to the **Network** node. The resolving method can be optimized for different environments. The Group for each Machine can also be detected automatically or defined manually.

Add IP Range	**Add IP Range** The **Add IP Range** button from the **Network** Ribbon group on the **Home** page and from the **Enumeration** Ribbon group on the contextual **Network** page should be used to add Machines to the program by scanning a specific range of IP addresses.

To add Machines via an **IP Range**, you should either press the **Add IP Range** button from the **Network** Ribbon group on the **Home** page or from the **Enumeration** group on the **Network** page. Alternatively, you can choose an appropriate option within the **Enumerate Machines** wizard Pic 1 .

Pic 1. Configuring an IP range enumeration

When preparing for an IP range enumeration, you are proposed to choose the network environment type, define if the Group to add Machines to should be determined automatically, and provide the IP range to be enumerated. As soon as you have provided the required settings, press the **Add** button to proceed with the scan process.

How should I configure the IP range enumeration?

Remote Installer stores remote Machines by their host names, so when Machines are added via an IP range, a reverse name resolution is performed. To improve the performance of the reverse name resolution process and the ability to detect a Group for each Machine automatically, you should choose a proper environment configuration before performing an IP range enumeration. The environment is the first and the most important thing to specify for a successful enumeration.

The **Domain** environment type should be chosen, if the Machines from the specified range are part of an Active Directory domain infrastructure. It is supposed that a proper DNS server configuration is available in such a case, so the reverse name resolution process can be optimized by querying the DNS server only. Similarly, if you have chosen an automatic Group detection for each Machine, it is supposed that the group information is available in the Active Directory database and is accessible from the PC Remote Installer is running on.

The **Workgroup** environment type should be used if you are using a simple Windows network with Machines joint into a workgroup, so there is no Active Directory database available and no time should be spent on finding a domain controller for each Machine. For such environments, NetBIOS name resolution techniques are used and each Machine is connected to for detecting its Group automatically. The process can be optimized by enabling the remote Machines availability detection by using pings on the **Scan Settings** preference page. In case the remote Machines ping is not enabled in your environment, this option should be disabled.

The next thing to specify is the Group the remote Machines should be added to. It is strongly recommended to use the automatic groups detection by choosing the **Detect Group for each Machine automatically** option, because in such a case there should be no conflicts between the IP range and the network scan enumeration methods. Besides, this approach will secure a proper behavior when applying the network credentials. However, if you are sure that all Machines from the specified range belong to the same Group, you can switch to the **Add all Machines to the specified Group** option and fill in the **Group Name** field. In such a case, the automatic Group detection will be skipped, thus the overall range enumeration performance may be increased.
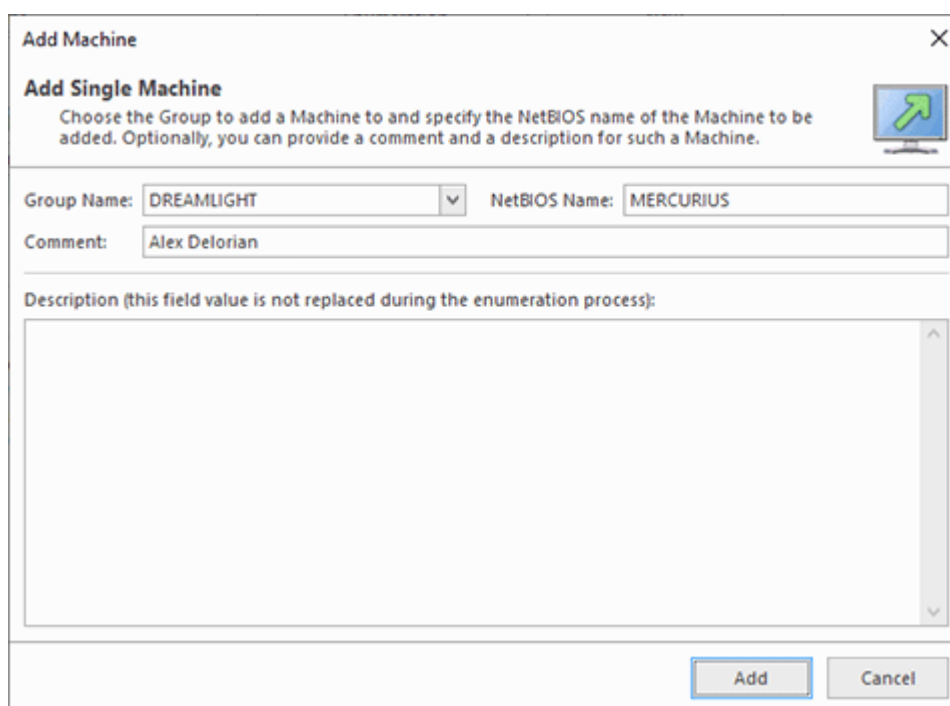
Finally, after you have specified the range to be scanned in the **Start IP** and **End IP** fields, you can proceed with the enumeration process.

Adding Machines Manually

Remote Installer provides you with an option of adding Machines to the program manually by using the **Add Machine** command. This action can be found in the **Network** Ribbon group on the **Home** page or in the **Enumeration** Ribbon group on the **Network** contextual page.

![Add Machine] Add Machine	**Add Machine** The **Add Machine** button from the **Network** Ribbon group on the **Home** page and from the **Enumeration** Ribbon group on the contextual **Network** page should be used to add a single Machine to a specific group for further processing.

The **Add Machine** dialog will be displayed on the screen for you to provide the required data for the Machine to be added `Pic 1`. The first thing to specify is the name of the group the new Machine(s) will be added to. You can specify it manually in the **Group Name** field or click and select one from those detected automatically as available in the network. The next step is specifying the name for the Machine to be added in the **NetBIOS** Name field. Optionally, you can also provide a comment and a description to be set for the Machine.

Pic 1. Adding a single Machine

After the required fields have been filled, press the **Add** button to proceed with the addition process. The Machine with the defined name will be added to the specified group in the **Network** node.

Collections

A Collection either groups a set of static Machines or defines the method and conditions for fetching Machines to be operated dynamically. It is a component for building a Machine Queue that describes the scope of Machines to be processed by any operation in Remote Installer.

In this chapter, we will provide a detailed description of a Collection structure and review the Collections management process to help you understand the idea of Collections and benefit from using them in your everyday work.

Collections Overview

A Collection is a component for building a **Machine Queue** that describes a scope of Machines to be processed by any operation in Remote Installer. It consists of Machines and/or Queries that define a set of Machines to be retrieved dynamically.

Each Query in a Collection defines a condition to fetch Machines from a single Group. It is possible to check the Machine name and the Active Directory Container the Machine is from for satisfying any condition. The querying source defines if the Machines from a specific Group should be fetched from those available in the program database, or a network scan of the Group should be performed to fetch the Machines that match the specified condition.

The main advantage of using Queries in Collections instead of a set of static Machines is that such Collections can reflect the changes made to the network environment automatically. For instance, if you use a Collection to group Machines from a specific Organization Unit, you'll have to modify this Collection every time you add Machines to or remove Machines from this Organization Unit, whereas if Machines from that unit are fetched by a Query in the Collection, no changes to that Collection are required to reflect the changes in Active Directory.

Remote Installer allows you to set a **Machines Filter** on each Collection, which enables you to filter Machines by their data, e.g. the operating system, the platform, the installed software, etc. The Machine Filter is applied to both static Machines and those fetched via Machine Queries.

You can create Collections within a program scope or separately for a specific operation. The Collections defined within a program scope are displayed under the **Collections** node in the **Network** view and can be reused in multiple operations. Collections that are defined for specific operations are called embedded Collections and are available only in a specific Machine Queue. The advantage of using Collections defined within in a program scope is obvious. You can include them to the Machine Queues of different tasks and then only change the Collection itself, if required. The task's Machine Queue will reflect the changes to the Collection automatically, so you do not need to reconfigure multiple tasks that should operate the same scope of Machines when the scope changes. You can also easily create new tasks for operating this scope of Machines.

When you start any operation with only standalone Machines and/or Queries selected, an embedded Collection is automatically created in the Machine Queue to group those Machines and/or Queries, so that you can combine those Machines with the Machines provided by other Collections.

For details on creating and editing Collections, refer to the **Collections Management** section of this document, and detailed information on possible Machines filters is available in the **Machines Filter** section.

Collections Management

A Collection is a component for building a Machine Queue that describes the scope of Machines to be processed by any operation in Remote Installer. It either groups a set of static Machines or defines a method and conditions for fetching Machines to be operated dynamically. In this section of the document, we will describe how to create and configure Collections within the program scope. Management of embedded Collections defined within the scope of a single Machine Queue is the same; the only difference is that they are stored locally within the Machine Queue.

★ Collection	**Collection** The **Collection** button from the **New** Ribbon group on the **Home** page should be used to create a new Collection to group static Machines and Queries to fetch Machines dynamically.
★ New	**New** The **New** button from the **Collections** Ribbon group on the contextual **Network** page should be used to create a new Collection to group static Machines and Queries to fetch Machines dynamically.

To create a new Collection, you can use the **Collection** button from the **New** Ribbon group on the **Home** page or the **New** button from the **Collections** group on the contextual **Network** page. Alternatively, you can use the **New Collection** menu item from the Network view pop-up menu and the **Collections** button drop-down from the toolbar. You can also use the **New Collection** option of the **Add to Collection** drop-down to create a Collection initializing it with the selected Machines and Queries. In any case, the **New Collection** dialog will appear on the screen to configure the Collection being created `Pic 1`.
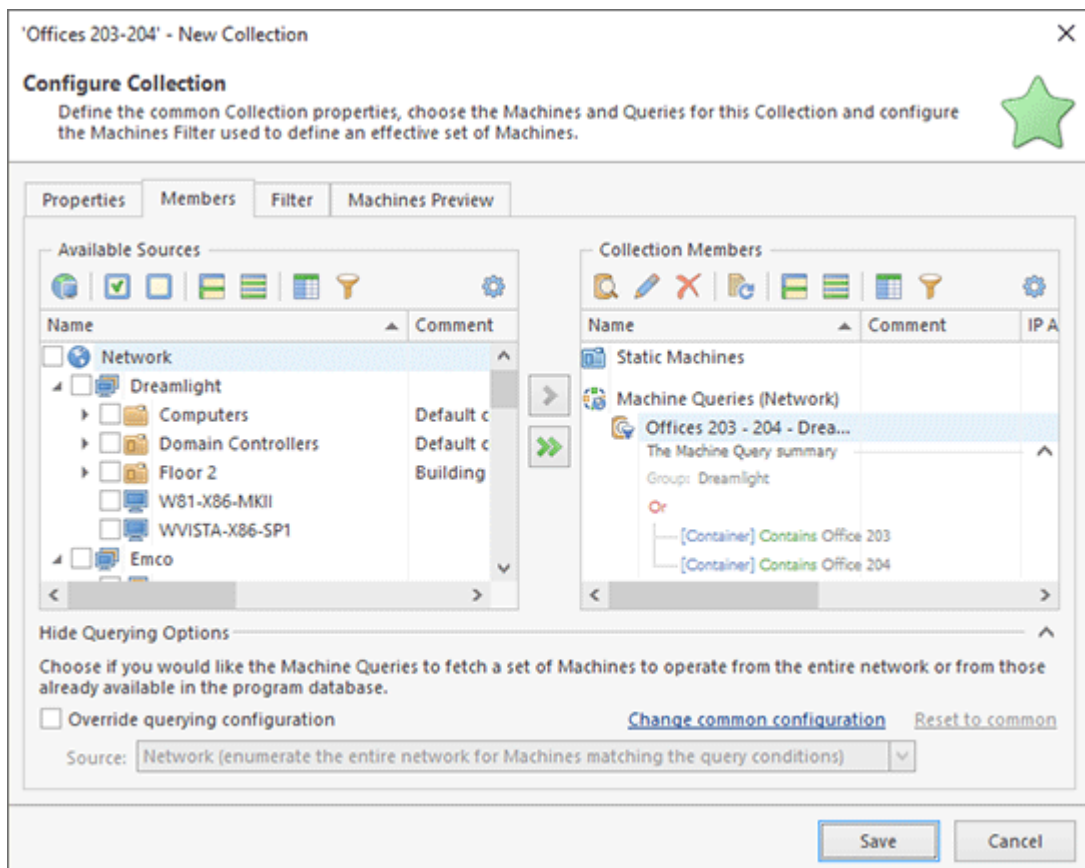
Pic 1. Choosing the Collection members

The Collection editor consists of four tabs. The **Properties**, **Members** and **Filter** tabs are used to configure the Collection being created. The **Machines Preview** tab allows previewing the set of Machines defined by the Collection.

On the **Properties** tab, you are supposed to specify the common Collection properties such as the Collection name, comment and description. It is recommended that the comment and description fields be filled in to easier distinguish this Collection from others in the future.

The **Members** tab is used to specify the set of Machines and Queries included into the Collection and to configure the querying options. It is divided in two parts: the tree of Machines and Queries available in the program and the tree of Machines and Queries from the Collection being edited. The available Machines are grouped, and you can choose from the Machines available in the **Network** view, the **All Machines** view and other Collections. In addition, if there are any Machines and/or Queries in the clipboard, they are displayed under the **Clipboard** group within the **Additional Sources** node. If you have expanded the available Machines scope to include imported Machines or those found during the enumeration, the **Additional Sources** node also contains the **Enumerated** node where you can find those Machines. The Machines that are already in the Collection being edited are automatically filtered out from those available and shown again when removed from the Collection. Within the **Collection Members** part, standalone Machines are grouped within the **Static Machines** node and Queries are grouped within the **Machine Queries** node.

To add Machines to the Collection, you should check them in the **Available Sources** part and press the button with a single right arrow. The checked Machines will appear in the **Collection Members** part and disappear from the **Available Sources** part. You can also add all available Machines to the Collection being edited by using the button with a double right arrow.

Queries can be copied from **Available Sources** to **Collection Members** the same way as Machines. It is also possible to create new Queries using the **New Machine Query** button and edit queries and query options using the Edit button on the **Collection Members** part toolbar. Each query retrieves Machines from a single Group depending on the specified query conditions. Those conditions should be defined within the Machine Query editor `Pic 2`.

Pic 2. Configuring the Machine Query

Within the Machine Query editor, you can provide the query name, the group to query Machines from and the query conditions. Optionally, you can also specify a comment and a description for the query. The group is chosen from the drop-down list of available groups. It is also possible to add a new group and configure the credentials to be used for connecting to Active Directory using the [...] button on the right of the groups list. After pressing this button, the **Select Group** dialog Pic 3 is displayed.

Pic 3. Providing credentials to connect to Active Directory

In the **Select Group** dialog, the tree of available groups is displayed along with the credentials to be used to connect to Active Directory. You can provide and reset the credentials the same way as for the **Credentials** view. It is also possible to add a new group by typing its name into the Add Group field and pressing the ✱ button. You can check the provided credentials and build the network structure using the **Build Structure** button on the **Credentials** toolbar. After all the required groups have been added and the credentials have been specified, press the **OK** button to proceed.

After you provide the Machine Query name and the group to retrieve Machines from, you should define the query condition, if required. If the query condition is left empty, all Machines will be queried from this group. The query condition editor is similar to the filter editor used for data filtering. The condition can be applied to the Machine name, the Container and the Last Logon timestamp. The Container condition should contain the Active Directory container path, where '\' is used as a separation for path elements, e. g. *Computers\Office 203*. If the container unit name contains the '\' character, it should be replaced with '\\'.

On the **Machines Preview** tab page, you can execute a query by pressing the **Preview** button. The Machines fetched by the query will be displayed within the **Machines** part, and the **Log** part will show if there have been any problems while executing the query.

Machine Queries can fetch Machines either from the network or from the program database. The default querying source is defined on the **Collections Settings** preference page, but you can override the behavior for specific collections using the querying options group at the bottom of the **Members** tab and ticking the **Override querying configuration** checkbox.

To remove Machines or Machine Queries from the Collection being edited, select them in the **Collection Members** part and press the **Delete** button from the toolbar. The selected Machines will disappear from the **Collection Members** part and appear in the **Available Sources** part. The Machine Queries will simply be removed.

All the Machines grouped within a Collection, both static and those fetched via Machine Queries, can be filtered by their properties such as the operating system version and type, the platform, installed software, etc. The condition to be used for filtering is defined on the **Filter** tab `Pic 4`. Refer to the Machines Filters section of this document for details.
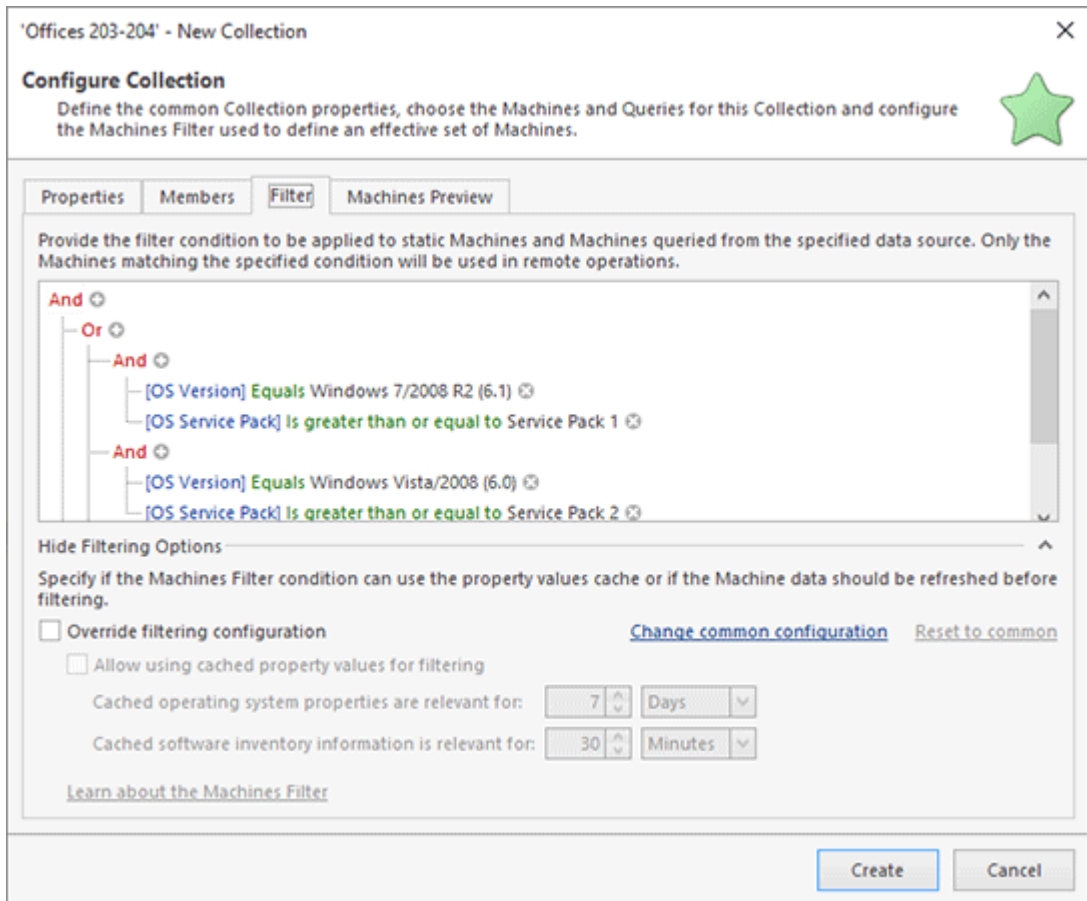
Pic 4. Configuring the Machines Filter

After a Collection has been configured, you can press the **Preview** button to execute all the queries and apply all the filters and review the effective set of Machines defined by this Collection on the **Machines Preview** page `Pic 5`.
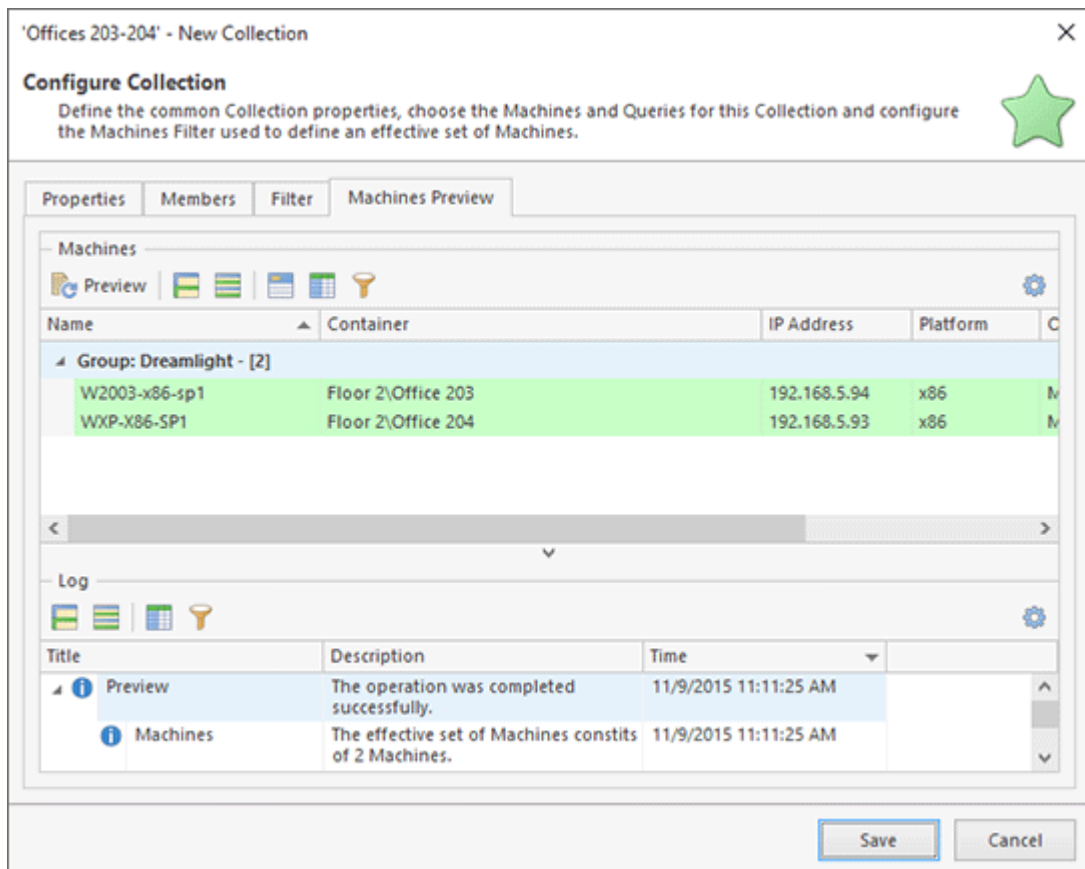
Pic 5. Reviewing the effective set of Machines

During the Collection editing process, you can expand the scope of available Machines by using the **Expand Scope** button on the toolbar and from the pop-up menu. The **Expand Scope** wizard is similar to the **Enumerate Machines** wizard, the only difference being that Machines are added to the **Available Sources** part.

Press the **Create** button to proceed with creating the Collection. After the Collection has been created, it can be found in the **Network** view under the **Collections** node. It can be added to a Machine Queue of any operation.

To edit a Collection, if required, you can select it and choose the **Edit** button from the **Organize** Ribbon group on the **Program** page, the **Edit** menu item or the **Edit** button on the toolbar. Alternatively, you can just double-click the Collection. When a Collection is edited, the configuration process is the same as during the Collection creation. When a Collection is no longer needed, you can delete it. To delete a Collection, select it and choose the **Delete** button from the **Organize** Ribbon group on the **Program** page, the **Delete** menu item or the **Delete** button on the toolbar. It is also possible to delete any item from an existing Collection. After a Collection has been deleted, it is also removed from all Machine Queues it was used in.

With Remote Installer it is really easy to transfer and back-up Collections. You can use the well-known drag/drop and copy/paste techniques, simply duplicate **Collections** and export/import them. You can also copy a Collection from this or another EMCO program and paste it into the Collections node. Export and import can also be used to share and back up Collections; refer to the Importing and Exporting Network section for details.

Create Snapshot	**Create Snapshot** The **Create Snapshot** button from the **Collections** Ribbon group on the contextual **Network** page should be used to create a snapshot of a Collection containing the currently effective set of Machines defined with this Collection.
Preview	**Preview** The **Preview** button from the **Collections** Ribbon group on the **Network** contextual page allows you to review the currently effective set of Machines defined with the selected Collection.

A Collection defines a set of Machines to operate using Queries. Each Query defines a group to fetch Machines from and the conditions to be used. Filtering may also be applied to a Machines scope. However, it may sometimes be useful to work with standalone Machines currently defined with the Collection. To resolve this issue, the Collection Snapshots are introduced. For each Collection, there can be only one snapshot representing its most relevant result. Snapshots are displayed under the **Collections' Snapshots** node in the **Network** view. To create a snapshot from a Collection, you should select this Collection and either click the **Create Snapshot** button from the **Collections** Ribbon group on the contextual **Network** page or choose the corresponding item from the pop-up menu or the **Collections** button drop-down on the toolbar. All the queries defined in the Collection will be executed, all the filter conditions will be applied, and the snapshot containing the currently effective set of Machines will be added to the **Collections' Snapshots** node. The query log becomes available on the process completion in the **Application Log** view.

As it has already been mentioned, you can preview the effective set of Machines while editing a Collection, but it is not required to open the Collection for editing to review it again. You can simply select the Collection and either click the **Preview** button from the **Collections** Ribbon group on the contextual **Network** page, or choose the corresponding item from the pop-up menu or the **Collections** button drop-down on the toolbar. The effective machines set preview will be opened in a new window and displayed in the same manner as when editing a Collection.
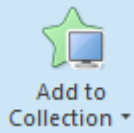
Add to Collection

The **Add to Collection** button from the **Collections** Ribbon group on the contextual **Network** page should be used to add the selected Machines and/or Machine Queries to a new or an already existing Collection.

The Collection editing process is not the only way to add Machines and Machine Queries to any Collection. Remote Installer allows you to add the items you have selected within the **Network** or the **All Machines** view to any **Collection**. Simply select those items and choose the required Collection from the Add to Collection pop-up menu. The pop-up menu displays only the first ten Collections. If the required Collection is not displayed and you have more Collections to display, you can click the **Choose Collection** item under the Collections list and choose the required Collection through the dialog where all the Collections are displayed. To create a new Collection based on the selection, choose the **New Collection** item under the Collections list. It is also possible to copy Machines and Queries from any view and paste them into any Collection, as well as cut them from any Collection and paste them into another one. The drag-and-drop feature is fully supported, too. You can even import items into a Collection by selecting this Collection and either pressing the **Import** button from the **Organize** Ribbon group on the **Home** page or choosing the corresponding menu item from the pop-up menu.

We've done our best to make the Collections management both easy-to-use and flexible, and we hope you'll be able to solve your management tasks without any difficulties and with full understanding of the process.

Machines Filter

Collections allow defining to define a set of static Machines and Queries for retrieving Machines from specific Groups with an ability to filter fetched Machines by their name and location in an Active Directory database. Remote Installer also enables you to filter the defined static Machines and the resulting set fetched by all the Queries defined in a Collection by applying conditions to remote Machines' properties. The Machines filter is defined on the **Filter** tab when editing a Collection **Pic 1**.
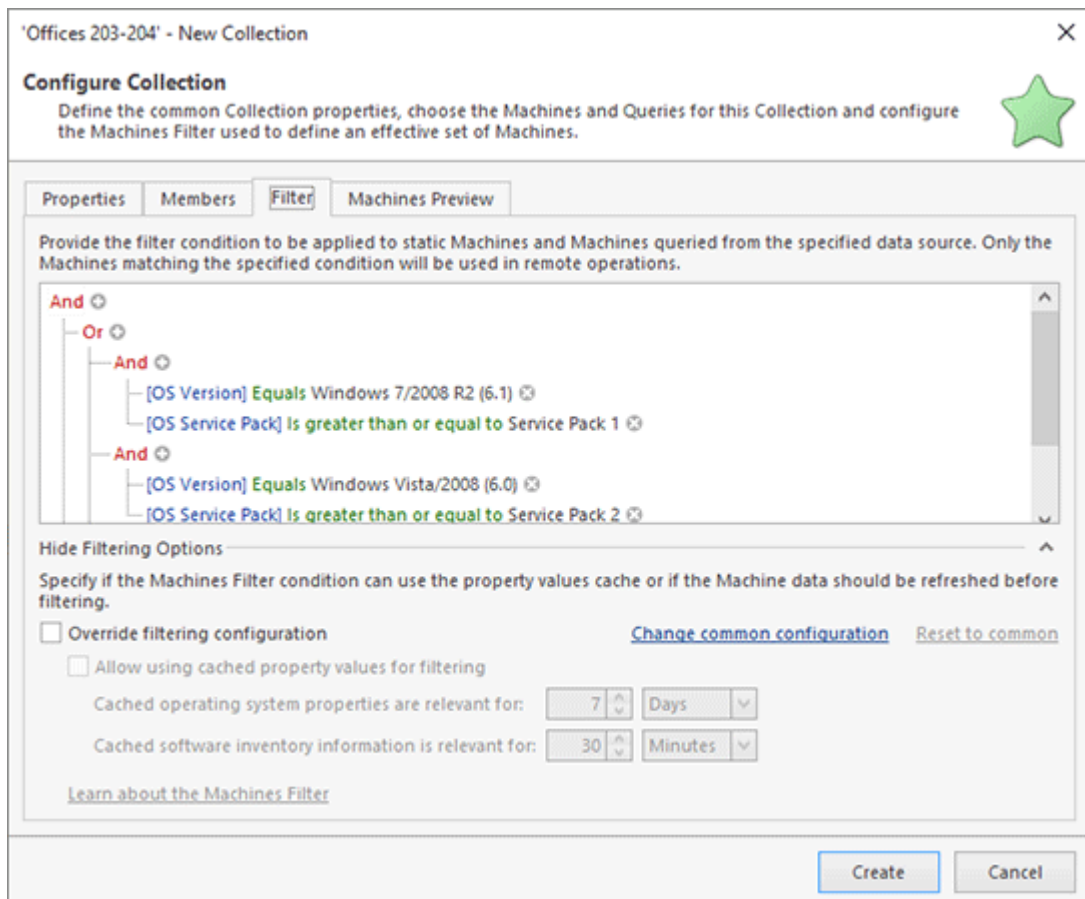
Pic 1. Specifying the Machines filter

The Machines filter editor is similar to the filter editor used for filtering data in trees and tables. You can combine any number of conditions, as well as groups of conditions, with **Or** and **And** operators. You can filter by the following Machine properties: the operating system version, the operating system type, the service pack, the platform and the language. It is also possible to check if specific programs are installed on remote Machines.

By default, to get the most relevant filtering results, the program tries to connect to each remote Machine to refresh the properties used for filtering before checking the condition, but you can allow the program to use cached property values. The Machines filter options used by default for all Collections are defined on the **Collections Settings** preference page. It is also possible to override those options for a specific Collection, if required. To override the default options, expand the filtering options group on the **Filter** tab while configuring the Collection and tick the **Override filtering configuration** checkbox.

In case the filters preview is enabled in a view, the Machines filter, if defined, can be easily reviewed by expanding the preview row of the Collection node. Therefore, you do not need to edit the Collection to see if there is any condition defined and which condition is defined.

Credentials

The credentials to be used for connecting to remote Machines are provided in the **Credentials** view and stored between the program sessions. Thus, you can specify the credentials once for Machine, Group or Network, and they will be applied automatically when required.

> ⚠️ Although the credentials are stored in a strongly encrypted state, it is still possible for an intruder to decrypt the credentials.

Credentials set on the Network item are used to set the same credentials for all the Machines in the network.

Credentials defined for an individual Group are used when several domains or workgroups with different administrative accounts are present in the network.

The function of specifying credentials for an individual Machine is mainly used to set credentials for separate Machines with unique accounts in the network.

Providing Credentials

Remote Installer allows you to specify credentials both for groups of Machines and for individual Machines in the **Credentials** view using in-place editors. It is also possible to import credentials from a file or copy them from another EMCO program. Credentials can be provided with or without explicit specification of the domain. The domain may be specified by using the User Principle Name or Down-Level Logon Name.

User Principal Name

The User Principal Name (UPN) format is used to specify an Internet-style name, such as *UserName@Example.Emco.local*. The following table summarizes the UPN components.

Component	Example
User account name. Also known as the logon name.	UserName
Separator. A character literal, the at sign (@).	@
UPN suffix. Also known as the domain name.	Example.Emco.local

A UPN can be defined implicitly or explicitly. An implicit UPN has the following form: *UserName@FQDN*. An implicit UPN is always associated with the user's account, even if an explicit UPN is not defined. An explicit UPN has the form *Name@Suffix*, where both the name and suffix strings are explicitly defined by the administrator.

Down-Level Logon Name

The down-level logon name format is used to specify a domain and a user account in that domain, for example, *DOMAIN\UserName*. The following table summarizes the components of a down-level logon name.

Component	Example
NetBIOS domain name.	DOMAIN
Separator. A character literal, the backslash (\).	\

Component	Example
User account name. Also known as the logon name.	UserName

Beside an explicit domain specification, you can use an implicit one by providing the Down-Level Logon Name with the '.' character instead of the domain part (.\UserName). In such case, the '.' character is replaced by the NetBIOS name of the Machine to connect to.

If the user name is provided without an explicit or implicit domain specification, the program generates one of the user name formats described above using the following rules:

- If credentials are specified on the Machine node, the following Down-Level Logon Name is generated for connection: *MACHINE\UserName*, where '*MACHINE*' is the NetBIOS name of the Machine the program is connecting to and '*UserName*' is the specified user name.

- If credentials are specified on the Network or Group node, than the group the Machine is located in is used to form the user name used for connection. If the group is an Active Directory domain, then the following UPN name is formed: *UserName@FQDN*, where '*UserName*' is the specified user name and '*FQDN*' is a fully qualified name of the domain the Machine is located in. In case the group is not an Active Directory domain, the following Down-Level Logon Name is generated for connection: *DOMAIN\UserName*, where '*DOMAIN*' is the NetBIOS name of the group the Machine is located in and '*UserName*' is the specified user name.

You can easily review the credentials that are going to be used for connecting to the remote Machine in the tool tip displayed for this Machine in the **Credentials** view.

Examples for Credentials specification

Specifying credentials for complex network environments may not be a trivial task, and this chapter is written to show you some examples that can help you with this task. Let's assume we have the following network structure:
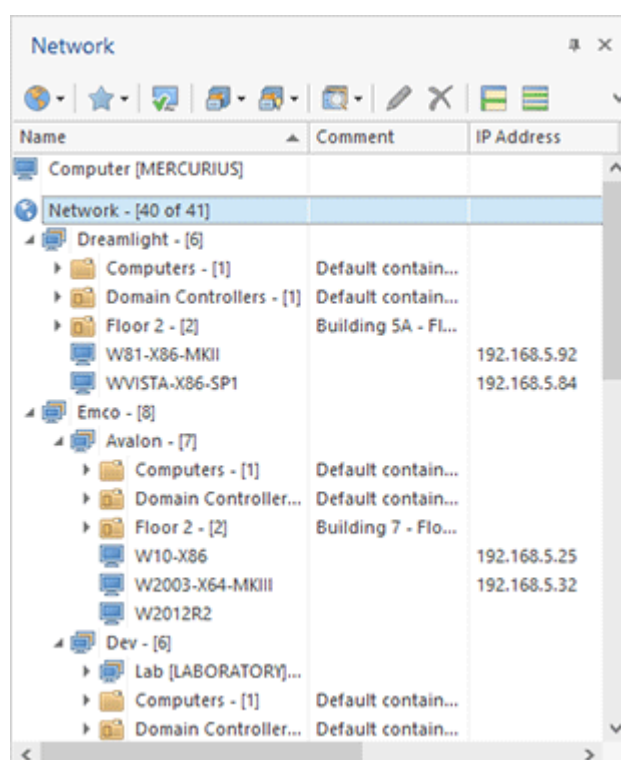
Consider the following methods of setting the credentials:

1. The credentials are set for the *Network* item. Connection to remote Machines and Active Directory will take place using the credentials set for the Network.

Same Credentials for Entire Network
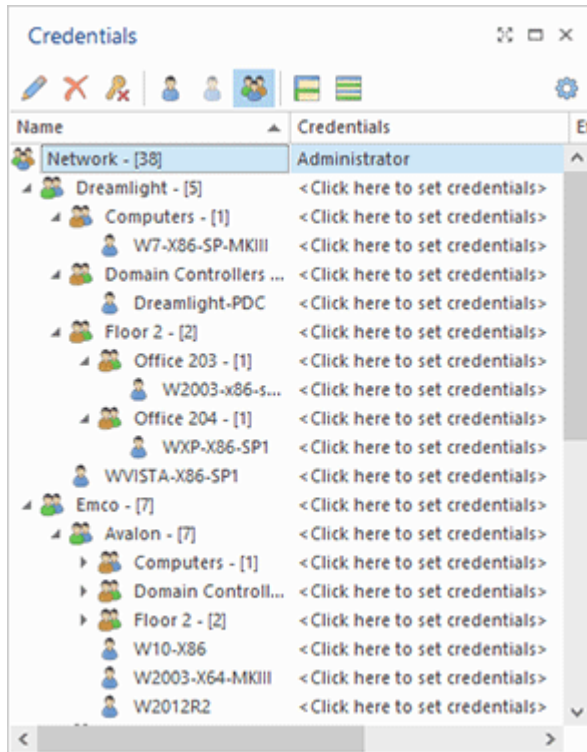
2. Two different credentials are set for the *Emco* and *Dev* groups. Connection to remote Machines from the *Dev* group will take place using the credentials set for the *Dev* group, Machines from the *Emco* group will be processed using the credentials set for the *Emco* group.

Specific Credentials for Groups
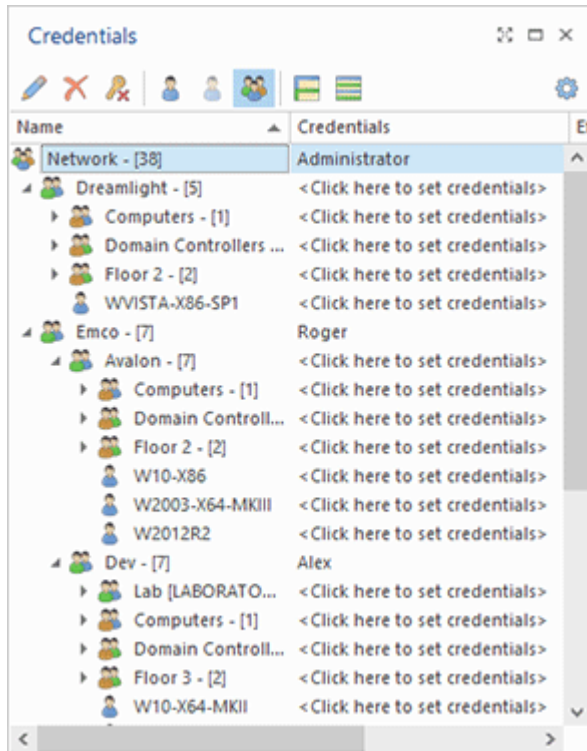
3. Three different credentials are set for the *Network*, the *Dev* group and the *Dev-PDC* Machine. Connection to remote Machines from the *Emco* group will take place using the credentials set for the *Network*, the *Dev* group will use the credentials specified for the *Dev* group and for *Dev-PDC* the credentials set for *Dev-PDC* will be used.

Specific Credentials for Groups
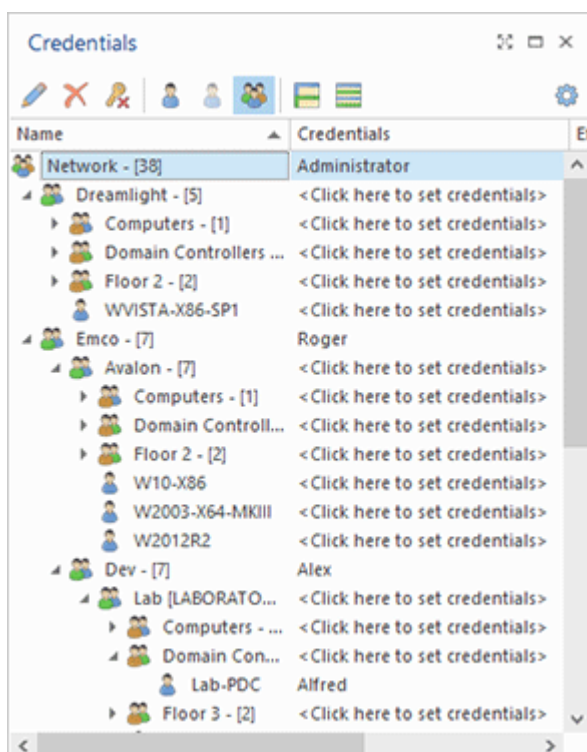
How do I access another domain?

By default, the credentials used for a Machine are applied as credentials for the domain where the remote Machine is located. It is displayed in the **Log on to** field of the credentials edit. In case you need to use the remote Machine's local account or the account from a domain that differs from the one provided by default, you should explicitly specify the Machine or the domain where the account is located in the user name. The **Log on to** field value is then changed to give you a clear understanding of which domain credentials are used.

> 💡 The **Log on to** field displays, by default, the name of the domain where the network resource is located. If you explicitly specify a certain account, this field shows the domain or computer name for the account you are using. Thus, it always displays actual information about the domain to be used to establish connection.

To do the actions described above, you should input the value in the following format to the User Name field of the credentials pop-up edit:

<Username>@<FQDN> - for an explicit specification of an Active Directory domain account, where 'FQDN' is a fully qualified name of the domain.

<Domain name>\<User name> - for an explicit specification of a domain account, where 'Domain name' is a NetBIOS name of the domain to be used.

<Machine name>\<User name> - for an explicit specification of a remote Machine account.

Pic 1. Providing the specific domain credentials

Now you know how to provide the credentials to be used from a specific domain and can configure network credentials without any difficulties.

Defining Machines to Operate

Each operation in Remote Installer is represented with a Machine Queue, which describes the scope of Machines to be operated, and an operation-specific configuration, which defines what exactly should be made with those Machines. A Machine Queue consists of **Collections**. Each Collection either groups a set of static Machines or defines the method and conditions for fetching Machines to be operated dynamically.

You can either use the Collections defined in the program scope for filling in the Machine Queue or create embedded Collections for the Machine Queue, or combine both methods. When any operation for the selected standalone Machines and/or Queries is launched, the embedded Collection containing those items is created automatically and added to the Machine Queue. A Machine Queue is configured before executing an operation or while configuring a task `Pic 1`.
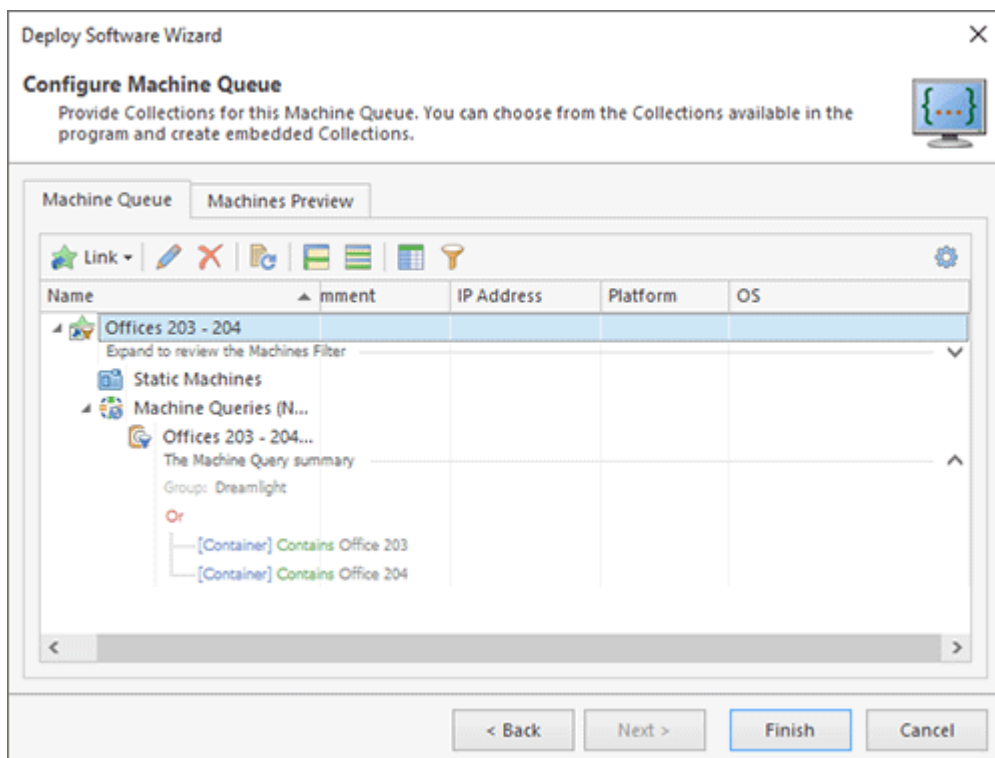
Pic 1. Machine Queue Editor

The pane used for configuring a Machine Queue has the following tab pages: **Machine Queue** and **Machines Preview**. The **Machine Queue** page is used to define the Collections to be included into the Machine Queue being edited. You can add Collections defined in the program scope using the **Link** item from the pop-up menu or from the toolbar. To create a new embedded Collection, you can use the **New Embedded Collection** item from the pop-up menu. The embedded Collections created while editing the Machine Queue exist as long as the corresponding Machine Queue and cannot be used in other Machine Queues. You can edit Collections and Queries using the **Edit** button on the toolbar or the **Edit** item in the pop-up menu. To delete a Collection from a queue, select it and press the **Delete** button on the toolbar or choose the **Delete** item from the pop-up menu.

You can review the effective set of Machines defined with the Collections added to the Machine Queue using the **Preview** button and menu item. While preparing for a preview, all Queries are executed and filters are applied, the Collections are merged and the resulting set of Machines to be operated is formed and displayed on the **Machines Preview** tab.

Now that you have been introduced to the Machine Queue concept, you should be able to configure the scopes of Machines to be operated without any difficulties and benefit from reusing the Collections defined in the program scope.

Remote Machine Statuses
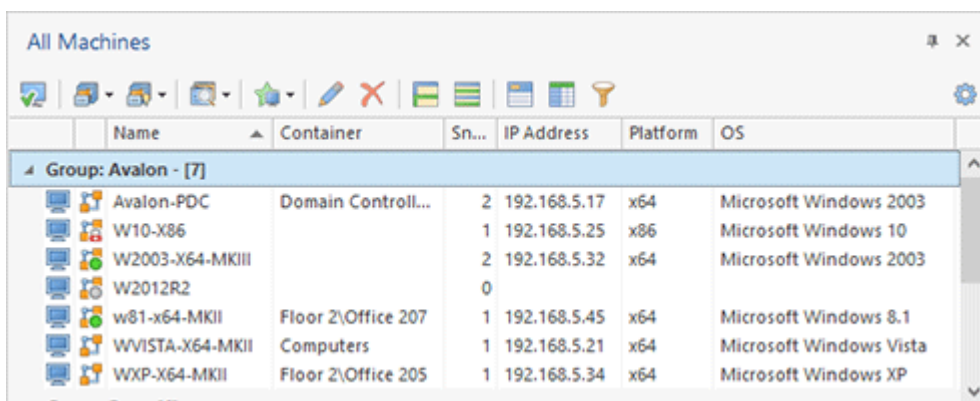
Remote Installer is used to operate remote Machines, so the status of access to each remote Machine is important information. When activated, Remote Installer determines the access status for each remote Machine and stores it in the program database together with the last access time, so you can always see this information when required.

> **Check State**
>
> The **Check State** button from the **Machines** Ribbon group on the contextual **Network** page should be used to refresh the access status of the selected remote Machines.

The access status of each remote Machine is displayed in the **Access Status** column of the **All Machines** view `Pic 1`.

Pic 1. Remote Machine statuses displayed in the All Machines view

The remote Machine status can be represented by one of the following values:

[Indefinite]   - the access status of the Machine is indefinite – you can press the **Check State** button from the **Machines** Ribbon group on the contextual **Network** page or choose the **Check State** item from the pop-up menu to check the Machine's access status;

Accessible	-	the Machine is accessible, i.e. it satisfies the requirements for remote Machines and can be operated;
Agent Not Running	-	the Machine is accessible and the remote agent is installed, but it is not running;
Agent Running	-	the Machine is accessible, the remote agent is installed and running;
Agent Update Required	-	the Machine is accessible, the remote agent is installed, but it is not up-to-date;
Agent Unreachable	-	the Machine is accessible, but the remote agent is unreachable: either it is impossible to check state of the remote agent, or it fails to start;
Offline	-	it is currently impossible to connect to this Machine, i.e. the Machine is offline;
Inaccessible	-	the Machine is inaccessible, i.e. it is currently impossible to operate this Machine;
Access Denied	-	the access to the remote Machine is denied; to operate this Machine, you should provide the administrative credentials in the **Credentials** view;
Client Not Supported	-	the operating system installed on the Machine is no longer supported.
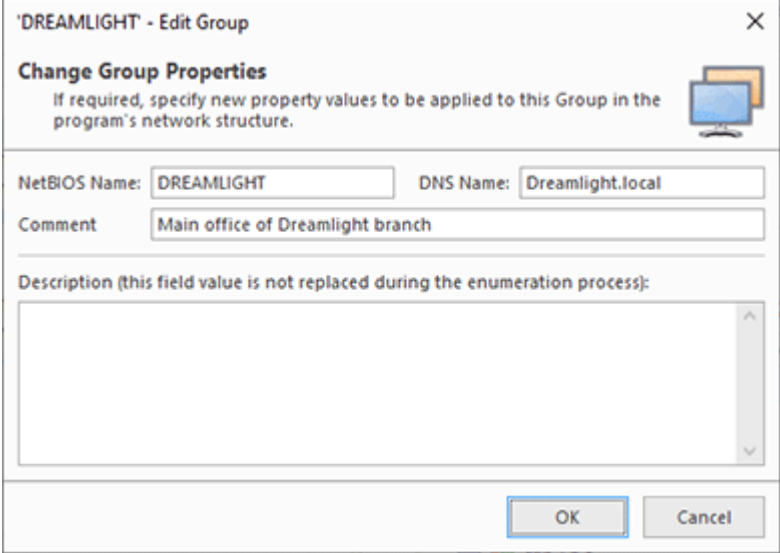
The remote Machine status is also displayed in the right bottom part of the Machine icon in the **Network** view and in the **Machine Queue** pane, so you can easily see it from any view displaying remote Machines. The information on the access status and the last access time, if any, is also available in the tooltip for each remote Machine.

Network Objects Properties

Every network object contained within the network structure available in the Remote Installer has a number of properties. Most of the properties are detected during the network enumeration process and are overridden during every enumeration. Unlike this, the description property is used to enable the end user to provide some information that will be stored permanently for this object. To review and change the object properties, you should select this object in any view and press the **Edit** button from the **Organize** Ribbon group on the **Home** page. This action is also available in the pop-up menu of a view. Let us review the range of properties available for each type of objects.

Group Properties

The Group properties consist of the **DNS Name**, **NetBIOS Name**, **Comment and Description**. The **NetBIOS Name** and **DNS Name** fields are maintained automatically and cannot be changed manually.

Pic 1. Group Properties

The full DNS name and comment are filled automatically during every scan if the group is an Active Directory domain. The provided description is always specified manually and can be used as information for this Group to permanently store in the program database.

Active Directory Container Properties

The Active Directory container properties consist of the **Name**, **Comment** and **Description**. The **Name** field for the **Active Directory** container is maintained automatically and cannot be changed manually.
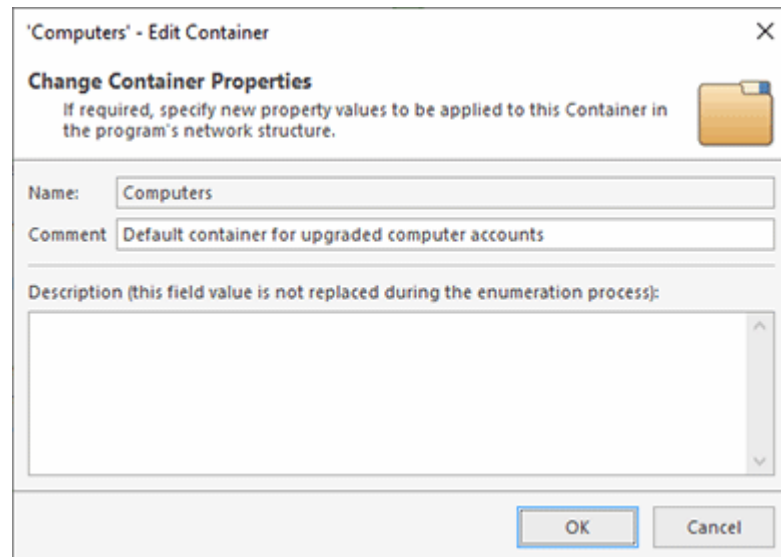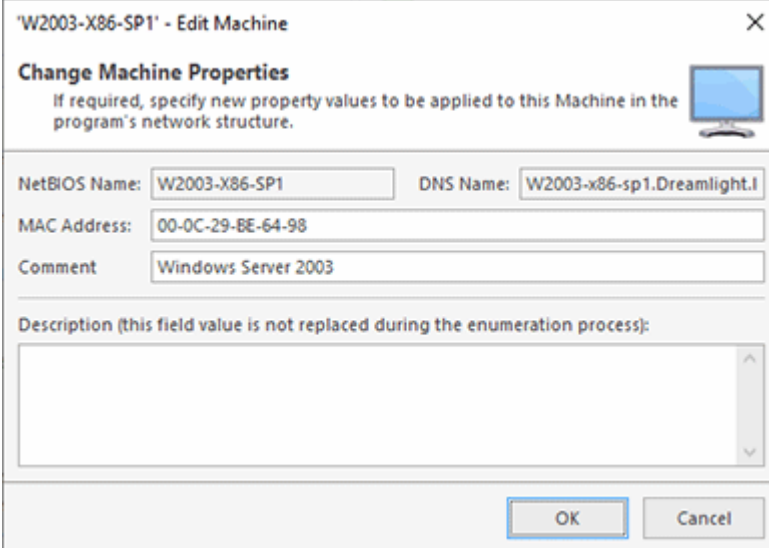
Pic 2. Active Directory Container Properties

The object name and the comment are retrieved from the Active Directory during an automated network enumeration process. The provided description is permanently stored in the program database. You can use it to save some additional information about this object.

Machine Properties

The Machine properties consist of the **NetBIOS Name**, **DNS Name**, **Comment** and **Description**. The **NetBIOS Name** and **DNS Name** fields are maintained automatically and cannot be changed manually.

Pic 3. Machine Properties

The Machine name, full DNS name and comment are filled automatically during every scan. The provided description is always specified manually and can be used as information for this Machine to permanently store in the program database.

Importing and Exporting Network

With Remote Installer, you can easily import and export network objects any time you want. You can export one or all of the available Machines, Credentials and Collections to use the exported data as a backup, to share data with your colleagues or simply to import the objects to another instance of the program. The import feature can be used both to import Machines, Credentials, Collections and Collection Members from files created during export and those created manually. For example, you can create a CSV file manually to add Machines by specifying their data in Microsoft Office Excel. This chapter covers the process of importing and exporting network objects.
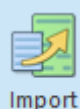
Import

The **Import** button from the **Organize** Ribbon group on the **Program** page can be used to import Machines' data from an XML or CSV file and Credentials, Collections or Collection Members from an XML file with the help of the wizard.

It is possible to import Machines, Credentials, Collections and Collection Members. Machines can be imported into Remote Installer from XML and CSV files. You can import Machines to the **Network** node or to any Collection, depending on the selection in the Network view. When running import from the **All Machines** view, Machines are imported into the **Network** node. Other network objects can be imported only from the XML format. To import Collections, you should select either the **Collections** node in the **Network** view or any Collection. The Credentials import can be launched when the **Credentials** view is active. The file formats are described in detail the Export/Import Formats section. You can use the files created by the program during previous exports or create new files manually.

To perform import, press the **Import** button from the **Organize** Ribbon group on the **Program** page. The import wizard will appear on the screen. Let us take a closer look at the import process using the Machines import as an example Pic 1.
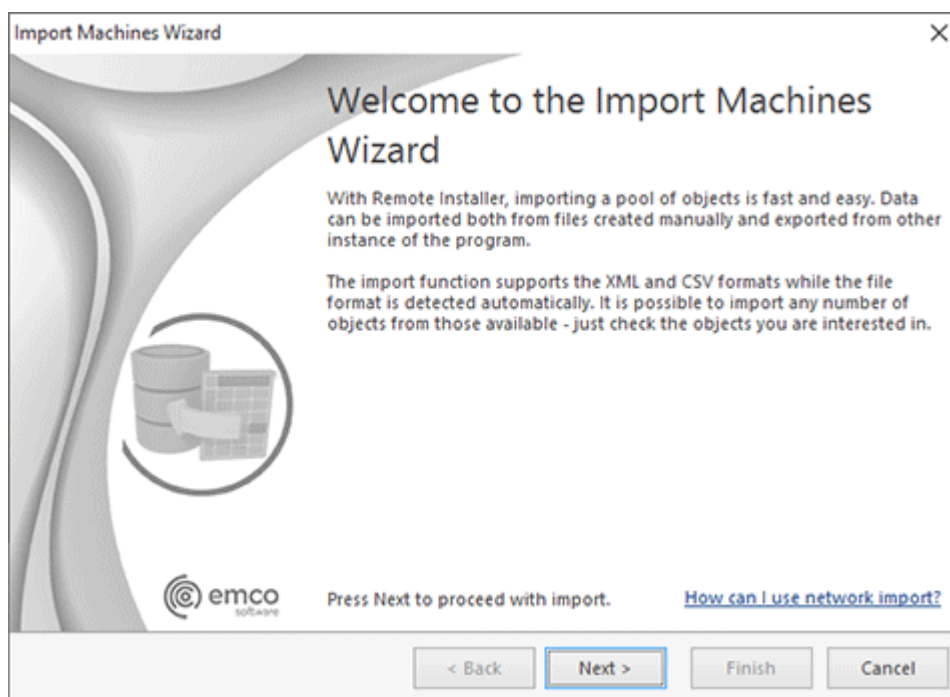
Pic 1. The Import Machines Wizard welcome page

The first page of the **Import Machines Wizard** is the welcome page used to introduce you to the feature the wizard is supposed to help you with. After reading the welcome information, press **Next** to continue with import.

On the next page of the **Import Machines Wizard**, you are offered to choose the file you are going to import Machines from Pic 2. The file path should be provided to the **Import From** field. The format of the provided file is detected automatically. The encoding of the XML file with Machines is also detected automatically. For the CSV format, a preview page is displayed where you can tune the parse options while immediately seeing the results.
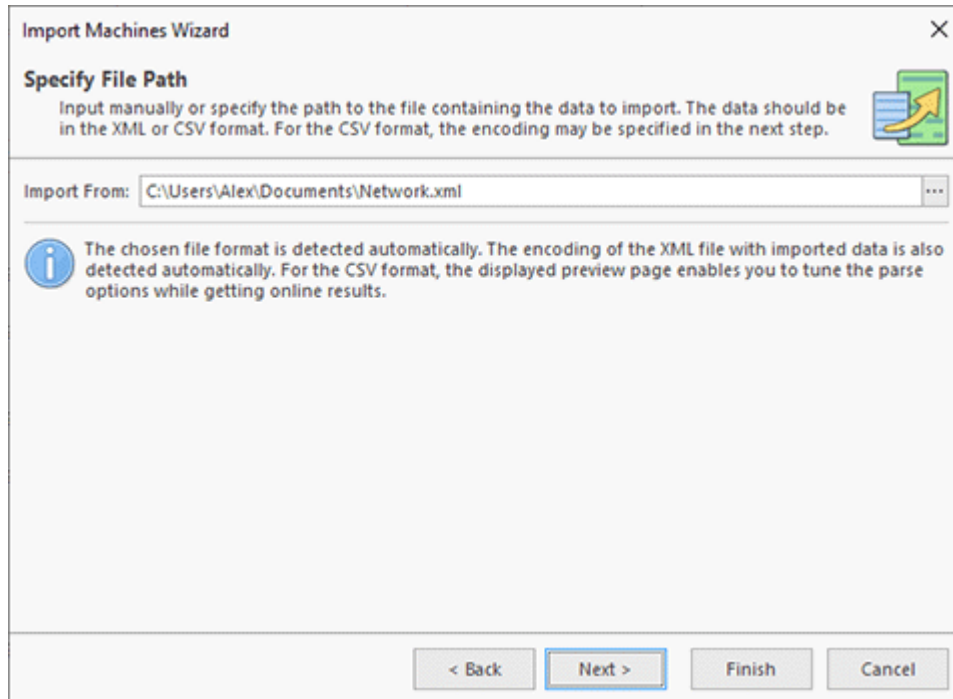
Pic 2. Choosing the import source file

In case of a CSV file, the next page is a preview page. When you change the CSV format options, the preview is refreshed so that you can see if the format options are chosen properly Pic 3.
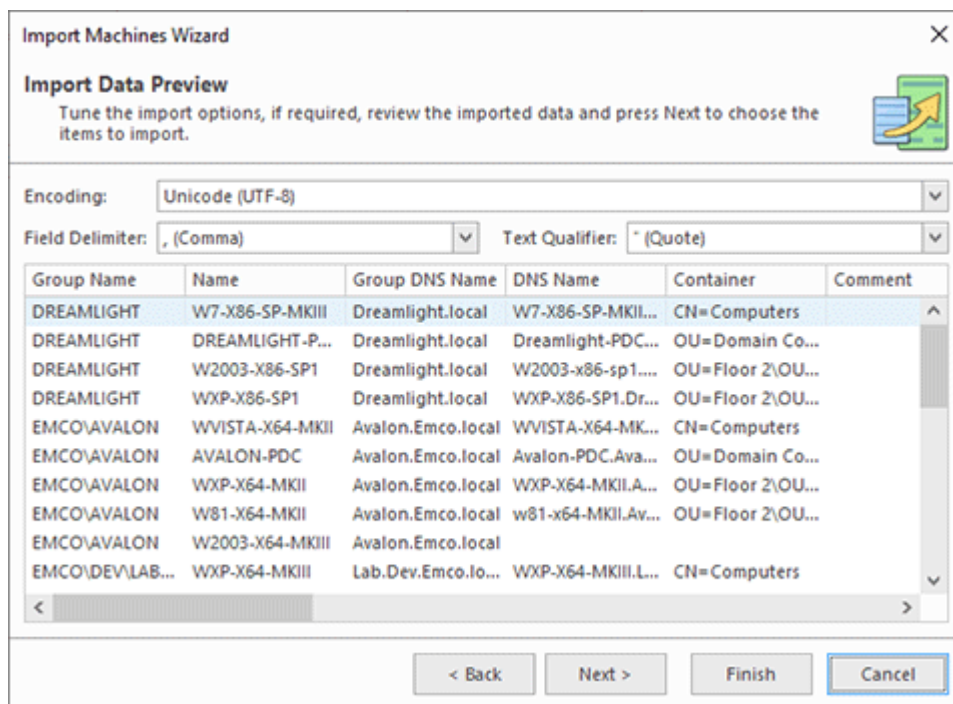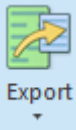
Pic 3. CSV file preview

After you have tuned the parse options, press Next to choose the Machines to import. The next page is the page for choosing Machines from those available in the file Pic 4. It is also displayed if you have chosen an XML file containing Machines. By default, all available Machines are chosen for import.
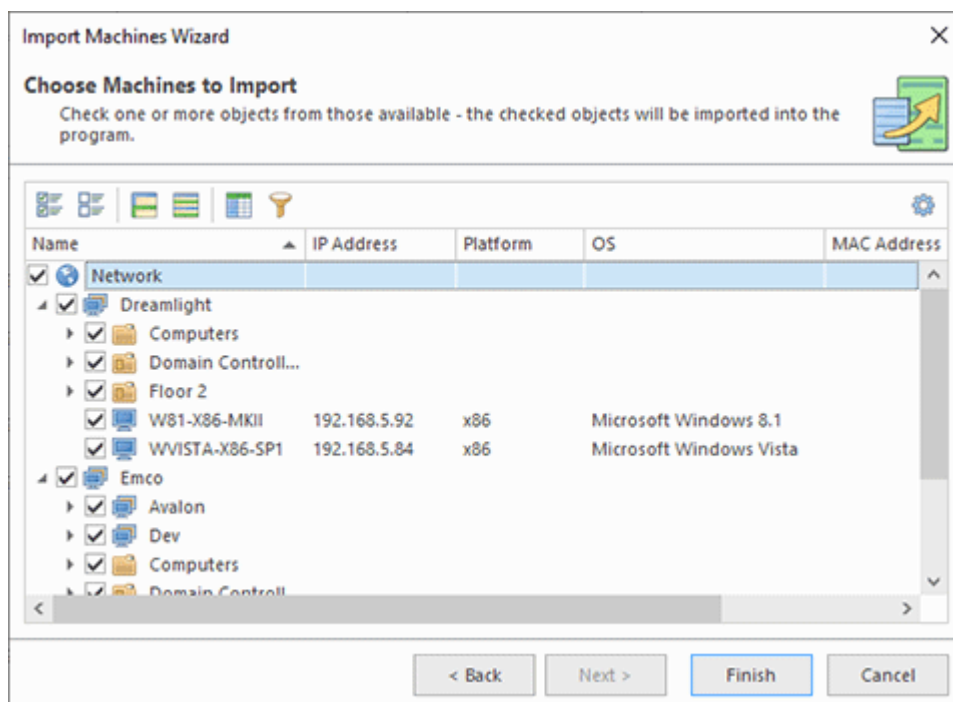
Pic 4. Choosing Machines to import

When the Machines to import have been chosen, press the **Finish** button to proceed with import. As soon as the import is complete, the imported Machines are added to the **Network** and the **All Machines** views. The same concept is used for importing Credentials and Collections, importing into Collections, etc.

> **Export**
>
> The **Export** button from the **Organize** Ribbon group on the **Program** page can be used to export the selected Machines, Queries, Collections or Credentials from the program to a file that can be used in the future for import.

Remote Installer allows you to export Machines, Machine Queries, Collections and Credentials. Machines can be exported to the XML or CSV file format. Other network objects can be exported to the XML file format only. To perform export, select the objects to export and press the **Export** button from the **Organize** Ribbon group on the **Program** page. Let us take a closer look at the network objects export using the Machines export as an example. When you choose to export some objects, the export wizard appears on the screen `Pic 5`.
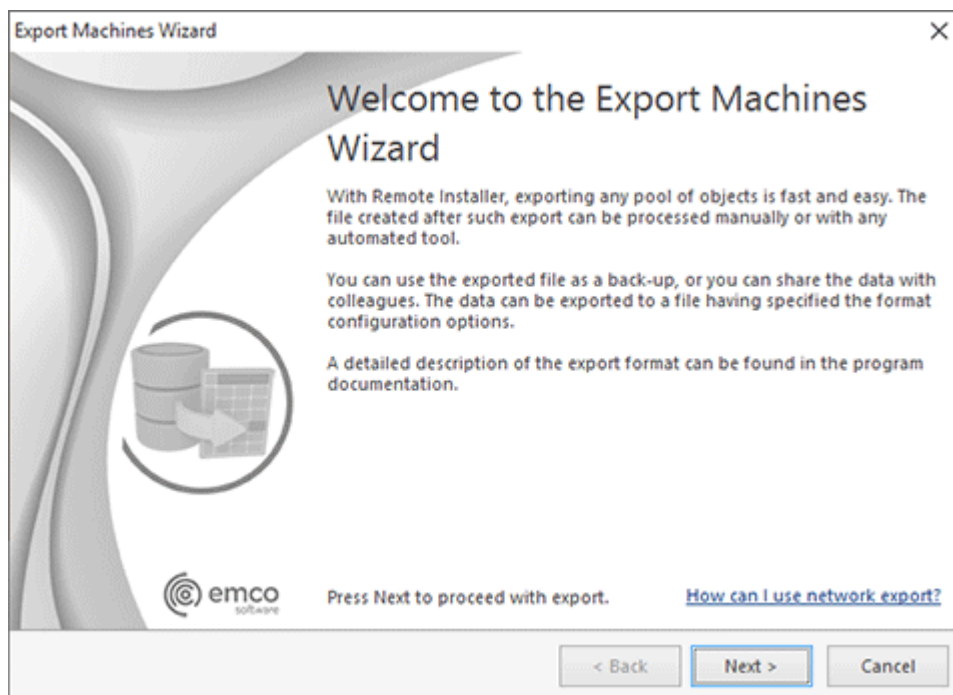

Pic 5. The Export Machines Wizard welcome page

The first page of the export wizard is the welcome page used to introduce you to the feature the wizard is supposed to help you with. After reading the welcome information, press **Next** to continue with export.

On the next page of the export wizard, you are offered to choose the file you are going to save the Machines data to, the file format and the format options `Pic 6`. The file path should be provided to the **Export To** field. For the XML format, you can choose the encoding to be used for saving the objects, and for the CSV file, the text delimiter and the field delimiter should also be specified along with the encoding.
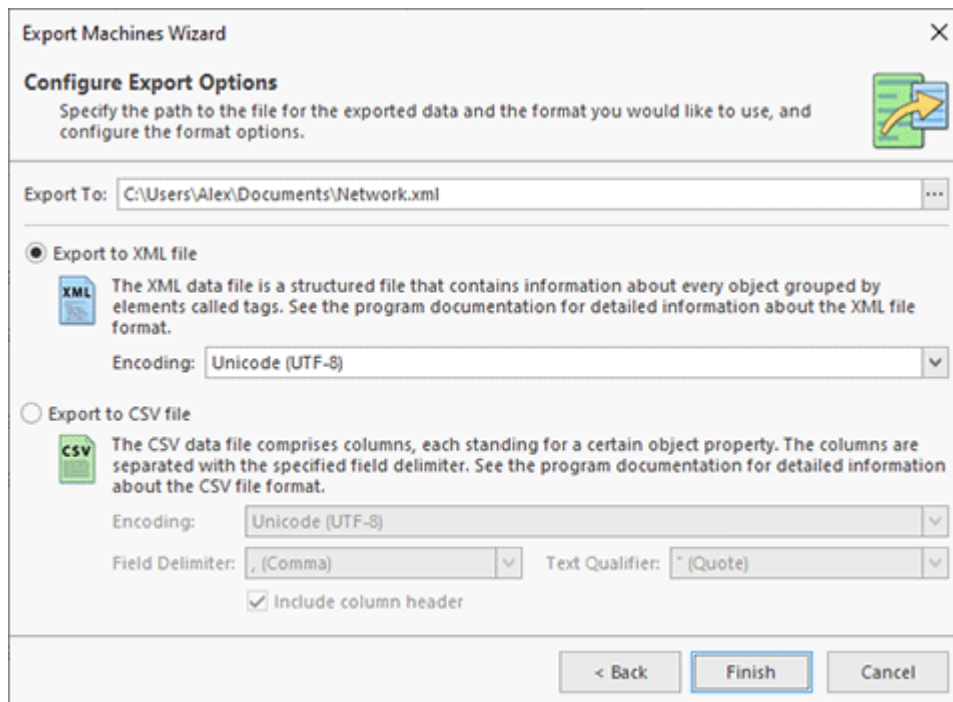
Pic 6. Configuring the export options

After the file path and the export form have been chosen, press **Finish** to proceed with export. A file containing the exported objects will be created in the specified path. The file created during export can be used in the future to import the objects back to the program.

Now you are fully introduced to the network objects export and import options available in Remote Installer and can use them in the future to solve your tasks. If you are interested in creating files to import manually, you can read the Export/Import Formats section that follows this section to get detailed information on the file formats.

Export/Import Formats

This section describes the format of the files used by Remote Installer while importing and exporting network objects. The CSV export and import is only supported for Machines; other network objects can only be transferred via XML files. The CSV file format for exporting Machines in general consists of sixteen columns, namely:

Index	Header	Description	Mandatory
1	GroupName	The NetBIOS name of the group the Machine is located in.	Yes
2	Name	The NetBIOS name of the Machine.	Yes

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Index	Header	Description	Mandatory
3	GroupDNSName	The full DNS name of the domain the Machine is located in (can be empty for network environments with workgroups).	No
4	DNSName	The full DNS name of the Machine. This column can be empty for network environments with workgroups.	No
5	OrganizationUnit	The path of the organization unit containing the Machine in the Active Directory database. The path elements should be separated with the '\' character. If the organization unit name contains the '\' character, it should be replaced with '\\'. If you would like to scan and rescan the imported units, you should define the container type for each path element: the organization unit should start with 'OU=' and the container, such as the default one named Computers, with 'CN='.	No
6	Comment	The comment for the Machine.	No
7	Description	The description for the Machine.	No
8	GUID	The unique Machine identifier in the Active Directory database. This column can be empty for network environments with workgroups.	No
9	Username	The username used to connect to the Machine.	No
10	Password	The password used to connect to the Machine in a strongly encrypted state. This column value cannot be provided manually.	No
11	IPAddress	The last retrieved IP address of the Machine.	No
12	Platform	The platform of the Machine: x86 or x64.	No
13	OSVersion	The major and minor version of the remote Machine's operating system, e.g. '5.2' for Microsoft Windows XP/2003.	No
14	OSType	The remote Machine's operating system type: 'Workstation', 'Server' or 'Server R2'.	No
15	ServicePack	The service pack version of the remote Machine's operating system, e.g. '2' for Service Pack 2.	No
16	OSLanguage	The language code of the remote Machine's operating system, e.g. 'en-US' for English (United States).	No

> If you are preparing a CSV file for import manually, you have two options: follow the indexes of columns or provide the column headers. If the headers are provided, the columns order is not taken into account. So, for example, if you want to provide the IP addresses for Machines you can create a file only with Name, GroupName and IPAddress columns – the program will determine the fields you are going to import using the header.

Sampe CSV file with Machines

"GroupName","Name","GroupDNSName","DNSName","OrganizationUnit","Comment","Description","GUID"
,"Username","Password","IPAddress","Platform","OSVersion","OSType","ServicePack","OSLanguage"

"DREAMLIGHT","W7-X86-SP-MKIII","Dreamlight.local","W7-X86-SP-
MKIII.Dreamlight.local","CN=Computers",,,"2f780f0f-6530-43e0-b7b0-
e90e3a3689fc",,,"192.168.5.85","x86","6.1","Workstation","1","en-US"

"DREAMLIGHT","DREAMLIGHT-PDC","Dreamlight.local","Dreamlight-PDC.Dreamlight.local","OU=Domain
Controllers",,,"3a9a9fb2-aa92-4768-b9f5-
0883048ff999",,,"192.168.5.74","x64","5.2","Server","2","en-US"

"DREAMLIGHT","W2003-X86-SP1","Dreamlight.local","W2003-x86-sp1.Dreamlight.local","OU=Floor
2\OU=Office 203","Windows Server 2003",,"07649a86-36d9-409d-8caa-
b2bb0e46e832",,,"192.168.5.94","x86","5.2","Server","1","en-US"

"DREAMLIGHT","WXP-X86-SP1","Dreamlight.local","WXP-X86-SP1.Dreamlight.local","OU=Floor
2\OU=Office 204","Windows XP Professional x86 Edition",,"038badad-baf7-41a8-a199-
cac381c48b60",,,"192.168.5.93","x86","5.1","Workstation","1","en-US"

As for the XML files, each file containing exported data has the **Data** root node that defines the data format and the format version. The following formats are supported:

- **Machines**, used to represent the exported Machines, respecting the network structure;

- **Queries**, used to represent the exported standalone Queries and Machines;

- **Collections**, used to represent the exported Collections;

- **Network**, used to represent the mix of exported Collections, standalone Queries and standalone Machines and can be imported into the **Network** view or into a Collection;

- **Credentials**, used to represent the exported Credentials respecting the network structure.

All XML formats for exporting network objects contain the network structure. Each element in the structure is represented with the **Entry** node. The root node is always a network node that has its **Type** attribute set to 'Network'. For all the formats, except **Machines** and **Credentials**, there is also the **Explorer** root node available, which contains Collections, Queries and references to the nodes representing the network item. For example, if there is the same Machine in two Collections, the Machine is only stored once within the network structure, and both the Collections contain references to that Machine. Let us take a look at the available entry types for each data format.

Type	Formats	Purpose
Network	All	This is the root node of the network structure, which can also contain the credentials to be used as default for connecting to remote Machines.
Group	All	This node represents a Group in the network structure.
OU	All	This node represents an Active Directory container (either Organization Unit or Container) in the network structure.
Machine	All	This node either represents a Machine in the network structure (when located within the Network node) or a reference to a Machine in the network structure.
Query	Queries, Collections, Network	This node represents a query for fetching remote Machines and references a Group in the network structure.

Type	Formats	Purpose
Collection	Collections, Network	This node represents a Collection and contains Queries and references to remote Machines grouped by this Collection.

Each node representing a network object has a set of properties used to describe the object. The table below contains a joint set of attributes and describes each attribute and its purpose in details.

Attribute	Description
The following attributes are used in all formats for all entry types representing the network structure, Queries and Collections.	
Name	The name of a network item. This attribute defines either the name for Active Directory Containers, Queries and Collections or the NetBIOS name for Groups and Machines.
Comment	The comment used for a network item.
Description	The description defined for a network item.
GUID	The unique item identifier in the database. This attribute is not applicable to Machines and Groups in workgroup environments.
The following attributes are used for the Group, OU and Machine entry types representing the network structure, in all formats.	
CNType	The type of a network item. It should be 'DC' for domains, 'OU' for organization units and 'CN' for other active directory containers, such as the default one named *Computers*, and Machines.
Username	The username used to connect to a network item.
Password	The password in a strongly encrypted from used to connect to a network item. This attribute cannot be provided manually.
The following attributes are used for the **Group** and **Machine** entry types representing the network structure, in all formats.	
DNSName	The DNS name of a Machine or the Fully Qualified Domain Name of a Group.
The following attributes are used for the **Machine** entries representing the network structure, in all formats, except **Credentials**.	
IPAddress	The last retrieved IP address of a Machine.
Platform	A Machine's platform: x86 or x64.
OSVersion	The major and minor version of a remote Machine's operating system, e.g. '5.2' for Microsoft Windows XP/2003.
OSType	A remote Machine's operating system type: 'Workstation', 'Server' or 'Server R2'.
ServicePack	The service pack version of a remote Machine's operating system, e.g. '2' for Service Pack 2.
OSLanguage	The language code of a remote Machine's operating system e.g. 'en-US' for English (United States).
The following attributes are used for **Machine** entries in the **Collections** and **Network** formats.	
ref	A reference to the Machines that is included into a **Collection** or a **Network** node in the network structure definition.
The following attributes are used for **Query** entries in the **Queries**, **Collections** and **Network** formats.	

Attribute	Description
Condition	The Query condition to be used for fetching remote Machines.
ref	A reference to the Group that should be used to fetch Machines from in the network structure definition.
The following attributes are used for **Collection** entries in the **Queries**, **Collections** and **Network** formats.	
Condition	The condition to be used for the Machines Filter.
OverrideMode	The sign that the Machine querying options are overridden for this Collection. The value is either 'yes' or 'no'.
Mode	The overridden querying source: '0' to fetch Machines from the entire Network and '1' to select Machines from the program database.
OverrideCache	The sign that the filtering options pertaining to the property values cache are overridden for this Collection. The value is either 'yes' or 'no'.
UseCache	The overridden sign showing if it is allowed to use cached property values for filtering.
PropsMeasurement	The overridden expiration measurement unit of the operating system properties cache: '0' for minutes, '1' for hours, '2' for days.
PropsExpire	The overridden number of measurement units (minutes/hours/days) for the time span defining the properties cache expiration interval.
InventoryMeasurement	The overridden expiration measurement unit of the software inventory cache: '0' for minutes, '1' for hours, '2' for days.
InventoryExpire	The overridden number of measurement units (minutes/hours/days) for the time span defining the software inventory cache expiration interval.

Sample XML file with network objects

```
<?xml version="1.0" encoding="utf-16"?>
<Data Version="3" Format="Machines">
  <Entry Type="Network">
    <Entry Type="Group" Name="DREAMLIGHT" DNSName="Dreamlight.local" CNType="DC"
Comment="Main office of Dreamlight branch" GUID="fa2a57e1-36a2-41d4-84f6-a4783412ddb8"
Username="admin"
Password="0j1pfppZgRecS+YRdh3XRX/u55YKZu8GTVXHVF11KJ0if89r4QxkPUbQQzlUU6ka">
      <Entry Type="OU" Name="Computers" CNType="CN" Comment="Default container for upgraded
computer accounts" GUID="aec2b844-3ad7-4aa6-8307-7ae4f6476ed1">
        <Entry Type="Machine" Name="W7-X86-SP-MKIII" DNSName="W7-X86-SP-
MKIII.Dreamlight.local" CNType="CN" GUID="2f780f0f-6530-43e0-b7b0-e90e3a3689fc"
IPAddress="192.168.5.85" Platform="x86" OSVersion="6.1" OSType="Workstation" ServicePack="1"
OSLanguage="en-US" />
      </Entry>
      <Entry Type="OU" Name="Domain Controllers" CNType="OU" Comment="Default container for
domain controllers" GUID="6da86366-77ae-4d56-86c6-e77fc849697f">
```

<Entry Type="Machine" Name="DREAMLIGHT-PDC" DNSName="Dreamlight-PDC.Dreamlight.local" CNType="CN" GUID="3a9a9fb2-aa92-4768-b9f5-0883048ff999" IPAddress="192.168.5.74" Platform="x64" OSVersion="5.2" OSType="Server" ServicePack="2" OSLanguage="en-US" />

</Entry>

<Entry Type="OU" Name="Floor 2" CNType="OU" Comment="Building 5A - Floor 2" GUID="23e9055e-4883-4c52-9702-8c34ba4c12cd">

<Entry Type="OU" Name="Office 203" CNType="OU" Comment="Accounts" GUID="cb63c680-249d-497a-b523-a6c3129a23ef">

<Entry Type="Machine" Name="W2003-X86-SP1" DNSName="W2003-x86-sp1.Dreamlight.local" CNType="CN" Comment="Windows Server 2003" GUID="07649a86-36d9-409d-8caa-b2bb0e46e832" IPAddress="192.168.5.94" Platform="x86" OSVersion="5.2" OSType="Server" ServicePack="1" OSLanguage="en-US" />

</Entry>

<Entry Type="OU" Name="Office 204" CNType="OU" Comment="Project Management" GUID="ed8a44b0-0d8e-48fe-8891-6c93c2edadc0">

<Entry Type="Machine" Name="WXP-X86-SP1" DNSName="WXP-X86-SP1.Dreamlight.local" CNType="CN" Comment="Windows XP Professional x86 Edition" GUID="038badad-baf7-41a8-a199-cac381c48b60" IPAddress="192.168.5.93" Platform="x86" OSVersion="5.1" OSType="Workstation" ServicePack="1" OSLanguage="en-US" />

</Entry>

</Entry>

</Entry>

</Entry>

</Data>

Now you are introduced to the formats used for storing the network objects data and can prepare files for manual import or for editing data exported earlier to be used for future imports.

Chapter 8: Operations' Execution Results

The operation execution results are stored either within the execution results or in the log depending on the operation type.

The execution results part of the program database stores all results of business operations performed on remote Machines grouping them by runs. You can review those results within the **Execution Results** view. For each run, you can see the operation name, the operation type, the execution type and brief execution statistics. Under each run, you can find detailed results info grouped by Machines and Groups those Machines belong to.

The log is designed to store information on supplementary operations' results and other events taking place while the program is running. For example, the results of enumerating a network for Machines performed either for building the network structure or while executing machine queries is stored within the log. The log also contains events that are not directly connected to remote operations and merely provide you with details on the program lifecycle. Such events are displayed in the **Log** view.

Both the execution results and the log are designed so as to help you to analyze the operation execution results and to troubleshoot problems taking place while the program is in use. The execution results and the log databases may grow continually, thus slowing down the program loading and response time. To prevent this, you can either delete execution results and clear the log manually or allow the program to perform the clean-up automatically on a regular basis. The options for deleting execution results and events automatically are available on the **Execution Results** and **Log Configuration** preference pages.

In this chapter, we will explain how to analyze execution results and the log to ensure that operations have been completed successfully or to troubleshoot possible problems. We will also describe the option of exporting execution results and logged events into a simple format.

Analyzing Execution Results

The main purpose of the **Execution Results** view is to help you understand if the business operation performed on remote Machines has succeeded and troubleshoot eventual problems. Each entry in the **Execution Results** view has a severity icon, a title, a description and possibly a hint on solving the problem, if any. From the title, you can understand which operation has been performed; the description contains the result message; the hint provides you with troubleshooting advice; and the severity icon helps you to quickly understand if the task has fully succeeded.

For example, let us take a closer look at the following result set in the **Execution Results** view `Pic 1`.

Pic 1. Sample execution results

As we can see from the picture above, most of the Machines have been processed successfully, but some of them have not. We need to find out what caused the problem and what should be done to avoid it in future. Also, it may be interesting to go through the warnings to see if anything wrong is going on.

The results are grouped by task runs and groups. In each grouping node, you can see the time during which the elements from that group were processed and the number of successful results, warnings and errors. So, you can basically go through the grouping rows to see if everything is OK and know the time spent for processing.

The error messages displayed in the **Execution Results** view contain all available information on each error that has occurred. That information is provided to help you understand the problem, try to solve it and avoid it in future.

After the results have been reviewed and all problems have been solved, you can run the operation again and ensure that the problematic Machines are processed successfully this time.
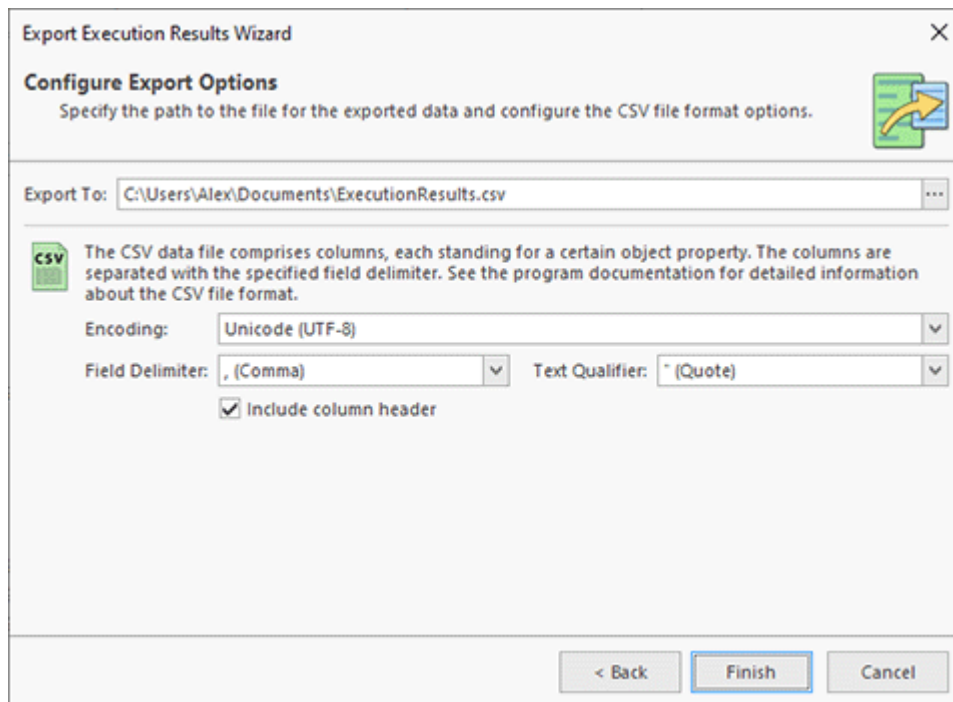
Exporting Execution Results

With Remote Installer, you can easily export the execution results of a business operation to the CSV file format for future analysis or processing by an automated tool. To export the execution results, click the **Export** button from the **Execution Results** view toolbar. You are proposed to choose between exporting the selected results and all results. You can also press the **Export** button from the **Organize** Ribbon group on the **Program** page when the **Execution Results** view is in focus. It is also possible to use the pop-up menu of the **Execution Results** view to export the results. The **Export Execution Results Wizard** will appear on the screen `Pic 1`.

Pic 1. The Export Execution Results Wizard welcome page

The first page of the **Export Execution Results Wizard** is the welcome page used to introduce you to the feature the wizard is supposed to help you with. After reading the welcome information, press **Next** to continue with export.

On the next page of the **Export Execution Results Wizard**, you are offered to choose the file you are going to save the execution results to and the CSV format options. The file path should be provided to the **Export To field** Pic 2. You can choose the encoding to be used for saving the data, as well as the field delimiter and the text qualifier. While performing export, you may also define if you would like the column header to be present in the resulting file, which would make it easier for you to identify each column. This feature can be enabled using the **Include column header** option.

Pic 2. Configuring the export options

After you are ready with configuring the export options, press **Finish** to proceed with export. The file containing the task execution results will be created in the path specified.

The CSV file with the exported results consists of seven columns, which are the following:

Column Index	Header	Description
1	Run	Information about the run during which the result was generated.
2	Group	The group the operated Machine belongs to.
3	Machine	The operated Machine's name.
4	Container	The Active Directory container the operated Machine belongs to.
5	Title	The execution result title.
6	Type	The execution result type that indicates severity level.
7	Description	The execution result description.
8	Time	The time when the event occurred.

Column Index	Header	Description
9	Error Code	The error code for the execution result, if any.

Sample exported data in the CSV format

"Run","Group","Machine","Container","Title","Severity","Description","Time","Error Code"

"'Scan Software' - 1/10/2015 5:26:30 PM - Processed: 8 Machines (Successful: 5, Warnings: 0, Errors: 3, Cancel: 0) - Duration: 24 sec.","Dreamlight","WVISTA-X86-SP1","Floor 2\Office 203","Prepare Connection","Error","Could not ping the 'WVISTA-X86-SP1.Dreamlight.local (192.168.5.91)' Machine using the following timeout: 1500 ms. Ping reply was not received within the allotted time. IP status: 11010.","2015-01-10 17:26:36",

"'Scan Software' - 1/10/2015 5:26:30 PM - Processed: 8 Machines (Successful: 5, Warnings: 0, Errors: 3, Cancel: 0) - Duration: 24 sec.","Emco","Emco-PDC","Domain Controllers","Connect","Error","Could not connect to the 'Emco-PDC.Emco.local (192.168.5.10)' Machine. The connection was performed using the current user credentials. Access is denied. Error code: 5.","2015-01-10 17:26:31","5"

"'Scan Software' - 1/10/2015 5:26:30 PM - Processed: 8 Machines (Successful: 5, Warnings: 0, Errors: 3, Cancel: 0) - Duration: 24 sec.","Lab [LABORATORY]","Lab-PDC","Domain Controllers","Connect","Error","Could not connect to the 'Lab-PDC.Lab.Dev.Emco.local (192.168.5.14)' Machine. The connection was performed using the specified credentials: 'admin@lab.dev.emco.local'. Access is denied. Error code: 5.","2015-01-10 17:26:31","5"

"'Scan Software' - 1/10/2015 5:26:30 PM - Processed: 8 Machines (Successful: 5, Warnings: 0, Errors: 3, Cancel: 0) - Duration: 24 sec.","Wintoolkit","w2003-x86-sp2","Computers","Scan Software","Information","Information on installed programs and updates for the 'w2003-x86-sp2.Wintoolkit.local (192.168.5.156)' Machine has been retrieved successfully.","2015-01-10 17:26:32",

Analyzing Log

The main purpose of the **Log** view is to help you understand if the enumeration, state checking and other service operations execution has succeeded and troubleshoot problems if any have occurred. Each entry in the log has a severity icon, a title, and a description, and possibly a hint on solving the problem, if any. From the title, you can understand which operation has been performed and which resource has been operated; the description provides you with the result message, a hint is used to provide you with an advice on solving the problem, if any; and the severity icon can be used to quickly understand if the operation has fully succeeded.

For example, let us take a closer look at the following result set in the log **Pic 1**.

Pic 1. Sample logged events

The picture above displays the set of results we received after performing state check on a number of selected Machines. The results of checking the Machines are grouped by the Group the Machines are located in. In each group node, we can see how many Machines have been processed successfully, with warnings or not processed due to errors.

As we can see from the picture, most of the Machines have been processed successfully, but some of them have not. We need to find out what caused the problem and what should be done to avoid it in future. Also, it may be interesting to go through the warnings to see if anything wrong is going on. We have done our best to provide hints for problem solving for most of the possible common error messages.

After the events have been reviewed and all the problems have been solved, you can run the operation again and ensure that it completes successfully.

Exporting Log

With Remote Installer, you can easily export the log to the CSV file format for future analysis or processing by an automated tool. To export the logged events, click the **Export** button from the **Log** view toolbar. You are proposed to choose between exporting the selected events and all events. You can also press the **Export** button from the **Organize** Ribbon group on the **Program** page when the Log view is in focus. It is also possible to use the pop-up menu of the Log view to export logged events. The **Export Log Wizard** will appear on the screen `Pic 1`.

Pic 1. The Export Log Wizard welcome page

The first page of the **Export Log Wizard** is the welcome page used to introduce you to the feature the wizard is supposed to help you with. After reading the welcome information press **Next** to continue with export.

On the next page of the **Export Log Wizard**, you are offered to choose a file you are going to save the logged events to and the CSV format options. The file path should be provided to the **Export To** field **Pic 2**. You can choose the encoding to be used for saving the data as well as, the field delimiter and the text qualifier. While performing exporting, you may also define if you would like the column header to be present in the resulting file, which would make it easier for you to identify each column – this feature option can be enabled using the **Include column header** option.
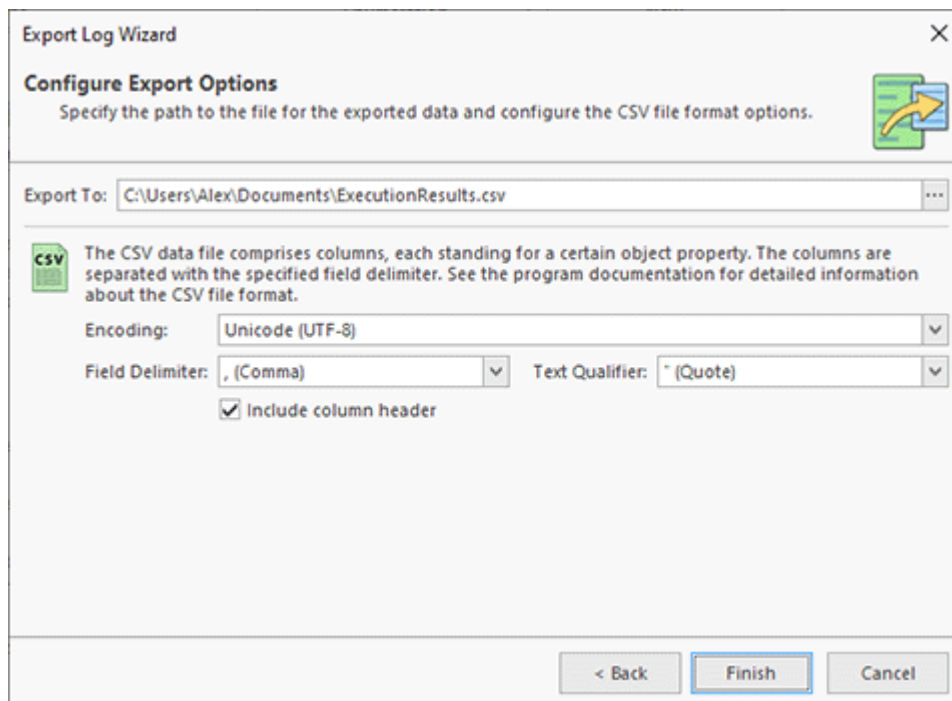
Pic 2. Configuring the export options

After you are ready with configuring the export options, press **Finish** to proceed with export. The file containing the logged events will be created in the path specified.

The CSV file with the exported data consists of six columns, which are the following:

Index	Header	Description
1	Path	The path to the logged event in the log tree.
2	Title	The logged event title.
3	Severity	The logged event severity level.
4	Description	The logged event description.
5	Time	The time when the event occurred.
6	Error Code	The error code for the event, if any.

Sample exported logged events in the CSV format

"Path","Title","Severity","Description","Time","Error Code"

"Clear Application Log","Clear Application Log","Information","The operation was completed successfully.","2015-01-10 16:13:21",

"Check State","Check State","Warning","Processed: 8 Machines (Successful: 5, Warnings: 0, Errors: 3, Cancel: 0)","2015-01-10 16:13:33",

"Check State\Wintoolkit","Wintoolkit","Information","Processed: 5 Machines (Successful: 5, Warnings: 0, Errors: 0, Cancel: 0)","2015-01-10 16:13:31",

"Check State\Wintoolkit\Wintoolkit-PDC","Wintoolkit-PDC","Information","The remote service is installed on the 'Wintoolkit-PDC.Wintoolkit.local (192.168.5.138)' Machine.","2015-01-10 16:13:28",
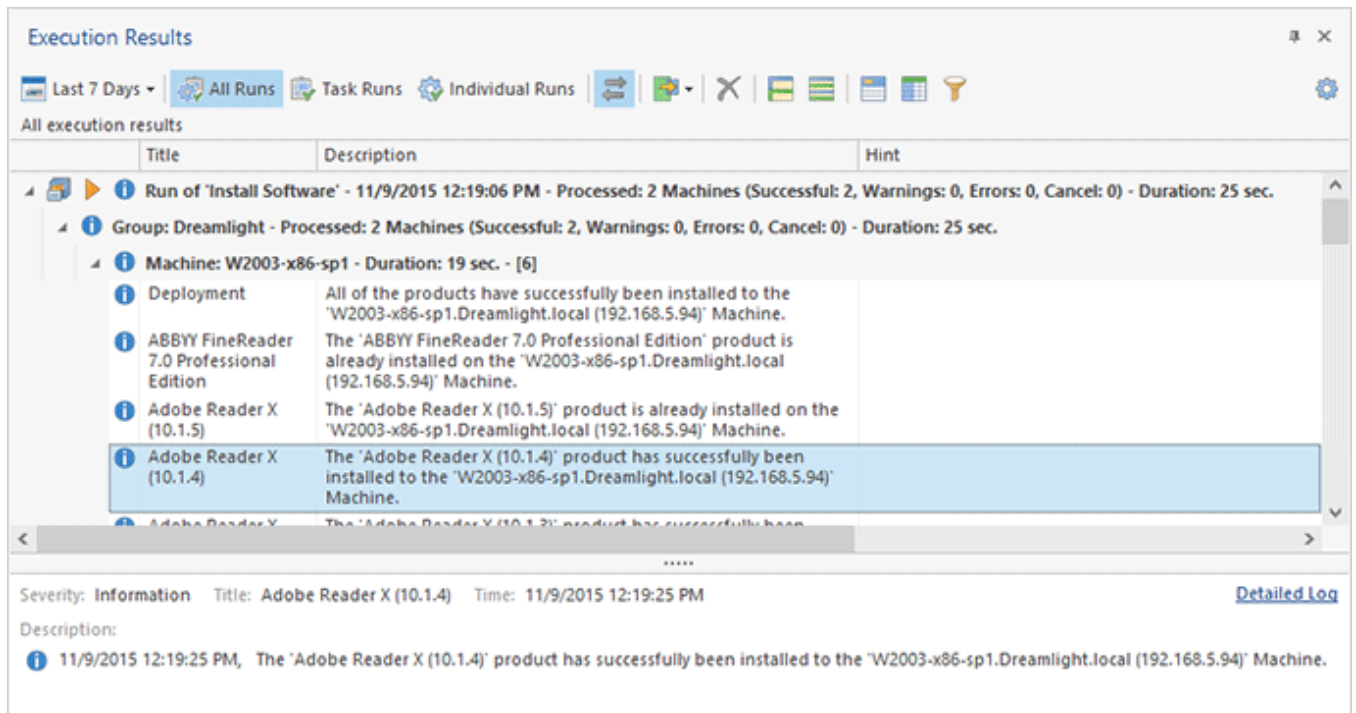
"Check State\Wintoolkit\W2008-R2-SP1","W2008-R2-SP1","Information","The remote service is installed on the 'W2008-R2-SP1.Wintoolkit.local (192.168.5.158)' Machine.","2015-01-10 16:13:28",

Now you are introduced to the log export and export data file format and can use the export feature for the log analysis without any misunderstanding.

Detailed Log

Remote Installer maintains a detailed log while running an install, uninstall or repair process on a remote Machine. Such a log contains installer log and information on the execution and output of the custom actions. The Windows Installer Log settings used during install, uninstall and repair processes are configured on the **Windows Installer Log** preference page and can be overridden for each deployment package used to deploy a **Windows Installer Package**.

The generated log is retrieved from each remote Machine after the operation is completed and is stored in the program database. To review this log, you should first select the operation result row in the **Execution Results** view. The link to the detailed log, if there is any, is available in the **Event Details** pane, which is visible by default, and in the **Additional Info column**, which is hidden by default `Pic 1`.

Pic 1. The link to the detailed log

Next, you should simply click the **Detailed Log** link and the log will be displayed on the screen in a new window Pic 2 .
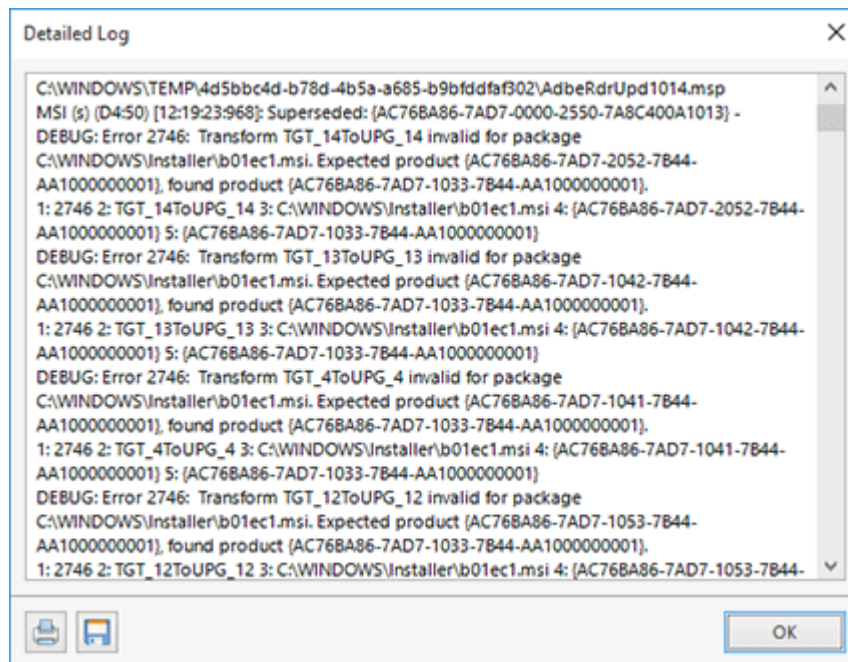
Pic 2. The detailed log

You can review the logged information right in the embedded editor, print it or save to file for future analysis and processing.

Now you are introduced to the detailed log feature of Remote Installer and will always be able to get all required information about the install, uninstall or repair processes.

Chapter 9: Program Preferences

Remote Installer comes with a wide range of settings available for changing by any user. Every preference page has a detailed description of its content and of the feature it is used to configure. You can configure almost anything: the Windows Installer Log settings, the applications repair options, the network scan process, the application behavior with regard to the System Tray, the database location, the proxy settings to be used to connect to the Internet, etc. To reach the application preferences, click the **Preferences** button available from the **Application Menu**. Also, the clickable **Ribbon** groups' glyphs open the preference pages that configure the functionality incorporated in the respective group.
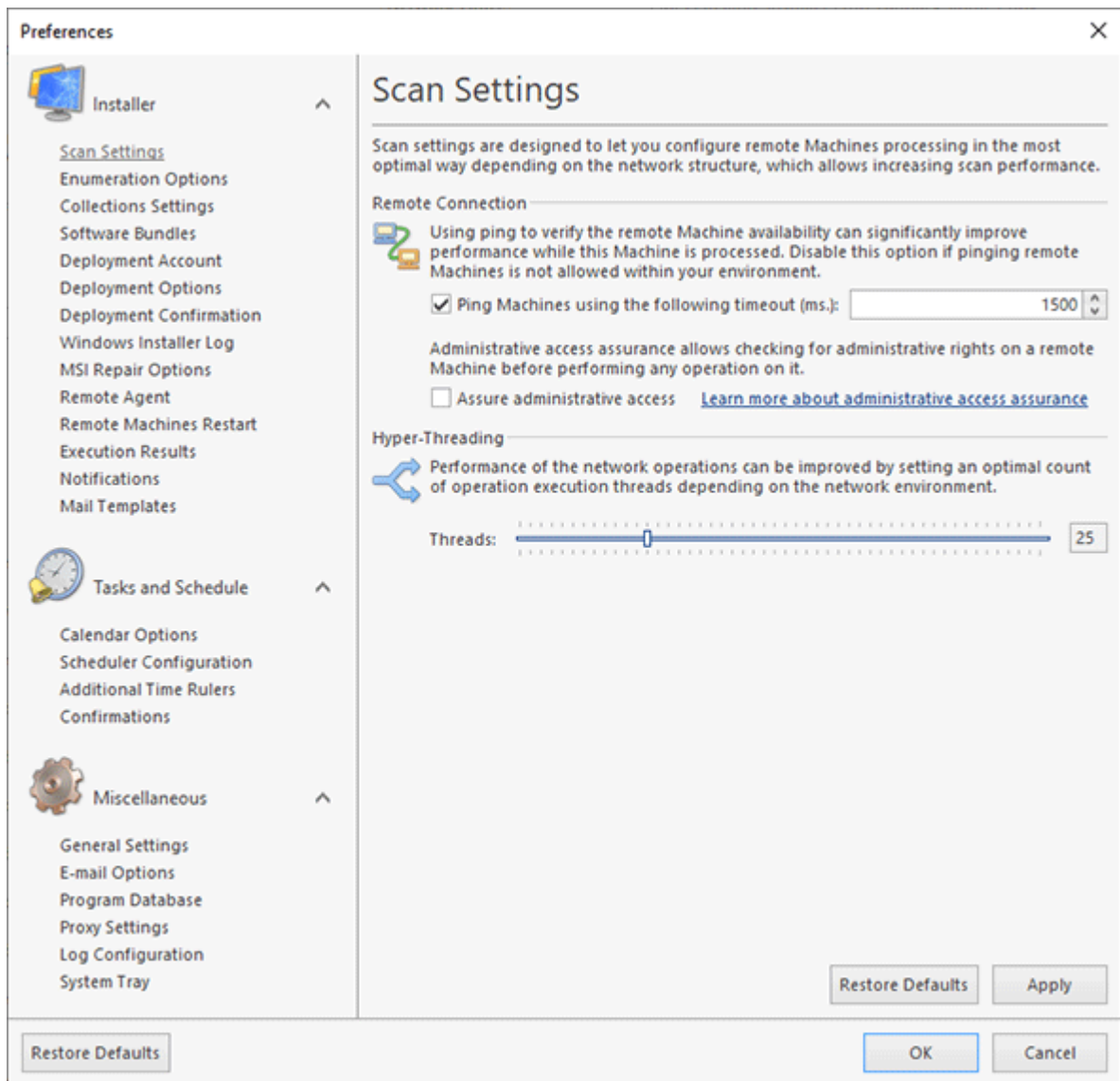
Remote Installer Part

The **Remote Installer** part of the program preferences should be used to configure the main Remote Installer properties such as the Windows Installer Log settings, the applications repair options and the network enumeration options. To open the **Preferences** dialog, click the **Preferences** button available from the **Application Menu**. Feel free to configure the available settings to suit your needs best.

Scan Settings Page

The scan settings are designed to enable you to configure the processing of remote Machines in the most optimal way depending on the network structure, thus increasing the overall scan performance **Pic 1**. To configure the **Scan Settings**, click the **Preferences** button in the **Application Menu** and switch to the **Scan Settings** preference page using the corresponding link in the navigation bar on the left in the Preferences dialog within the Remote Installer group.

You are offered to configure the Machines availability detection, administrative access assurance and hyper-threading options.

Pic 1. Configuring scan settings.

Remote Installer provides an option of detecting the remote Machines' availability by pinging them before processing. This can significantly speed up bulk operations on remote computers, but if your environment has any ping restrictions, you should disable this option, so that remote Machines that are not allowed to be pinged could also be processed. To detect remote Machines' availability using the ping functionality, check the **Ping Machines using the following timeout (ms.)** option and provide the required timeout value. To enable the administrative access assurance, check the **Assure administrative access option**.

The ultimate Hyper-Threading technology provided by EMCO allows you to perform network operations in parallel to reach the highest performance available. You can set an optimal operation execution threads count depending on the network environment by using the **Threads** editor.

Administrative access assurance

The **Assure administrative access** option allows connecting only to the Machines that can be processed using administrative rights. It is convenient if you are targeting data modification and would like to retrieve data only from the Machines where it can then be changed by you.

Enumeration Options Page

Enumeration options are designed to make the network enumeration process clearer and more comfortable for you **Pic 1**. To configure the enumeration options, click the glyph of the **Network** Ribbon group. Also, you can click the **Preferences** button from the **Application Menu** and switch to the **Enumeration Options** preference page using the appropriate link in the navigation bar on the left in the **Preferences** dialog within the Remote Installer group.
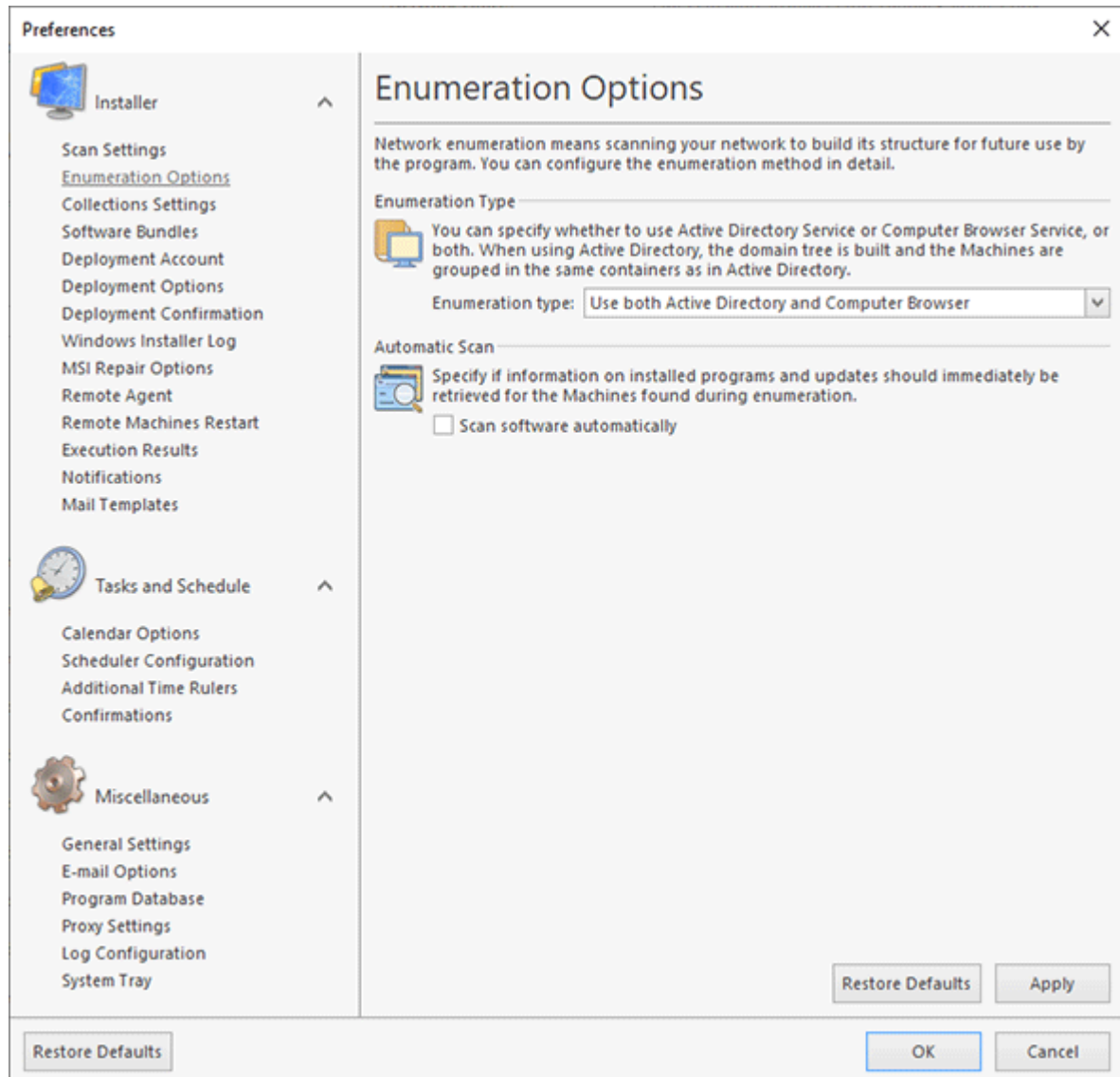
Pic 1. Configuring the enumeration options

The **Enumeration type** option specifies the way of performing a network scan for Machines.

The Active Directory scan runs significantly faster than the Computer Browser scan and allows you to get more information on your network structure. Also, there is no need for all network computers to be turned on, because information on the network is gathered directly from the domain controller. However, this type of enumeration requires access to the domain controller and won't find Machines that are not registered in the Active Directory database.

For the Active Directory scan, the domain hierarchy and structure are respected. Respecting the domain hierarchy means that the same structure will be preserved for domains having a tree structure (registered domains and sub-domains) in the **Network** view as in your Active Directory. Respecting the domain structure means that the Machines in the **Network** view are grouped in the same way they are grouped in Active Directory with the help of containers.

Searching for computers by means of Computer Browser will result in finding all the Machines that are turned on and visible from yours during the Enumeration process.

In the combined mode, the program performs the Active Directory scan first, then adds the Machines found by means of Computer Browser.

Let us take a look at the results received using different options:

Active Directory scan enabled:

As a result, all the domains are displayed in a hierarchy where each sub-domain is located under its parent domain (in our case *Dev* is a sub-domain of *Emco* and Lab is a sub-domain for *Dev*) with Machines found in them grouped by the Active Directory containers they are located in.
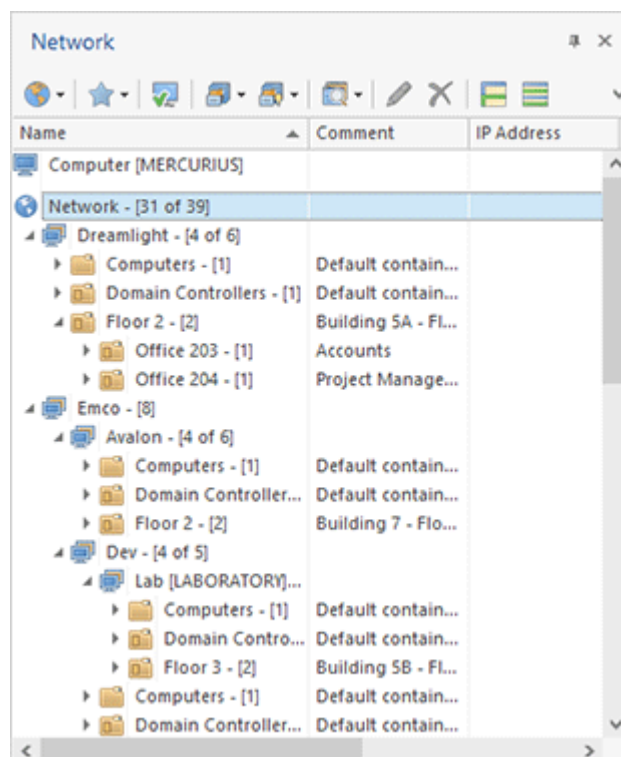
Computer Browser scan enabled:

As a result, we've got only the Machines that are turned on, including those that are not registered in any domain, and all the workgroups and domains are displayed as children of the *Network* item.
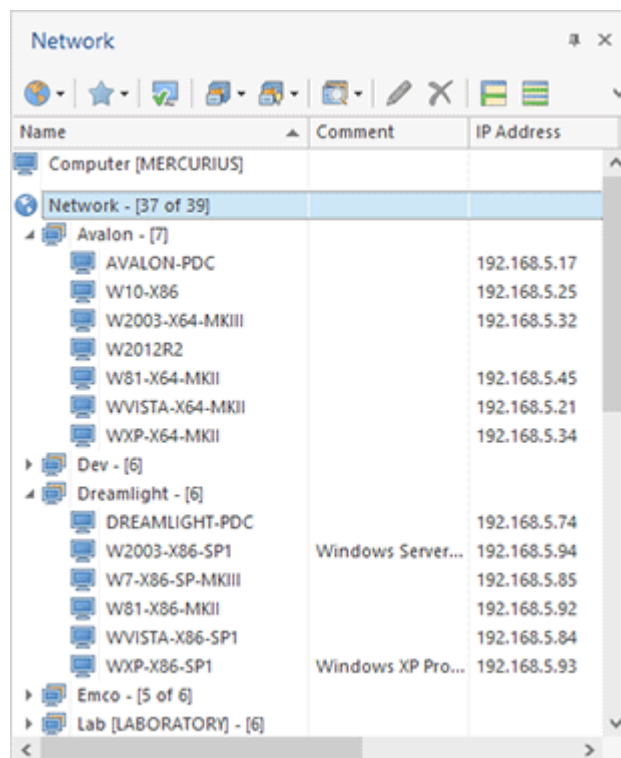
## Both Active Directory and Computer Browser scan enabled:

As a result, we've got both the Machines that are turned on and those that are registered in domains: workgroups, domains and Machines are grouped by the structure respect options.
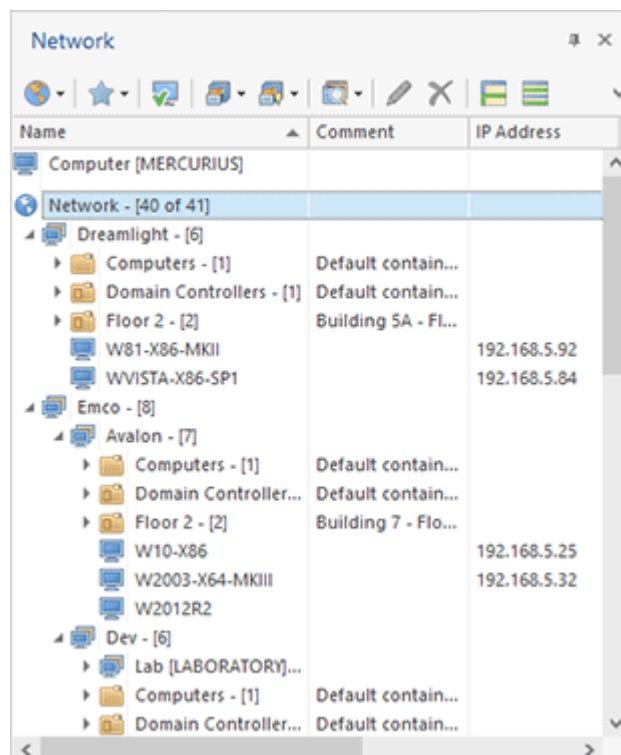
Remote Installer allows you to retrieve the information on installed programs and updates for a Machine just after it was added to the **Network Browser**. To make the program behave in such a way enable **Scan software automatically** option.

Collections Settings Page

Collection either groups a set of static Machines or defines the method and conditions for fetching Machines to be operated dynamically. The resulting set of Machines, including those retrieved via queries and defined as static entries, can be filtered using custom conditions based on Machine properties. The **Collections Settings** preference page allows you to configure the Machines querying and filtering options Pic 1. To open the **Collections Settings** page, click the Preferences button in the **Application Menu** and press the corresponding link in the navigation bar on the left of the **Preferences** dialog within the Remote Installer group.
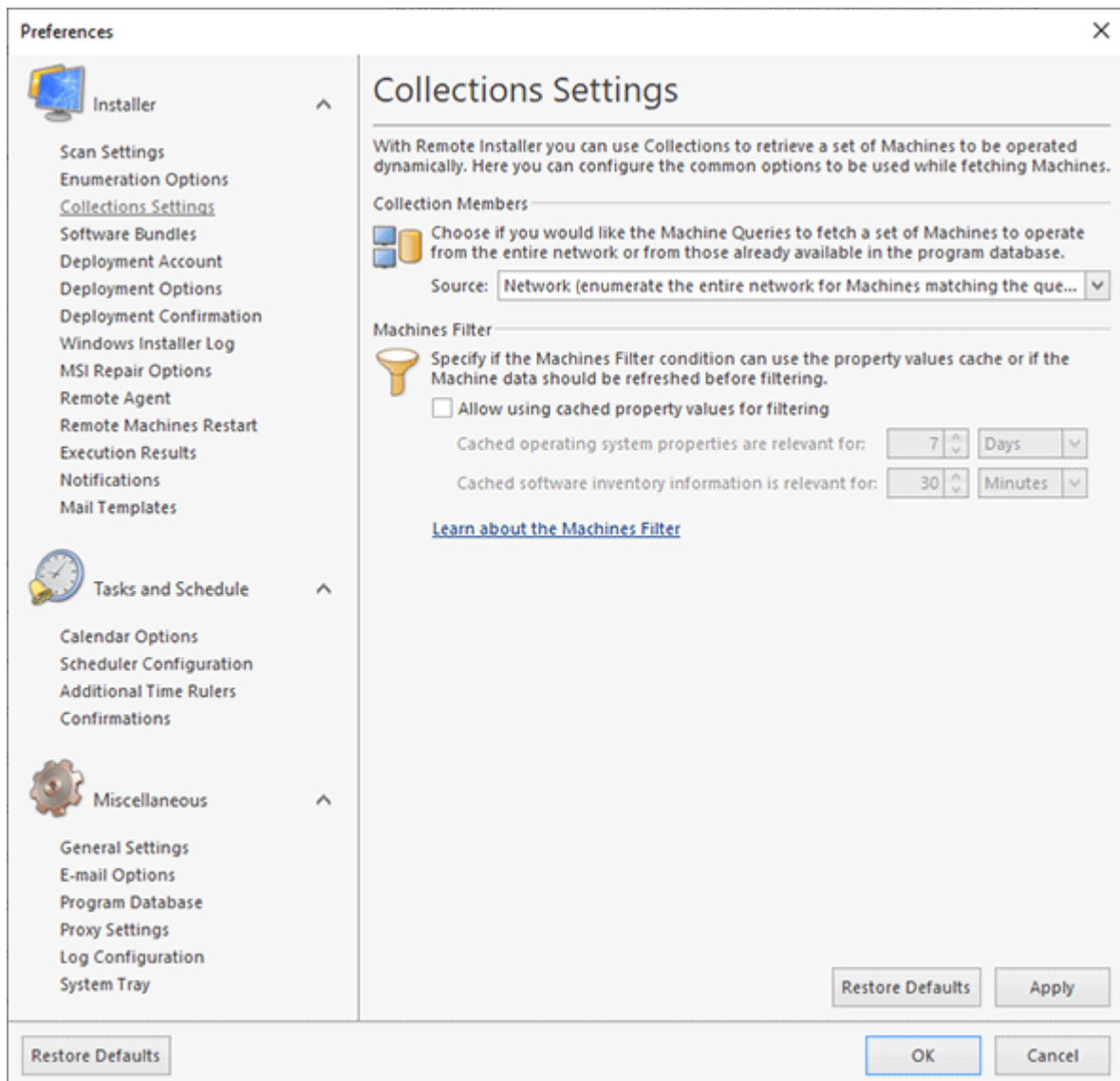
Pic 1. Configuring Collections Settings

Within the **Collection Members** group, you can define if you would like the Machine Queries to fetch a set of Machines to operate from the entire network or from those already available in the program database. Simply choose the required option in the **Source** field.

When configuring the Machine Filter behavior, you can specify if the program is allowed to use the property values cache, if any, for filtering or if the properties used in the filter condition should be refreshed during each operation before checking the condition. In case you are going to use the cached property values, you can define the time interval during which the properties are considered relevant. All these options can be configured within the **Machines Filter** group.

The **Collections Settings** page defines the querying and filtering configuration used by default by all the Collections, but it is still possible to use a different configuration of each aspect for particular Collections. Refer to the Collections Management section of this document for details on how to override the described options.

Software Bundles Page

Remote Installer allows you to create Bundles that fully describe a single product by defining the actions to be performed to install, uninstall and/or repair it. To simplify the bundles creation process, Bundle Templates were designed. Using templates makes it much easier to create common software bundles. The **Software Bundles** preference page Pic 1 is used to configure the set of available templates. To reach the **Software Bundles** page, you should open the program preferences using the **Preferences** button from the **Application Menu** and click the **Software Bundles** link in the navigation bar on the left of the **Preferences** dialog within the **Installer** group.
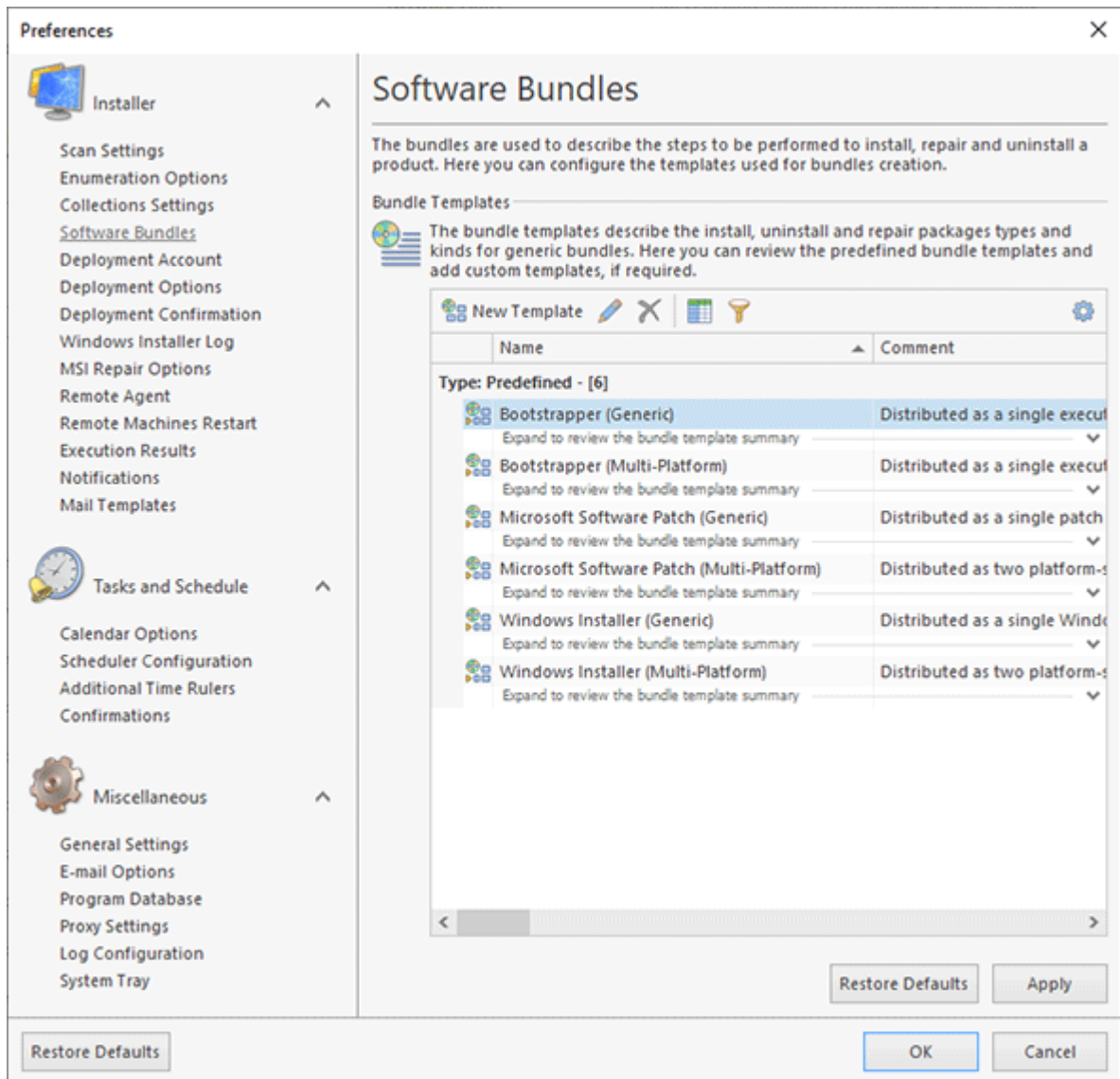
Pic 1. Configuring bundle templates

Each bundle template describes the type and kind of the install, uninstall and/or repair package for software deployment. So, when creating a bundle from a template, you do not need to choose these options again and again or provide any additional deployment package configuration. Remote Installer comes with a range of build-it templates describing the common software bundles. Those templates are grouped within the **Predefined** grouping node. You can review each of those templates by double-clicking them. You can add your own templates, and they will be grouped under the **User Defined** row. To add a new template, just press the **New Template** button on the **Templates** table toolbar. The dialog will appear on the screen to let you configure a template `Pic 2`.

**Pic 2. Configuring a user-defined bundle template**

When creating a new template or editing an existing one, you can provide a name and a comment for the template. Both are used to identify the template and make it easier for you to select the required one. The next step is configuring the installation package template, and you are proposed to choose the install package type and kind. When configuring uninstall and repair packages, you can either specify that the template is not applicable, or choose that the template is the same as for the install package or define a required template that differs from that of the install package.

User-defined templates can be edited using the **Edit** button on the toolbar and deleted from those available when no longer required by using the **Delete** button. For every template, there is a summary displayed within the **Templates** table. You can find it under each row representing the template. You can expand and collapse the summary by either double-clicking the summary row or clicking the arrow on the right of the row. If you do not wish to display the summary, you can disable the **Show Details** option in the **Configuration** menu of the **Templates** table.

When the bundle templates are defined, you can use them for creating software bundles quickly and easily.

Deployment Account Page

Remote Installer can perform deployment on remote Machines either using a specific deployment account or an account representing the local system. When performed from a user account, both per-machine and per-user deployments are possible. From the local system account, only per-machine deployment can be performed. It is also possible to use Remote Installer to perform remote deployment interactively in a session of a currently logged-on user, if required. All these options are available for configuration on the **Deployment Account** preference page **Pic 1**. To reach the **Deployment Account** page, you should open the program preferences using the **Preferences** button from the **Application Menu** and click the **Deployment Account** link in the navigation bar on the left of the **Preferences** dialog within the **Installer** group.
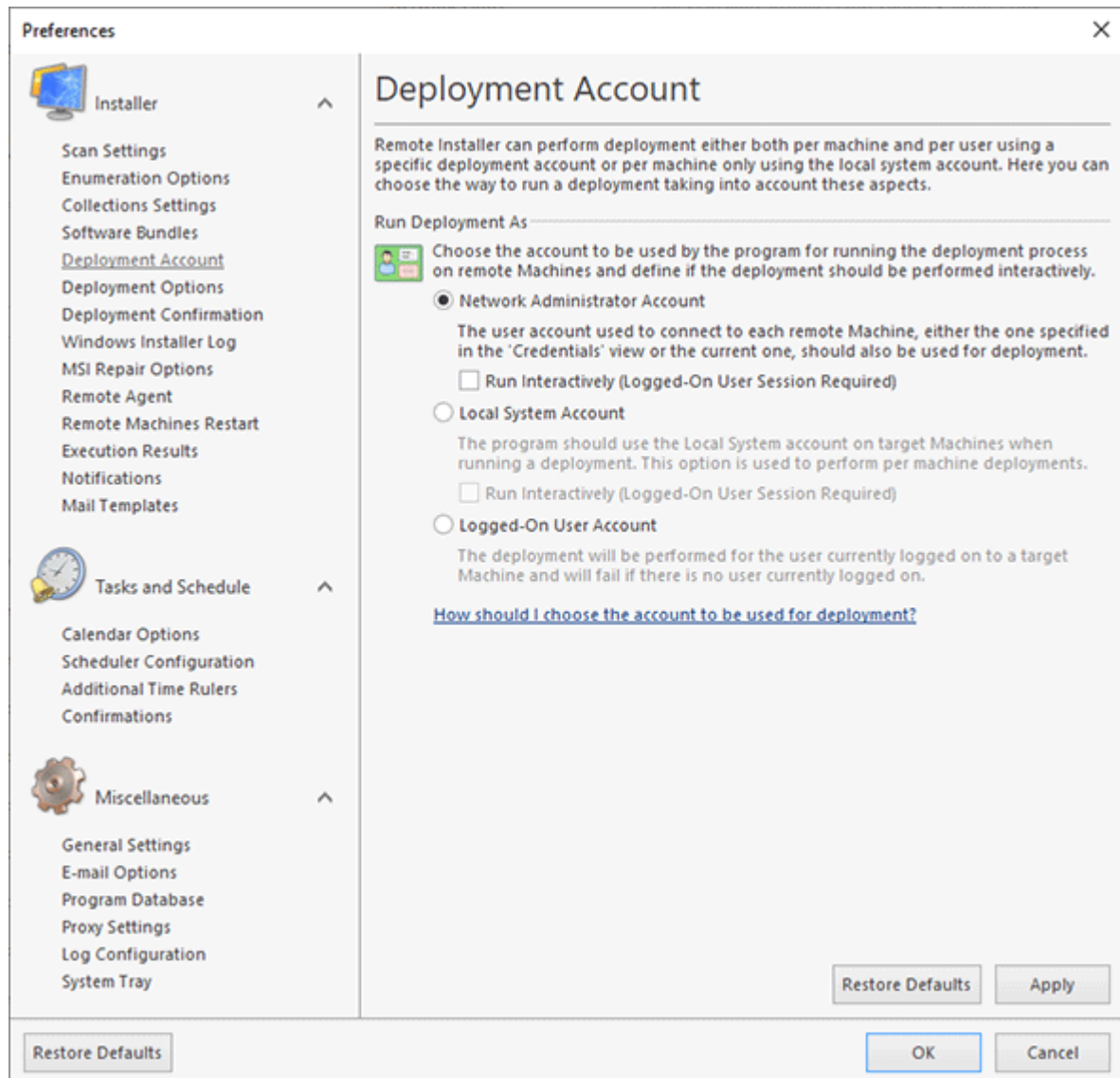
Pic 1. Choosing a deployment account

You can choose among the following options: **Network Administrator Account**, **Local System Account** and **Logged-On User Account**.

When the **Network Administrator Account** is chosen, Remote Installer launches the installer using the same account as used to connect to the remote Machine, either the local one or the one specified in the network credentials. For this option, you can enable the interactive deployment mode. In this mode, the installation setup wizard will be displayed in the session of the currently logged-on user. Using this option, you can execute both per-machine and per-user deployments.

> To be able to run deployment interactively and to access network shares when using the **Network Administrator Account** option, it is required that the network credentials should be provided explicitly in the **Credentials** view.

The **Local System Account** option allows you to perform per-machine deployments with maximum available permissions on a remote Machine. It should be used only for installations that require such permissions, which are very rare. For this option, it is also possible to allow interactive deployment, if required.

The **Logged-On User Account** option should be used to deploy applications that are installed per user when the logged-on user needs to provide certain information for the deployment to succeed. In this mode, the deployment is always executed interactively.

For detailed information on the situations when each of these options can and should be used, refer to the How should I choose the account to be used for deployment? section of this document.

The **Deployment Account** preference page is used to configure the common settings, which are by default applied to all deployment operations, but you can override those for each operation within the deployment configuration wizard.

Deployment Options Page

Remote Installer can either interrupt or continue a deployment process after a deployment package fails when performing a group deployment. It is also possible to update the software inventory after a successful deployment. The required settings are defined on the **Deployment Options** preference page `Pic 1`. To reach the **Deployment Options** page, you should open the program preferences using the **Preferences** button from the **Application Menu** and click the **Deployment Options** link in the navigation bar on the left of the **Preferences** dialog within the **Installer** group.
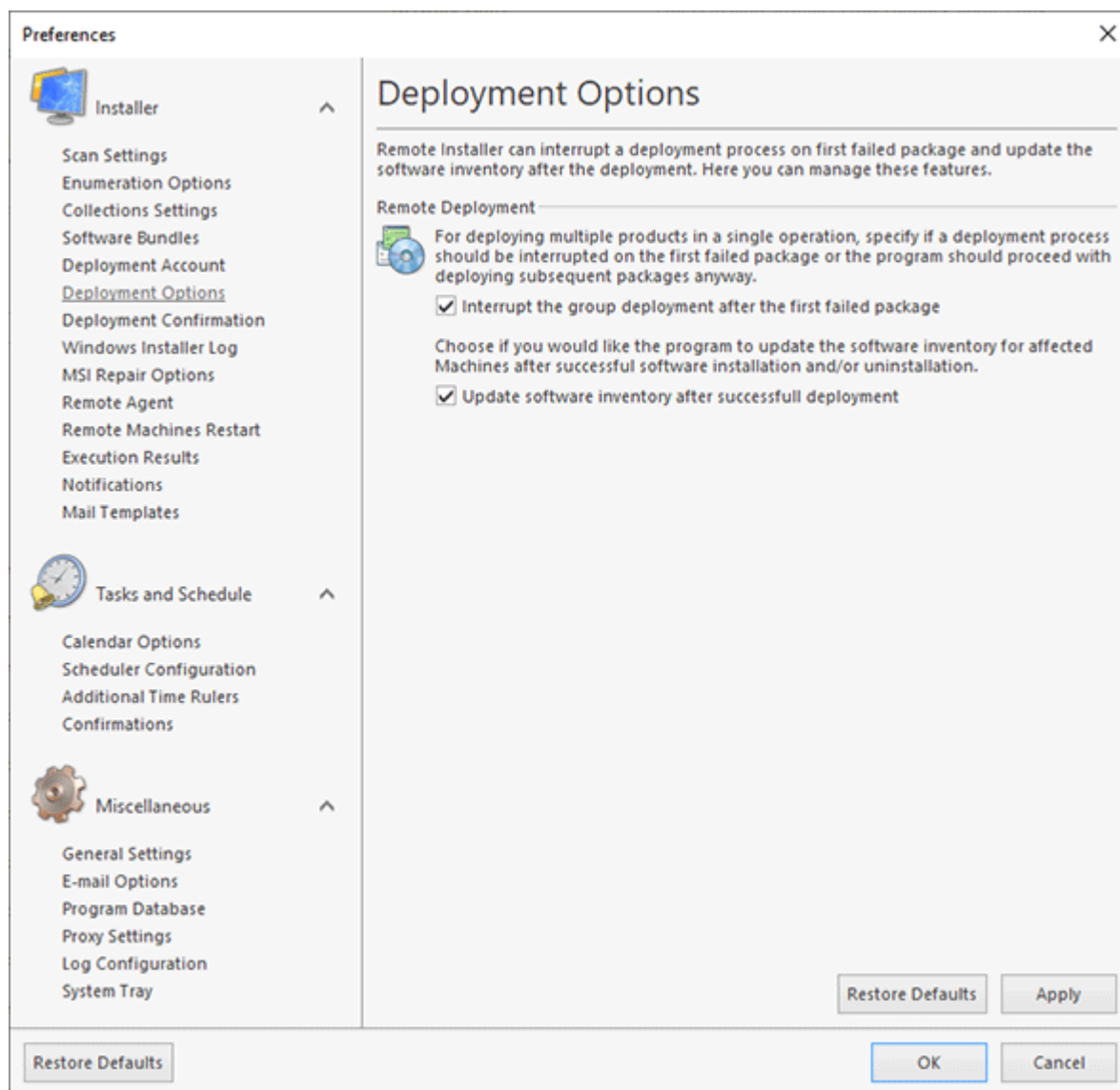
Pic 1. Configuring Deployment Options

For deploying multiple products within a single operation, you can specify if the deployment should be interrupted upon the first failed package or if the program should proceed with deploying subsequent products anyway. The **Interrupt the group deployment after the first failed package** option is used to configure this aspect.

On this page, you can also choose if you would like the program to update the software inventory for the operated Machines after a successful software installation and/or uninstallation. In case the **Update software inventory after successful deployment** option is enabled, a new software inventory snapshot is created automatically for all affected Machines after deployment operations. You can always update the software inventory manually and on schedule irrespectively of whether this option is enabled or disabled.

Deployment Confirmation Page

Remote Installer may ask the user currently logged on to a remote Machine for confirmation before launching the actual deployment process. The confirmation is displayed for a specific period of time. It is also possible to allow the user to cancel all or any of the deployment operations.

You can configure the deployment confirmation settings on the **Deployment Confirmation** preference page **Pic 1**. To reach this page, you should open the program preferences using the **Preferences** button from the Application Menu and click the **Deployment Confirmation** link in the navigation bar on the left of the **Preferences** dialog within the **Installer** group.
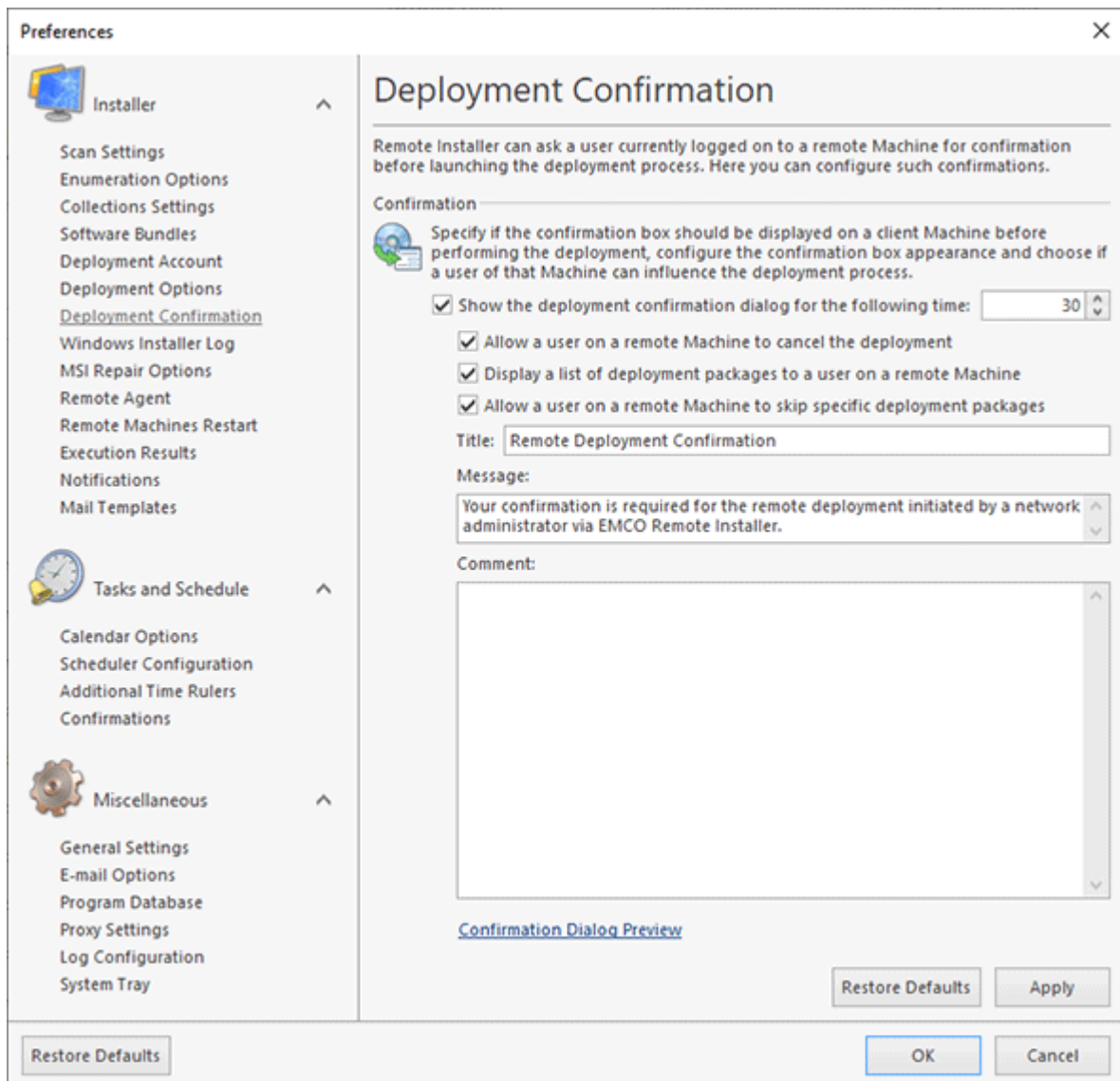

Pic 1. Configuring the deployment confirmation options

On the **Deployment Confirmation** preference page, you can specify if the deployment confirmation dialog should be displayed and choose the time span to display it for. In case it is displayed, you may also choose if you would like the user to be able to cancel the deployment, if you would like the list of deployment packages to be displayed to the user, and if it is allowed to skip specific deployment packages. It is also possible to change the confirmation dialog title and message and to provide a custom comment to be displayed to the user.

For the title, message and comment definitions, you can use the following placeholders that will be replaced with actual values before displaying the confirmation dialog on a remote Machine:

%SENDER%	the name of the user that initiated the remote deployment procedure.
%TIME%	the current time.
%DATE%	the current date.
%DATETIME%	the current date and time.

You can preview the dialog to be displayed to a remote user by following the **Confirmation Dialog Preview** link at the bottom of the preference page.

The **Deployment Confirmation** preference page is used to configure the common confirmation options that are applied to all deployment operations by default, but you can override those options for each operation within the deployment configuration wizard.

Windows Installer Log Page

Windows Installer can log events that occurred during the installation, uninstallation and repair process of the Windows Installer Packages and Microsoft Software Patches initiated by Remote Installer on remote Machines using the specified log level. Such a log is retrieved from each remote Machine after every operation and stored in the program database, so you can review it in future.

To reach the Windows Installer Log configuration, you should open the program preferences using the **Preferences** button from the **Application Menu** and click the **Windows Installer Log** link in the navigation bar on the left of the **Preferences** dialog within the **Installer** group `Pic 1`.
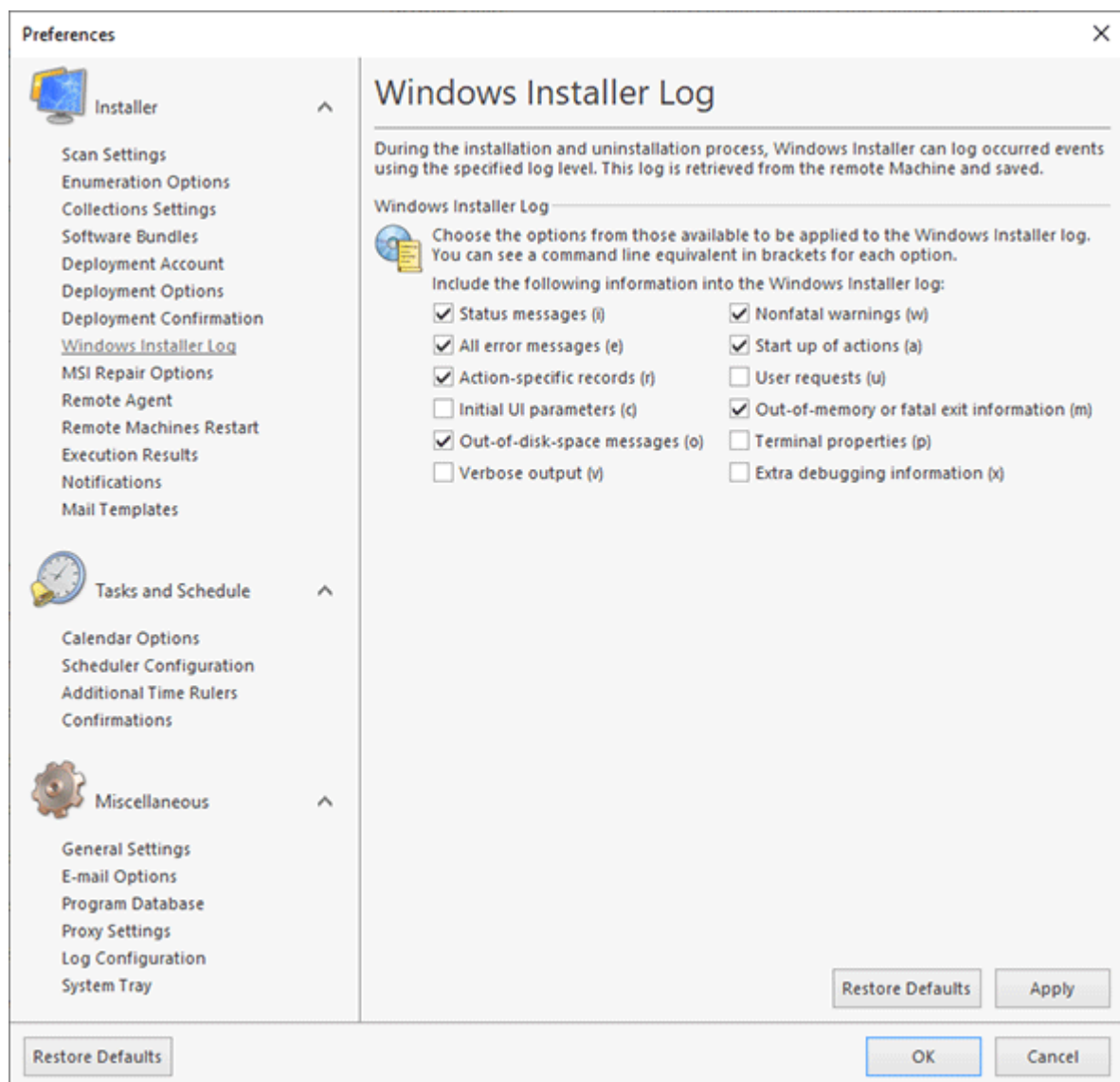
Pic 1. Configuring Windows Installer Log

On the **Windows Installer Log** preference page, you can choose from the available event types that can be logged by Windows Installer. You can see the Windows Installer command line equivalent in brackets for each option. If all the logging options are disabled, Windows Installer will not log information during the install, uninstall or repair process. The **Windows Installer Log** preference page is used to configure the common logging options, which are by default applied to all Windows Installer Package and Microsoft Software Patch packages, but you can override those options for each package within the package configuration wizard.

MSI Repair Options Page

Remote Installer makes it possible for you to repair Windows Installer Packages that are already installed on remote Machines having provided the required repair options. These options are configured on the **MSI Repair Options** preference page. To reach the **MSI Repair Options** page, you should open the program preferences using the **Preferences** button from the **Application Menu**, and to click the **MSI Repair Options** link in the navigation bar on the left of the **Preferences** dialog within the **Installer** group Pic 1.
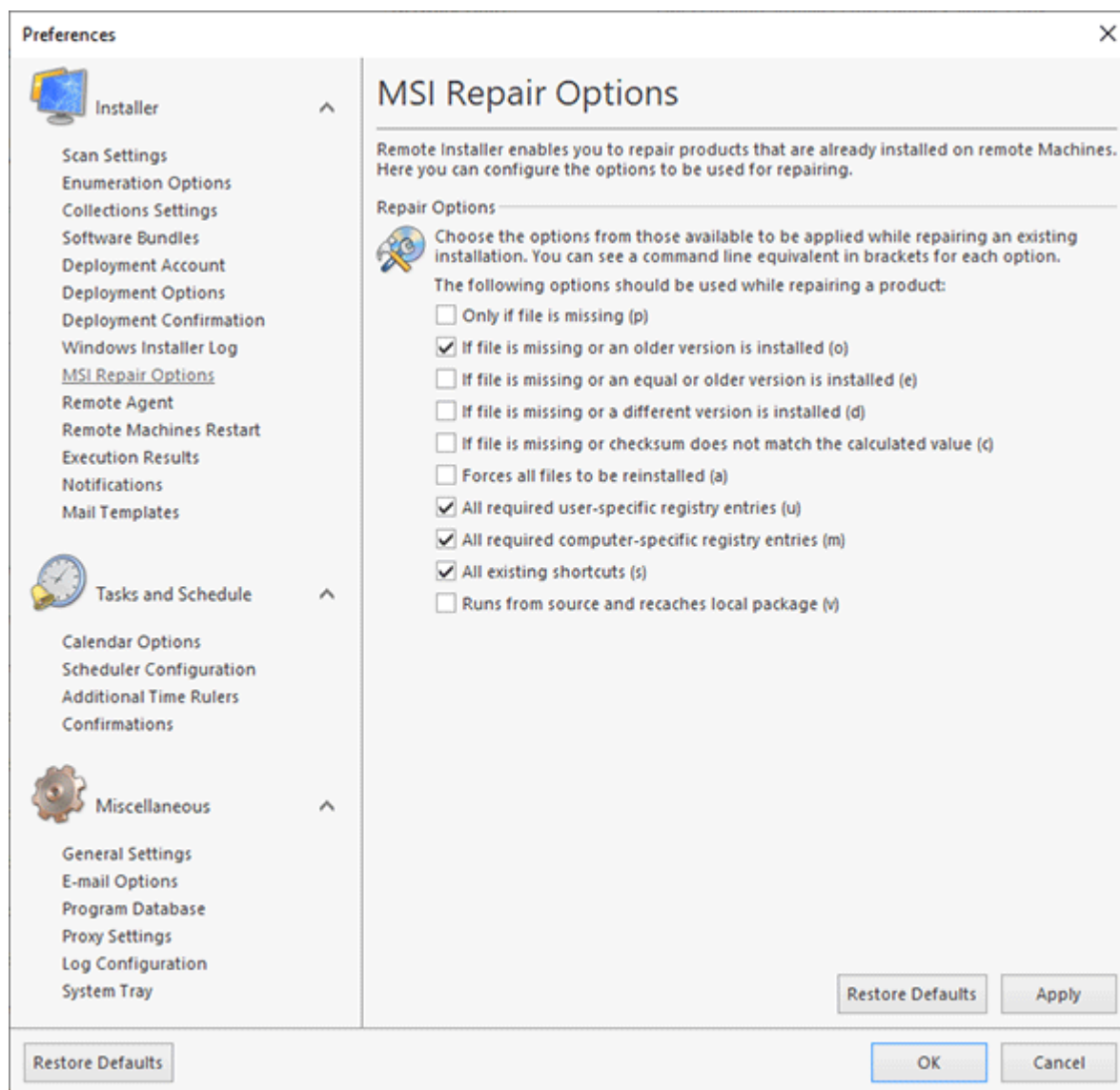
Pic 1. Configuring the MSI repair options

On the **MSI Repair Options** preference page, you can choose from the available options that can be used while repairing a program installation on a remote Machine. You can see the Windows Installer command line equivalent in brackets for each option. If all the repair options are disabled, Windows Installer will use the default repair options.

The source MSI package used for the program installation should be reachable for some repair options like, for example, **Runs from source and reaches local package**. The repair process will fail if the source package is missing. In such a case, it is still possible to repair that program having enabled the Th**e setup file to be used for performing a repair should be provided** option and provided the required MSI package while configuring the repair package.

The **MSI Repair Options** preference page is used to configure the common repair options, which are by default applied to all Windows Installer repair packages, but you can override those options for each repair package within the package configuration wizard.

Remote Agent Page

Remote Installer uses an agent to operate remote Machines. This agent can be installed by the program on demand or by a system administrator at any time. The agent deployment type is configured on the **Remote Agent** preference page **Pic 1**. To change the deployment type, click the **Preferences** button in the **Application Menu** and switch to the **Remote Agent** preference page using the appropriate link in the navigation bar on the left of the **Preferences** dialog within the **Remote Installer** group.
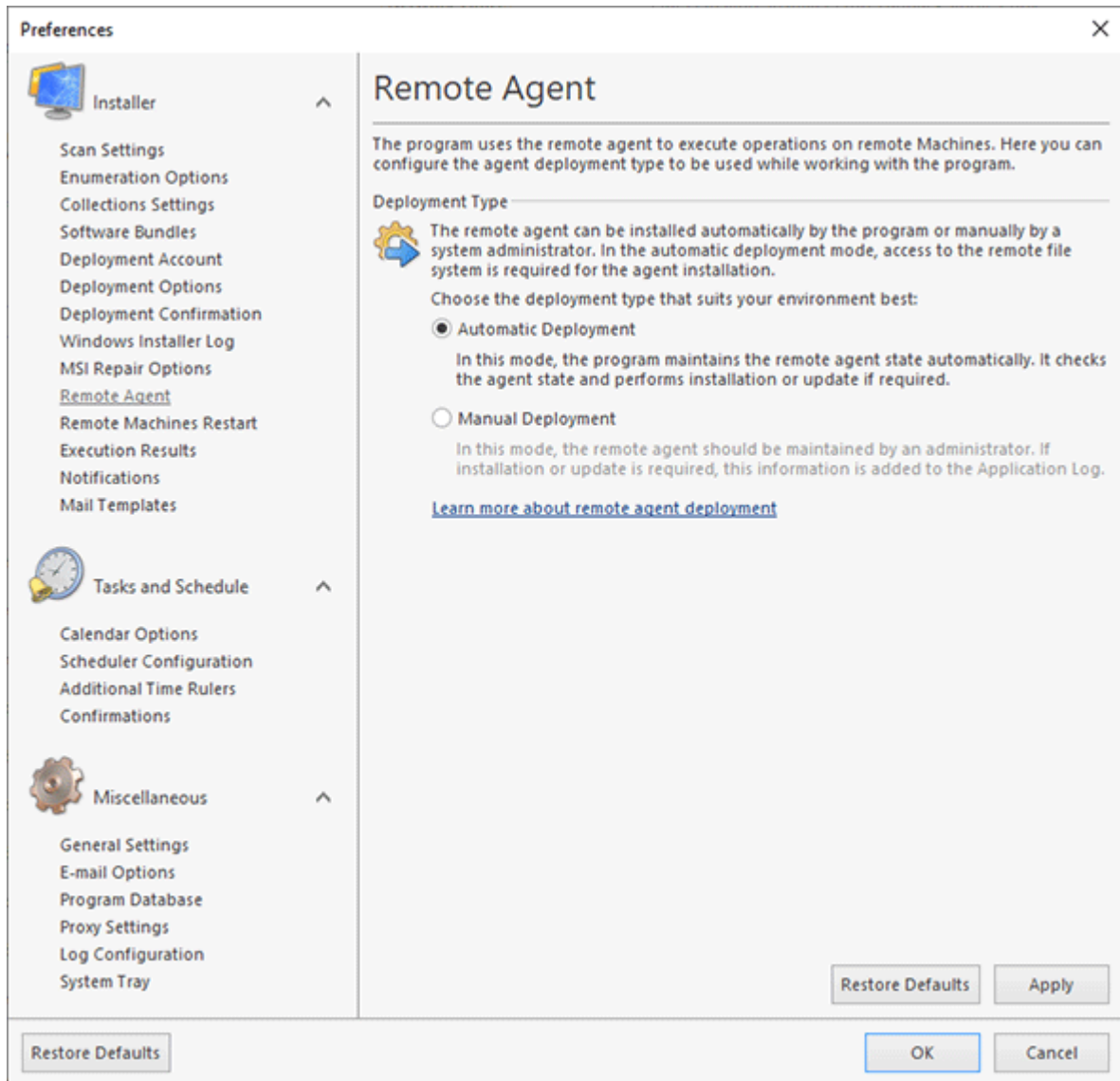
Pic 1. Choosing the remote agent deployment type

On the **Remote Agent** page, you are offered to choose if the state of the remote agent should be maintained automatically by the program or the remote agent deployment should be overseen by the network administrator. The difference between these two modes is that when the **Automatic Deployment** mode is used, Remote Installer requires administrative access to the remote file system so the remote Machine should be configured to allow access to its file system. Access to the file system is required to perform the remote agent installation and updates. When the **Manual Deployment** mode is used, the program does not need to access the remote Machines' file system to work with the agent; however the remote operation will fail if the remote agent installation or update is required.

In the **Manual Deployment** mode, the program adds an information to the **Execution Results** when it fails to operate the remote Machine because the required remote agent installation or update cannot be performed.

For manual deployment, the network administrator should use one of the installation packages supplied with the program. Those packages are available in the Setup folder of the program installation – this folder can be reached using the **Remote Agent Setup** link in the program sub-menu of the **Start** menu. The installations are shipped in form of both an executable file, which is platform-independent, and two different platform-dependent MSI files, which can be used, for example, for automatic deployment through GPO.

Remote Machines Restart Page

Remote Installer can restart remote Machines to complete an install, uninstall or repair process, if required. You can configure the timeout and notification settings to be used when performing a restart on the **Remote Machines Restart** preference page `Pic 1`. To reach this page, you should open the program preferences using the **Preferences** button from the **Application Menu** and click the **Remote Machines Restart** link in the navigation bar on the left of the **Preferences** dialog within the **Installer** group.
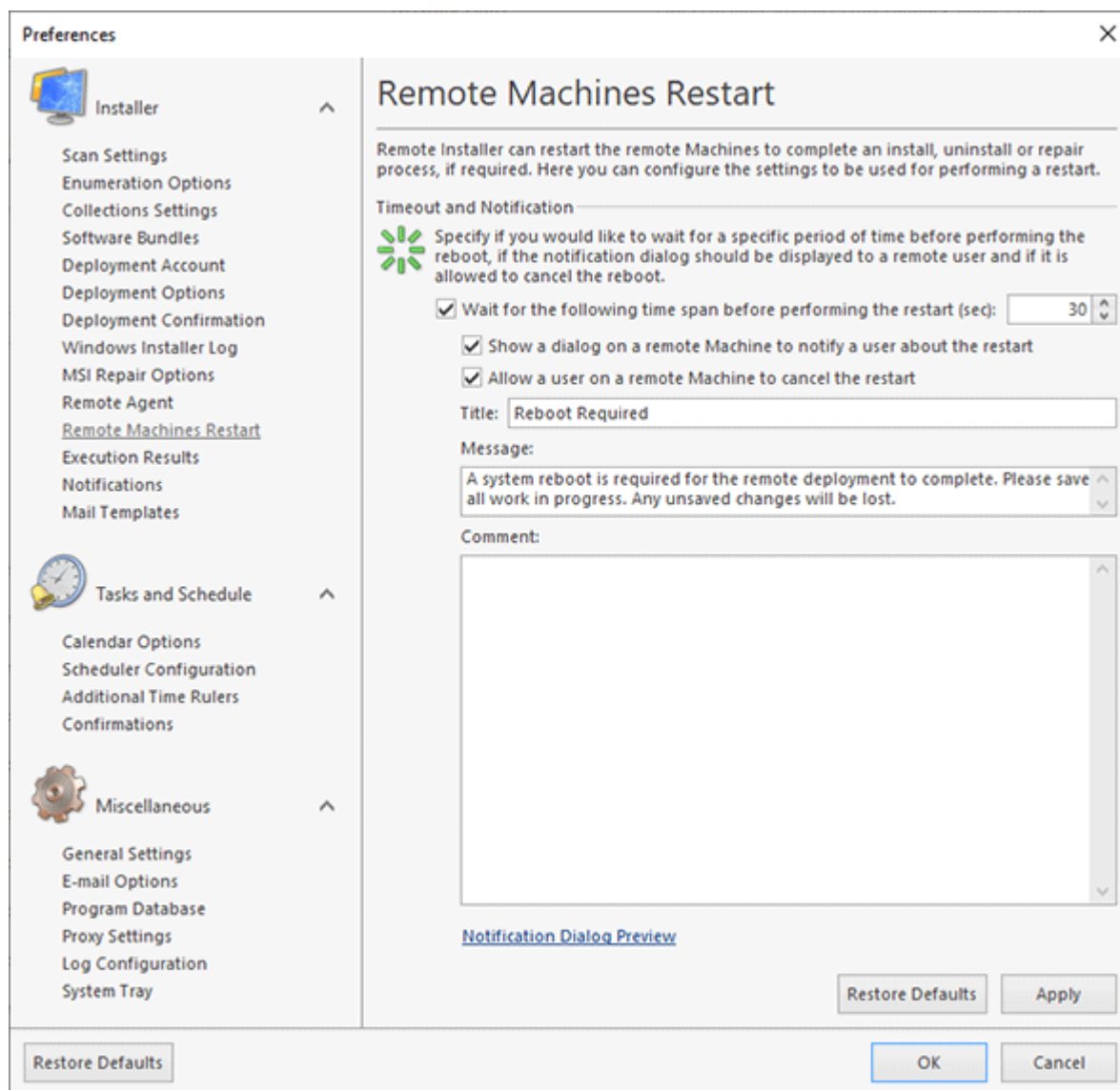
Pic 1. Configuring the remote Machines restart options

On the **Remote Machines Restart** preference page, you can specify if you would like to wait for a specific period of time before performing a reboot if a notification dialog is displayed to a remote user and if it is allowed to cancel the reboot.

For the notification dialog, you are proposed to provide a custom title & message and an additional comment to be displayed to a remote user. For the title, message and comment definitions, you can use the following placeholders that will be replaced with actual values before displaying the notification dialog on a remote Machine:

%SENDER%   the name of the user that initiated the remote deployment procedure.

%TIME%   the current time.

%DATE%   the current date.

%DATETIME%   the current date and time.

You can preview the dialog to be displayed to a remote user by following the **Notification Dialog Preview** link at the bottom of the preference page.

The **Remote Machines Restart** preference page is used to configure the common timeout and notification options that are applied to all deployment operations by default, but you can override those options for each operation within the deployment configuration wizard.

Execution Results Page

Remote Installer stores the results of each remote operation execution, so that you can review the execution statistics for each operation in future. Storing all operation execution results over a lengthy period of time can significantly increase the size of the program database and decrease the program performance. To avoid performance issues, it is recommended to optimize the program database by deleting the results that are no longer needed. Since it is not always easy for the user to remember all the tasks that have ever been executed and remove the results that are no longer needed, the program comes with a built-in option to automatically remove execution results based on their age.

To configure the conditions for automatic removal, open the program preferences using the **Preferences** button from the **Application Menu** and click the **Execution Results** link in the navigation bar on the left of the **Preferences** dialog within the Remote Installer group **Pic 1**.
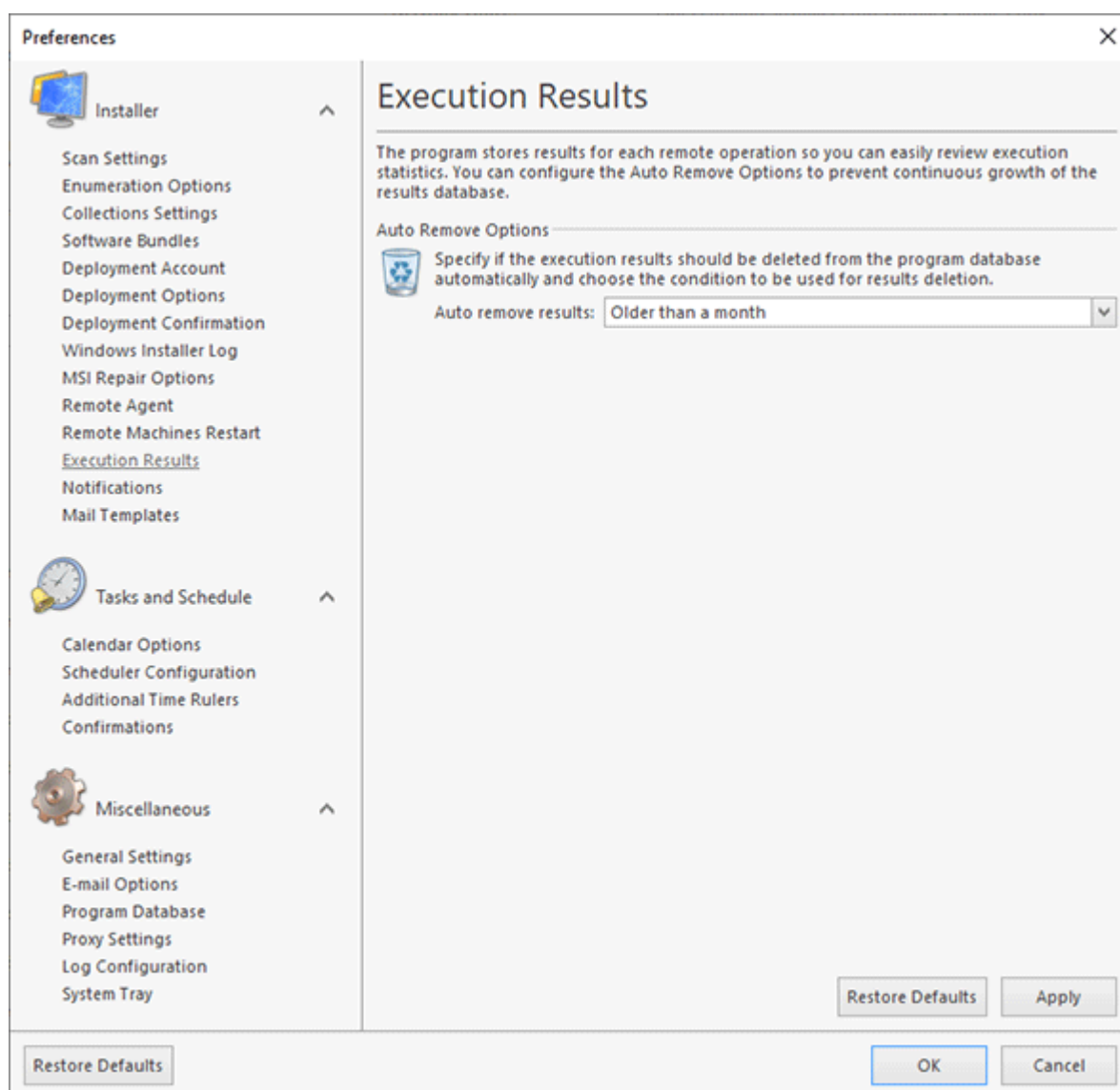

Pic 1. Configuring automatic removal of execution results

You can choose the condition to trigger automatic removal of the execution results within the **Auto Remove Options** group. It is possible to remove the results that are older than one day, one week, one month, one year, or choose Remote Installer not to remove the results automatically. In any case, you can always remove the results that are no longer needed directly from the **Execution Results** view.

Notifications Page

Another useful feature of Remote Installer is that it can send notification e-mails to a preset e-mail address and show balloon tips on occurrence of certain events. This feature can be configured on the **Notifications** preference page **Pic 1**, and the messages are sent using the **E-mail Options** specified. The e-mail message subject and body used for creating notification messages can be configured on the **Mail Templates** preferences page. The placeholders that can be used in the templates are described in the **Notification E-mails** part of this guide.
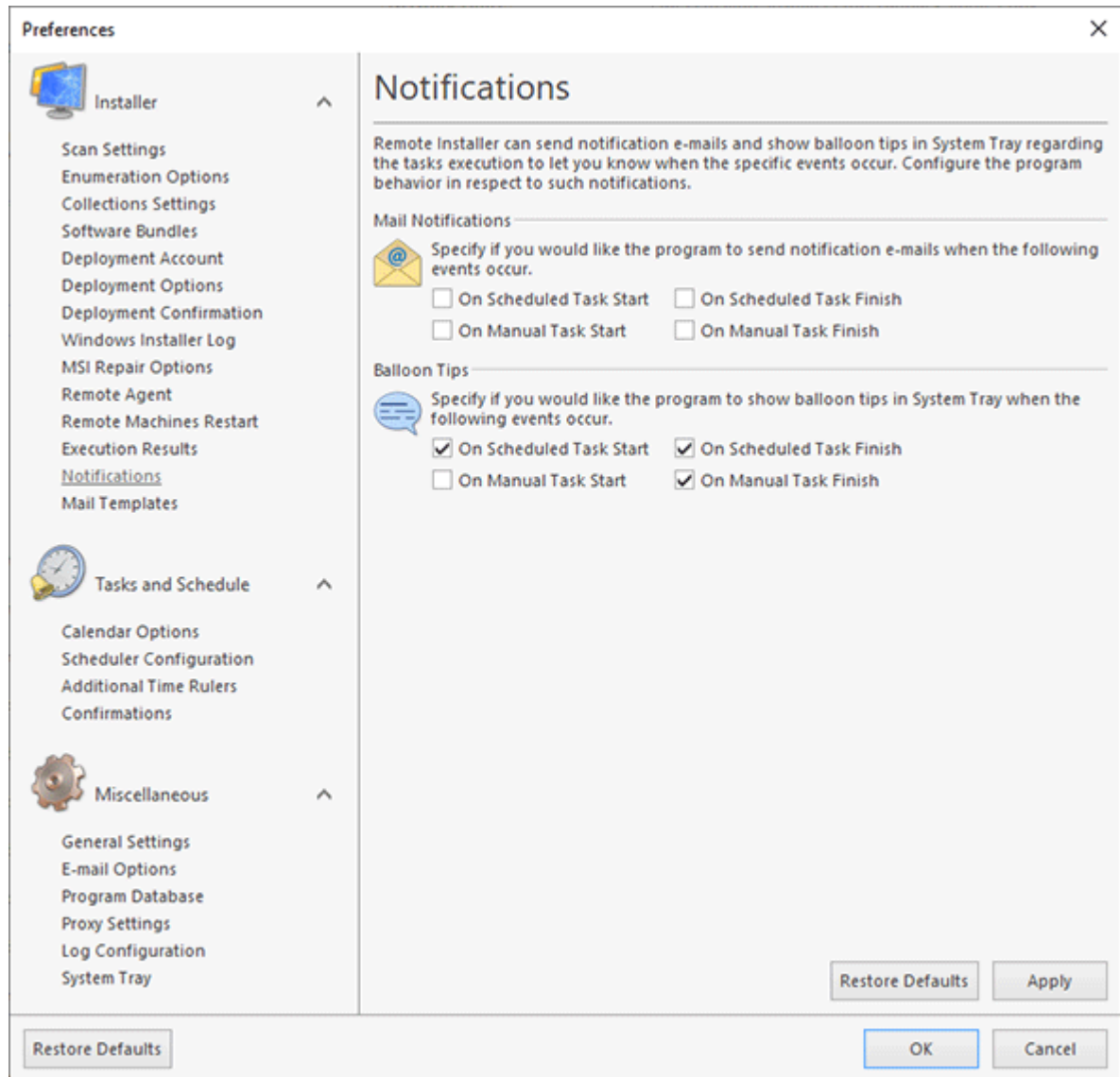
Pic 1. Configuring notifications

To access the notifications configuration page, click the **Preferences** button in the **Application Menu** and switch to the **Notifications** preference page using the appropriate link in the navigation bar on the left of the **Preferences** dialog within the **Remote Installer** group. On the page that opens, you can check the events you want to send notification messages for.

Balloon tips are displayed and sounds are played to notify of each client connected to the server. When disabling such notifications, you disable them only for the client you use at the moment.

Events may occur during two types of task execution: scheduled task execution and manual task execution. Scheduled task execution means that the task execution is initiated by the Remote Installer scheduling engine. Task execution via the **Run** feature is considered to be manual task execution.

Mail Templates

Mail Templates are used to form e-mail messages sent by Remote Installer. They can be configured on the **Mail Templates** preference page **Pic 1**. To access this page, click the **Preferences** button from the **Application Menu** and select the appropriate link in the navigation bar on the left of the **Preferences** dialog within the **Remote Installer** group.
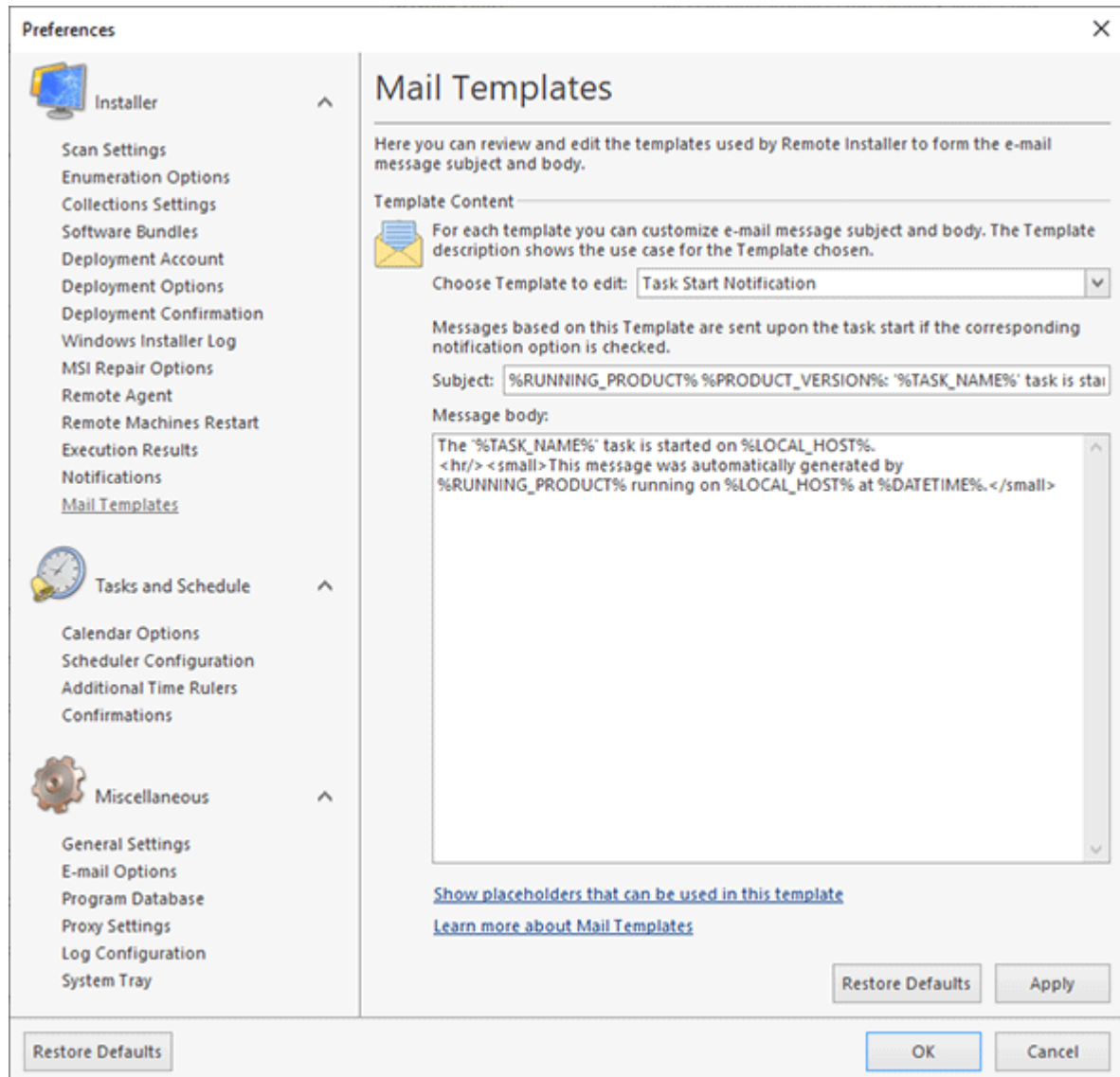
Pic 1. Configuring Mail Templates

On this page, you are offered to choose a template that you want to review and edit. The template description shows you the use case of the chosen template, and if there are placeholders available for this template, a link to a detailed placeholders description is shown under the template description.

Tasks and Schedule Part

The **Tasks and Schedule** part of the program preferences should be used to configure the Remote Installer features targeted at executing tasks and scheduling their execution, as well as configuring the **Tasks and Schedule** view. To open the **Preferences** dialog, click the **Preferences** button available from the **Application Menu**. Feel free to configure the available settings to meet your needs best.

Calendar Options Page

The **Calendar Options** are designed to make the process of interaction with the **Tasks and Schedule** functionality more convenient for you and enable you to use the whole range of the **Tasks and Schedule** features to solve your tasks in a more efficient way. To configure the **Calendar Options**, click the **Preferences** button from the **Application Menu** and switch to the **Calendar Options** preference page using the corresponding link in the navigation bar on the left in the **Preferences** dialog within the **Tasks and Schedule** group Pic 1.
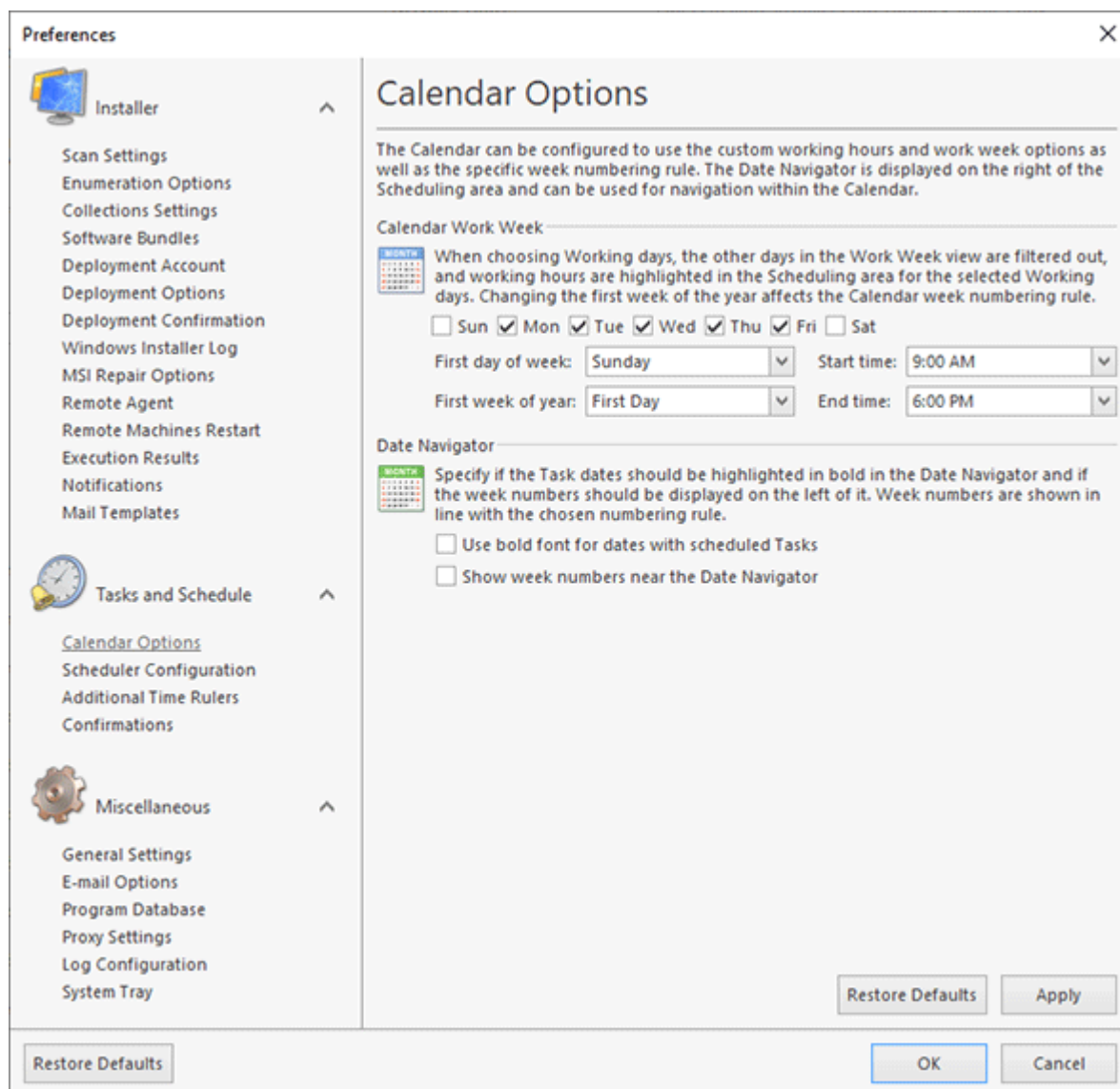
Pic 1. Configuring the Calendar Options.

After you have chosen the working days, the other days in the **Work Week** view are filtered out, and the working hours are highlighted in the **Scheduling** area for the selected working days. Changing the first week of the year affects the **Date Navigator** week numbering rule.

On this page, it is also possible to define if the **Task** execution dates should be highlighted in bold in the **Date Navigator** and if the week numbers should be displayed on the left, next to each week.

Scheduler Configuration Page

The **Scheduler Configuration** preference page contains settings for representation of the **Scheduling** area. To change the **Scheduler Configuration**, click the **Preferences** button from the **Application Menu** and switch to the **Scheduler Configuration** preference page using the corresponding link in the navigation bar on the left in the **Preferences** dialog within the **Tasks and Schedule** group `Pic  1`.
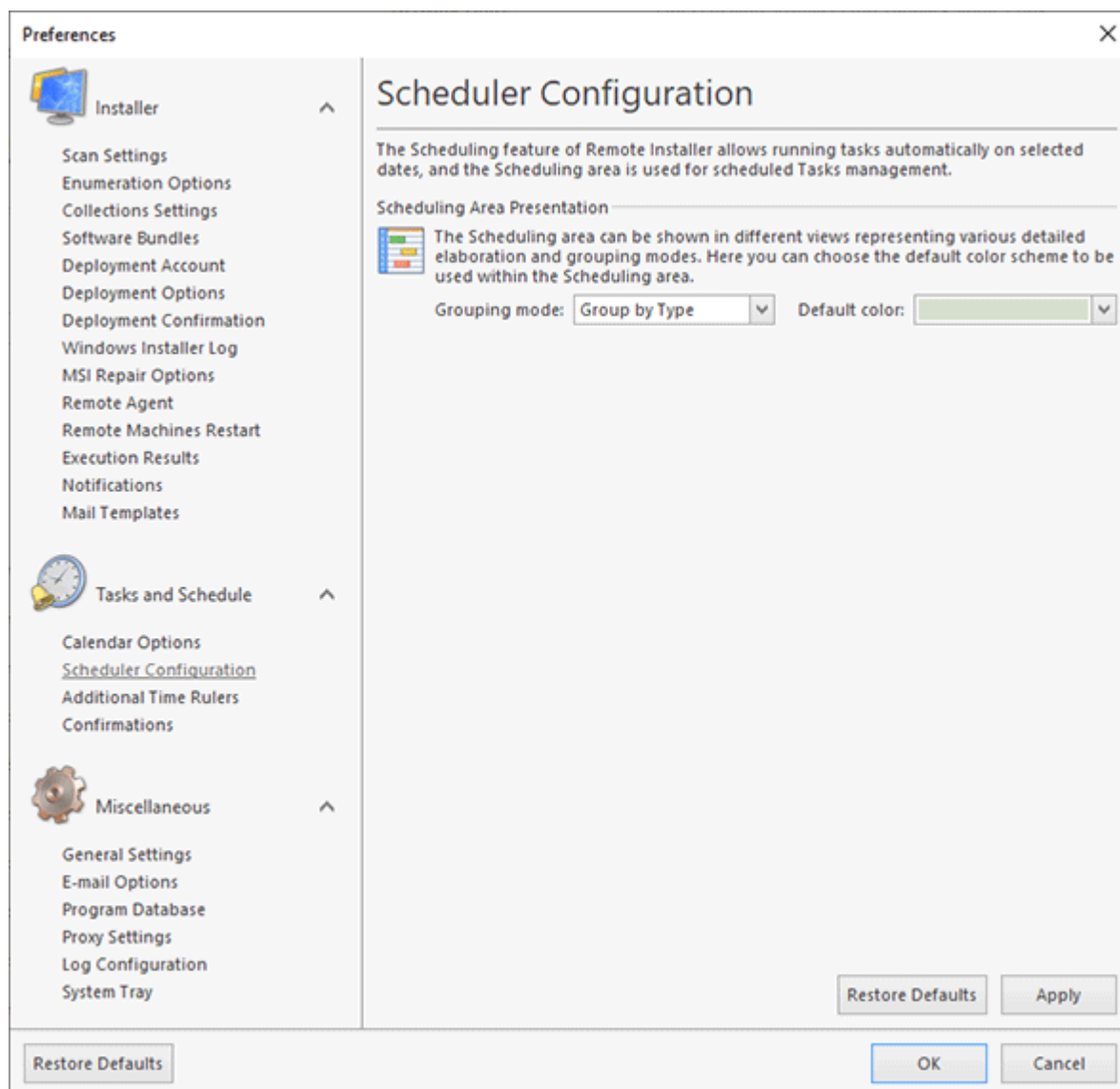
Pic 1. Changing the Scheduler Configuration

The **Scheduling Area Presentation** group of the **Scheduler Configuration** preference page should be used to change the default color scheme used by the **Scheduling** area. Also, it is possible to change the grouping settings used for the **Scheduling** area. You can group tasks either by type or by date by choosing the required option from the **Grouping mode** drop-down list.

Additional Time Rulers Page

Additional time rulers can be displayed for the **Scheduling** area when it is in the **Day View** or **Work Week View** view modes allowing you to see the time of the time zones that differ from the one defined in the underlying operating system. The **Additional Time Rulers** preference page should be used to enable those rulers and configure the time zones to be used. To configure additional time rulers, click the **Preferences** button from the **Application Menu** and switch to the **Additional Time Rulers** preference page using the corresponding link in the navigation bar on the left in the **Preferences** dialog within the **Tasks and Schedule** group Pic 1 .
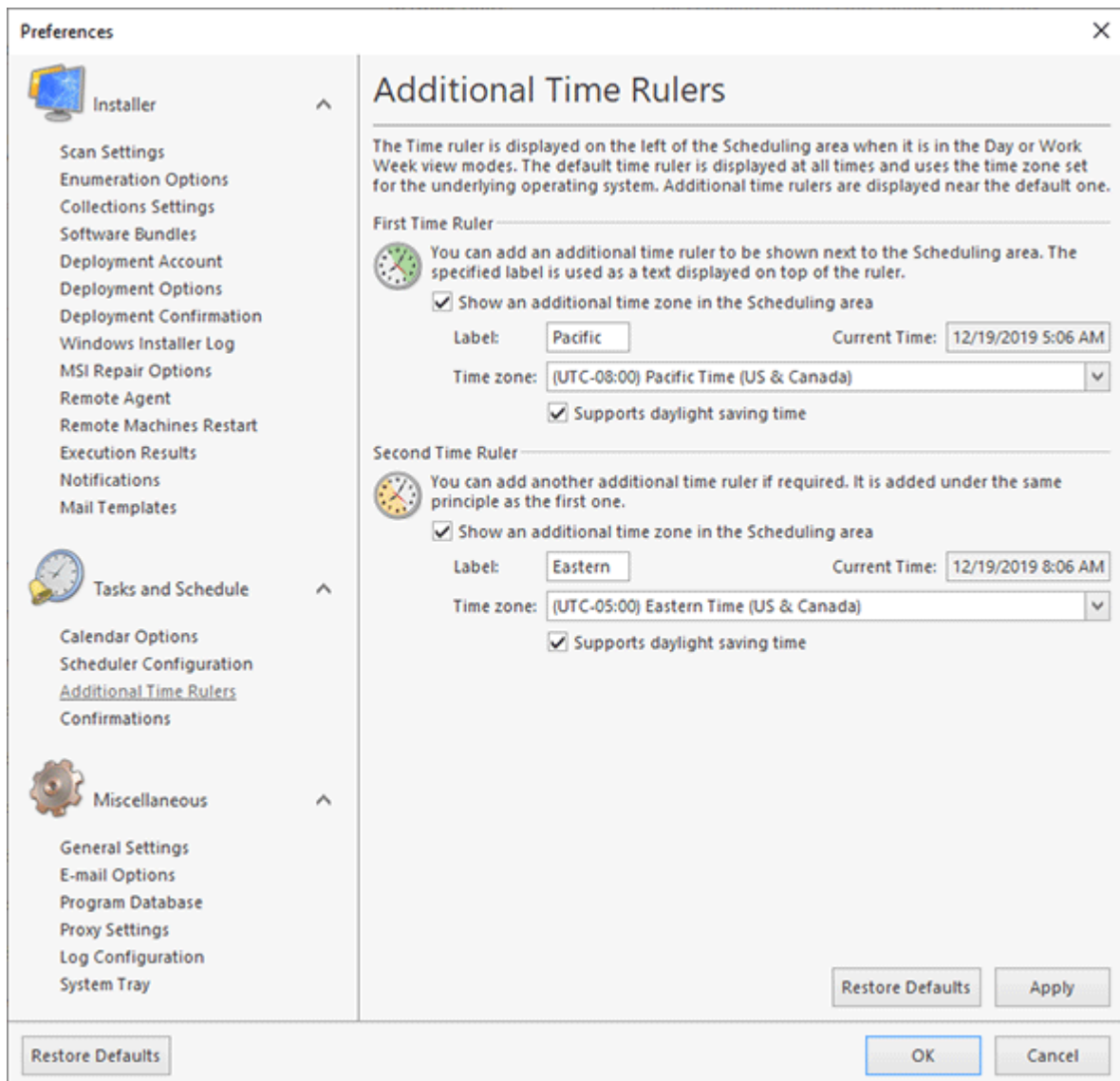
Pic 1. Configuring additional time rulers

You can add up to two additional time rulers to the **Scheduling** area.

Example
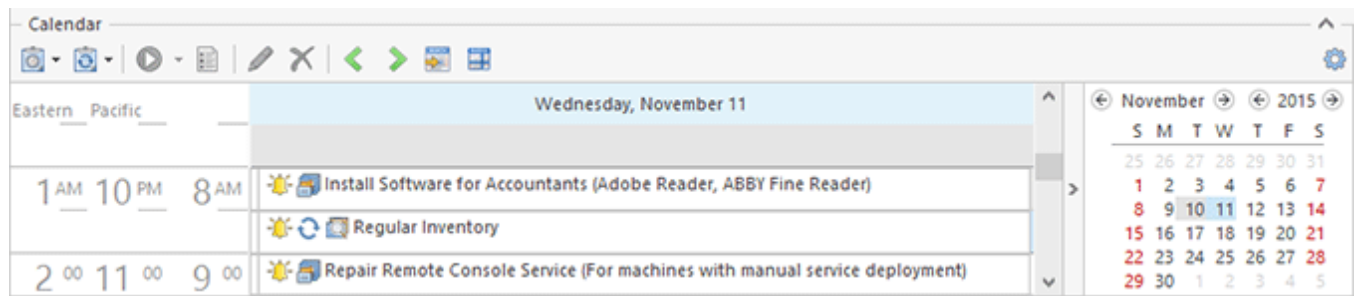
To add a time ruler, you should first enable it by using the **Show additional time zone in Scheduling area** option, then specify the time zone to be used and if the daylight saving time adjustment should be applied to it. You can also provide a label for each additional time ruler to help you identify it.

The **Current Time** field displays the current time in the selected time zone.

Confirmations Page

In some cases, the user's decision may be required for Remote Installer to perform further steps, so that the user could get an anticipated result. However, if your decision is always the same, you may not want to see the confirmation requests again and again. The **Confirmations** preference page `Pic 1` was designed to help you set your preferences.

To access this page, click the **Preferences** button from the **Application Menu** and select the appropriate link in the navigation bar on the left of the **Preferences** dialog within the **Tasks and Schedule** group.
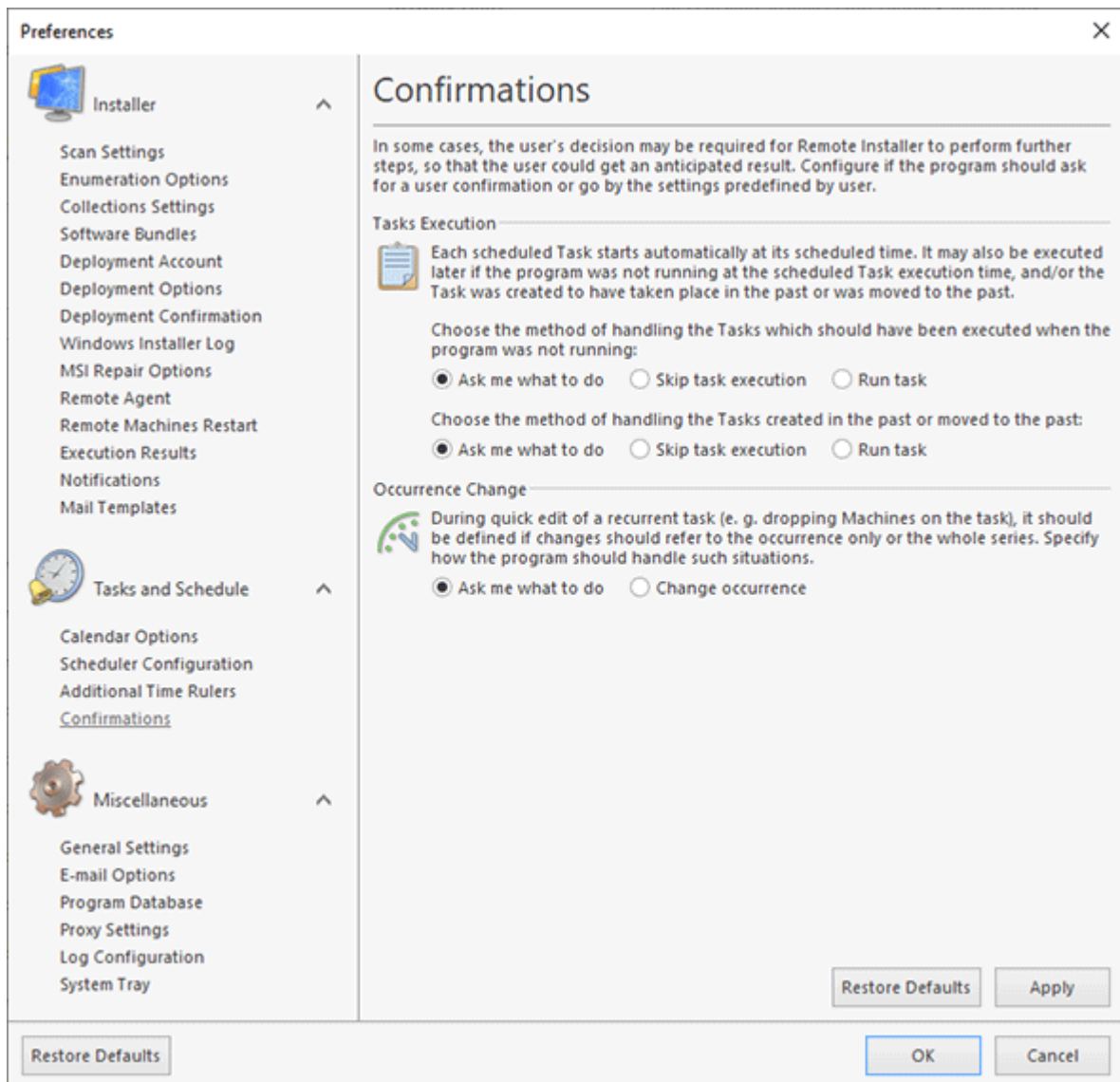
Pic 1. Configuring confirmations

The confirmations are divided into two groups: the **Task Execution** and **Occurrence Change** confirmations. Let us take a closer look at each group.

The **Task Execution** confirmations are required to let the scheduling engine know if it should execute the tasks that should have been executed when the program was not running (such tasks are called Past Tasks), and if it should execute the tasks moved to the past or created for the past. By default, the **Confirm Execution** dialog `Pic 2` is displayed on the screen to let you decide what to do with each task.
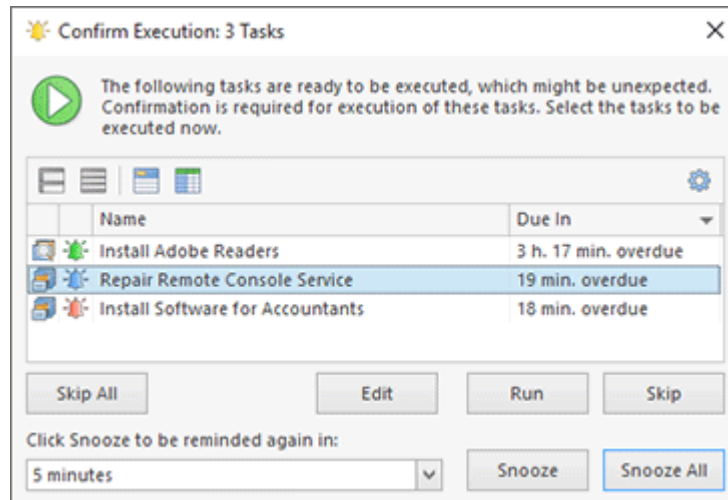
Pic 2. Confirm Execution dialog

However, if your decision is always the same, you can simply choose the **Skip task execution** or **Run Task** option on the **Confirmations** preference page to always perform the selected action with respect to Past Tasks. The same approach is used for the tasks created for the past and moved to the past.

The **Occurrence Change** confirmation `Pic 3` is displayed during a quick edit of a recurrent task (e.g. dropping Machines on some occurrence). For that confirmation, it should be defined if the changes should refer to the particular occurrence only or the whole series.
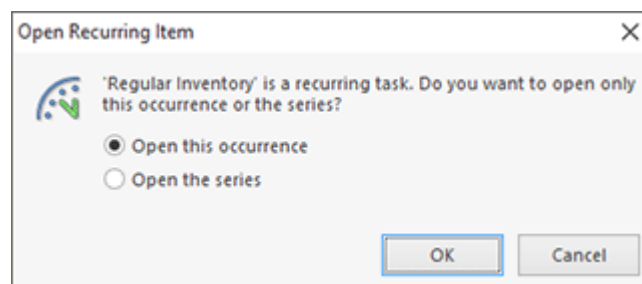
Pic 3. Change Recurring Item confirmation dialog

If you want to always change the occurrence, simply choose the **Change occurrence** option on this page.

Miscellaneous Part

The **Miscellaneous** part of the program preferences should be used to configure the common Remote Installer options, such as the program behavior in respect to the System Tray, the proxy settings to be used to connect to the Internet, etc. To open the **Preferences** dialog, click the **Preferences** button available from the **Application Menu**. Configure the available settings to best suit your needs.

General Settings

Remote Installer can automatically check for updates for you to always have the latest version of the program and can be added to the Windows startup. You can configure this features from the **General Settings** preference page. To open this page, click the **Preferences** button from the **Application Menu** and select the **General Settings** link in the navigation bar on the left in the **Preferences** dialog within the **Miscellaneous** group `Pic 1`.
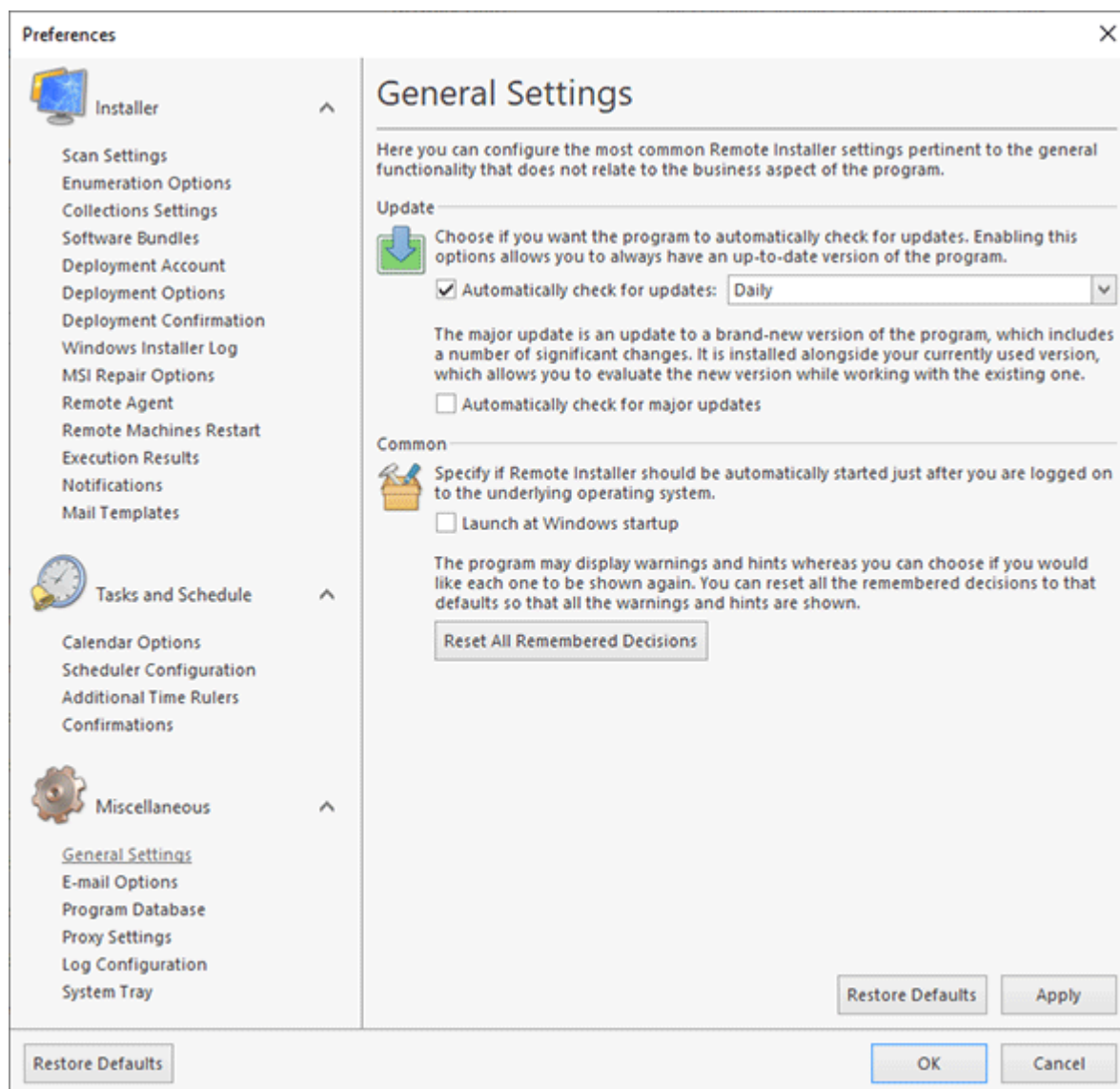

Pic 1. Configuring general settings

Remote Installer can check for updates automatically every day or once a week. To enable an automatic checking for updates, check the **Automatically check for updates** option and choose the checking frequency between **Daily** and **Weekly**. You can also define if the program should check for major updates by changing the **Automatically check for major updates** option value.

> ℹ️ If you use a proxy server to connect to the Internet and the required proxy settings are not provided, an automatic check for updates will not take place.

If you want Remote Installer to be automatically started right after you are logged on to the underlying operating system, enable the **Launch at Windows startup** option.

The application may display warnings and hints, and you can choose if you would like each one to be shown again. On this page, you can reset all the remembered decisions to the defaults so that all the warnings and hints are shown. Use the **Reset All Remembered Decisions** button to this purpose.

E-mail Options

Remote Installer can send notification e-mails only after your mailbox settings have been configured properly. To perform the mailbox configuration click the Preferences button from the **Application Menu** and select the **E-mail Options** link in the navigation bar on the left in the **Preferences** dialog within the **Miscellaneous** group.
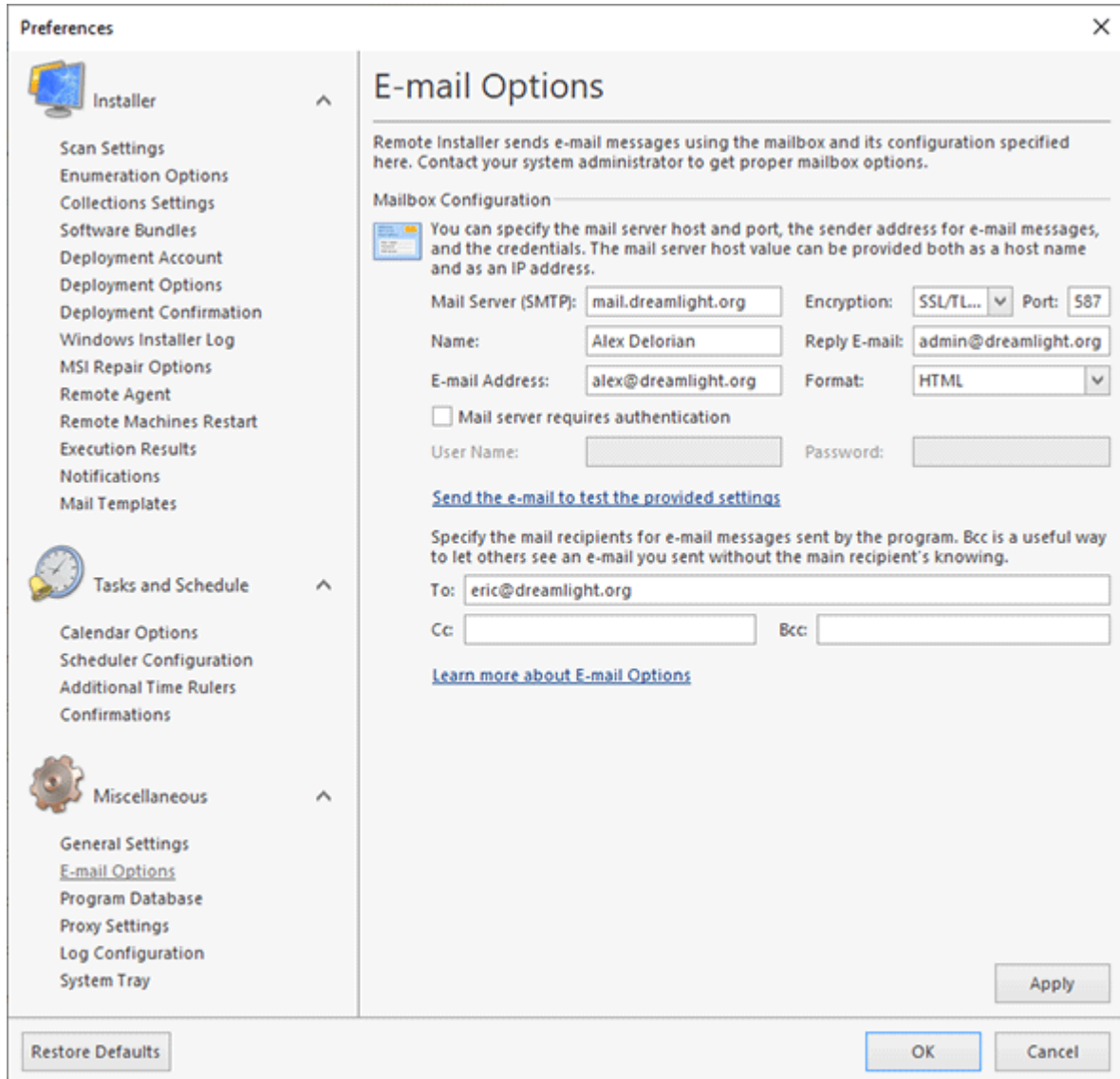
Pic 1. Configuring a mailbox

You should specify the mail server host, the encryption type the port to be used for connection to the mail server, the e-mail address to send e-mail messages from, the e-mail message format and the credentials to be used to access the mail server.

> Although Remote Installer supports both explicit and implicit SSL/TLS encryption, it is strongly recommended that explicit SSL/TLS be preferred due to its optimized performance and security. Thus, implicit SSL/TLS should only be used for compatibility with servers that do not support explicit SSL/TLS.

NTLM authentication can be used (i.e. connection to the mail server is established using the credentials of the currently logged on user) by enabling the Use NTLM authentication option. The **Mail Server (SMPT)** value can be provided both as an IP address and as a host name `Pic 1`.

> Remote Installer supports mail servers that run using SMTP. A mail server configuration may be quite complex. Contact your system administrator to get proper configuration details to be used for accessing your mailbox.

You can send a test e-mail to check the settings provided using an appropriate hyperlink. In the next section, it is described how the settings test works and how you can tell if the e-mail options are configured properly.

How does the test work?

After you have configured the e-mail options you can send a test e-mail to check the mail server settings. A test message is generated and sent to the specified recipients and the e-mail address specified in the **E-mail Address** field. If you and the other recipients receive the message, it is assumed that the mail options are configured properly, and there will be no problems with sending notification e-mail messages.

Program Database

The program database is a storage used by Remote Installer to keep all business data and logged events. The program database configuration can be changed on the **Program Database** preference page. To access this page, click the **Preferences** button from the **Application Menu** and select the corresponding link in the navigation bar on the left of the **Preferences** dialog within the **Miscellaneous** group.

By default, Remote Installer uses the SQLite database management system to store the data within the user's application data folder. Using this concept as default, allows you to start using the program without performing additional data storage configuration. The program also supports the Microsoft SQL Server database management system. You can choose the database engine to be used within the **Database Management System** drop-down list.
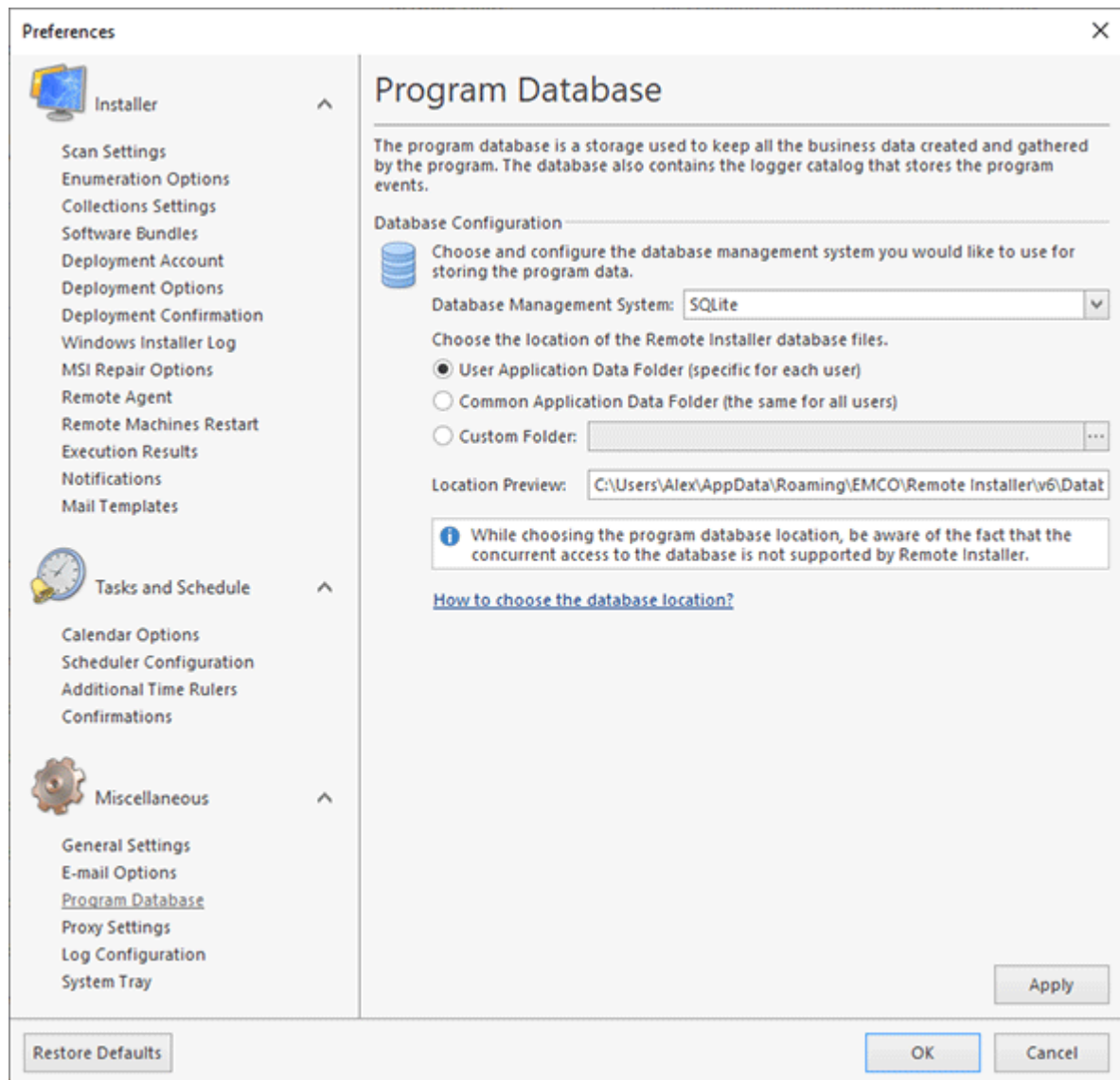
Pic 1. Configuring the SQLite database

For the SQLite database, you can choose a new database location . You can either choose the predefined database location or provide a path to the database files manually. While choosing the program database location, be aware of the fact that the concurrent access to the database is not supported by Remote Installer. Please also take into account that full access to the database location folder should be granted to the program for it to operate correctly.

Although the SQLite database is preconfigured and set by default, it is recommended to use the Microsoft SQL Server database if you are going to operate in an enterprise environment, because it provides you with a much higher performance and reliability `Pic 2`.
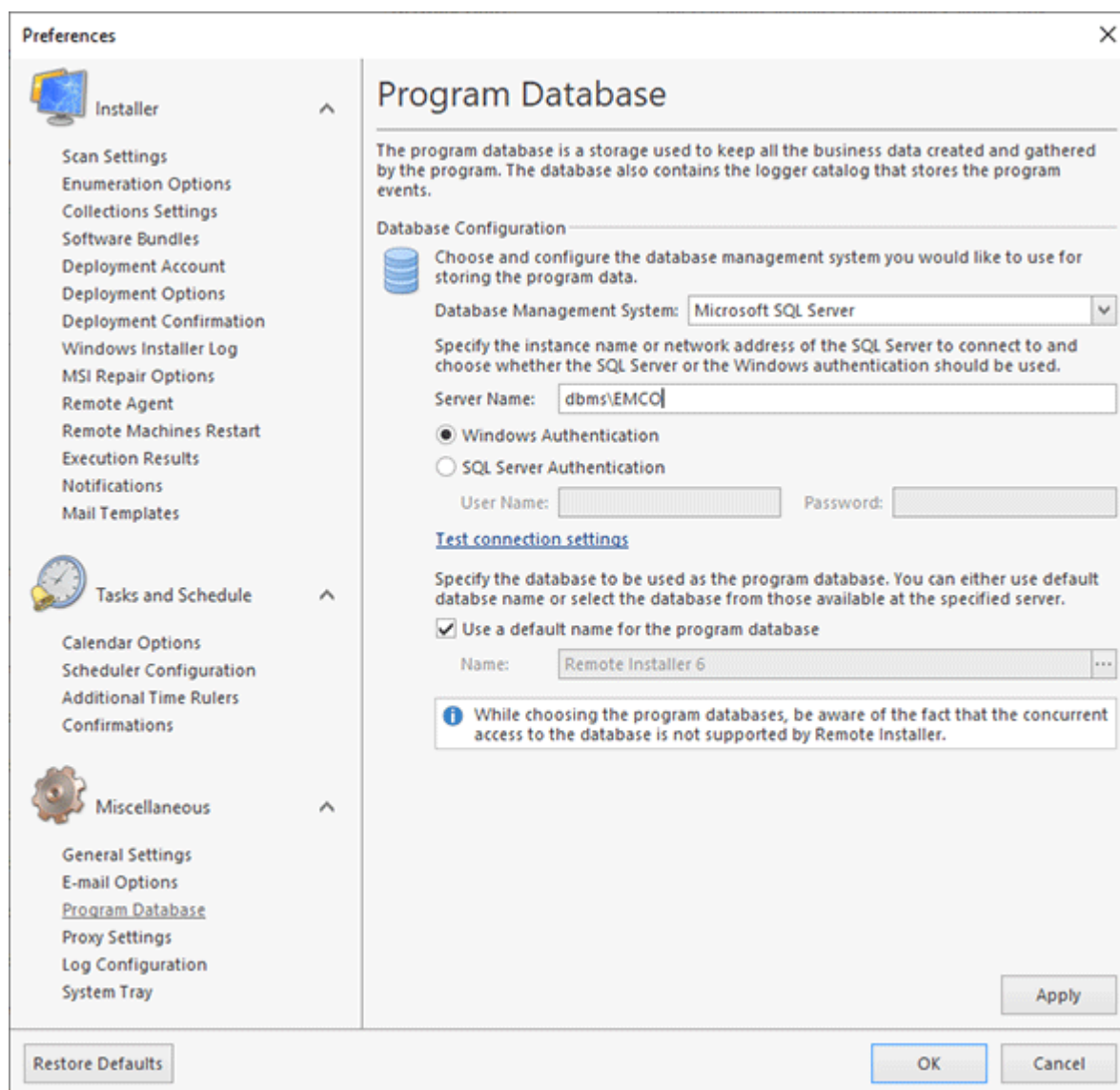
Pic 2. Configuring the Microsoft SQL Server database

While choosing the Microsoft SQL Server database to be used by Remote Installer, you should provide the database server name to the **Server Name** field and configure the authentication options. You can choose between **Windows Authentication** and **SQL Server Authentication**. It is strongly recommended by Microsoft that integrated security via **Windows Authentication** be preferred. As soon as you have completed this configuration step, you can press the **Test Connection Settings** hyperlink to check if the database server is accessible.

The next step is choosing the database to store data in. You can either use the default configuration or define the required database manually. When choosing a database from those available on the server, it is also possible to create a new one with default settings having provided its name.

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When you apply changes to the program database configuration, the program checks the provided settings for validity. If the specified database is empty, you are proposed to fill it with the data available in the database currently used by the program. This feature allows you to switch to the Microsoft SQL Server database from the SQLite database you are using easily and at any time. Besides, if the program restart is required for the applied changes to take effect, you are immediately prompted to restart.

Proxy Settings

Remote Installer requires an Internet connection to support the **Live Update** and **Feedback** features. Therefore, if a proxy server has to be used to connect to the Internet, it should be configured on the **Proxy Settings** preference page [Pic 1]. To access this page, click the **Preferences** button from the **Application Menu** and select the appropriate link in the navigation bar on the left in the **Preferences** dialog within the **Miscellaneous** group.
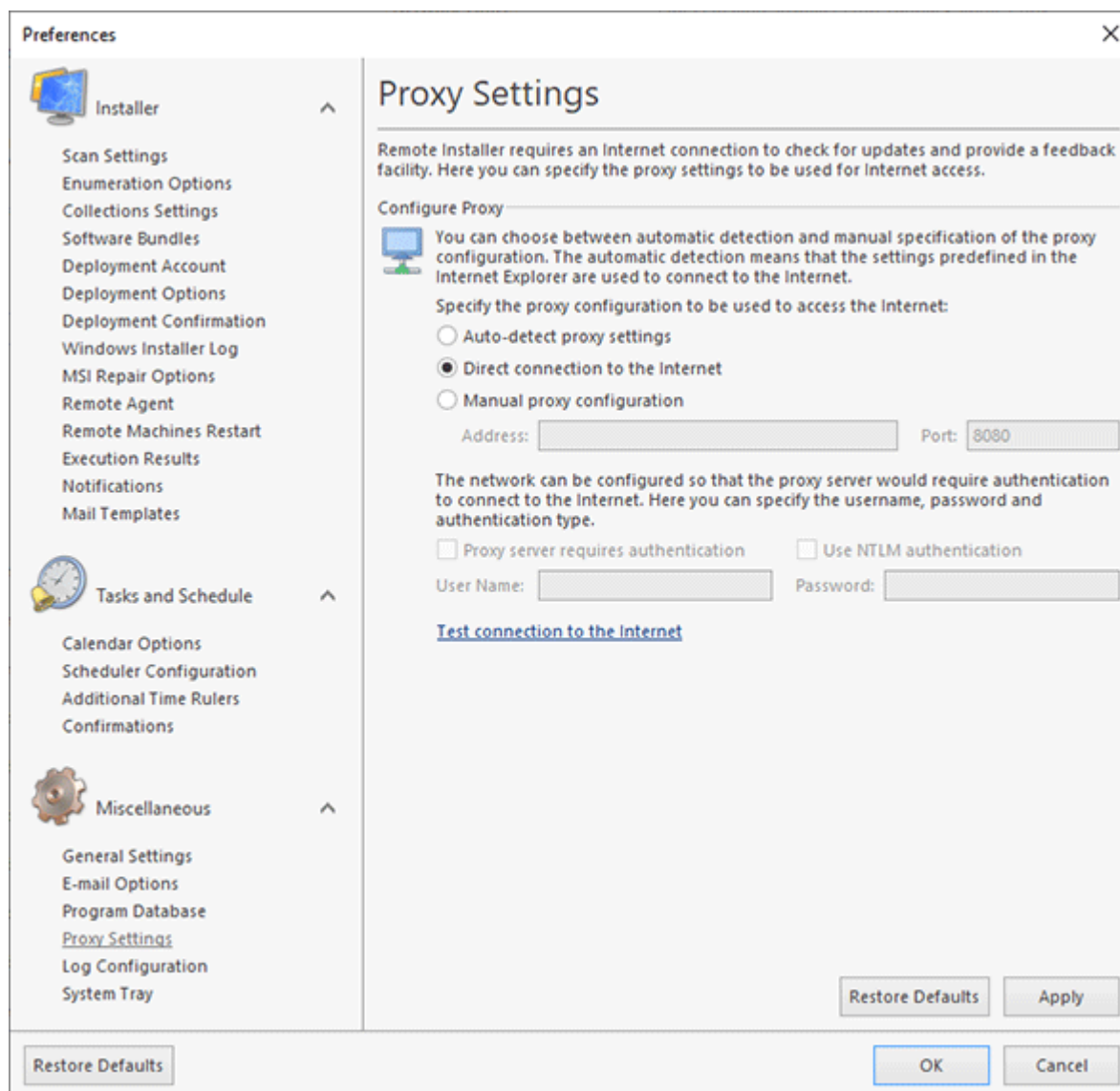
Pic 1. Proxy Settings

On this page, you may choose among three variants of the proxy configuration to be used by the program. If **Auto-detect proxy settings** is chosen, the program uses the settings predefined in the **Internet Explorer**. If Remote Installer does not have to use a proxy server to connect to the Internet, the **Direct connection to the Internet** option should be chosen. The **Manual proxy configuration** option allows you to provide the proxy server address and port manually.

Both for the automatic detection and manual configuration, it is possible to specify if the proxy server requires authentication and what credentials should be used to connect to the proxy server. For the manual configuration, an NTLM authentication can be used (i.e. connection to the proxy server takes place using the credentials of the user currently logged on) by enabling the **Use NTLM authentication** option.

After the proxy settings have been configured, it is possible to test if the Internet connection is available by using the corresponding hyperlink on the bottom of the settings page.

Log Configuration

To configure the **Log** behavior, click the Preferences button from the **Application Menu** and switch to the Log Configuration preference page using the appropriate link in the navigation bar on the left in the Preferences dialog within the Miscellaneous group. Here, you can specify the logged events auto-removal options `Pic 1`.
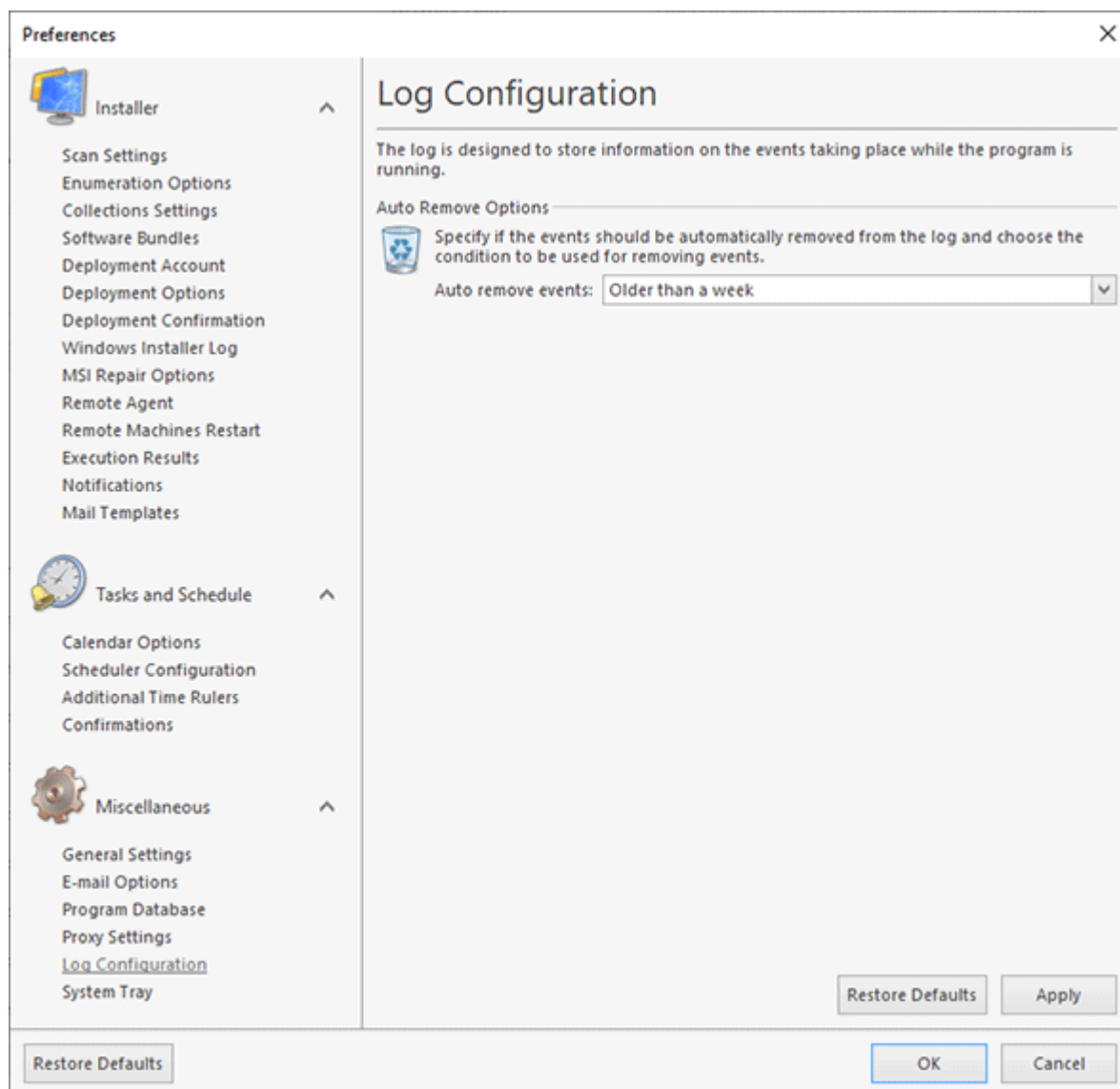
Pic 1. The log configuration

Remote Installer gives you an option of an automatical removal of logged events from its database. The maximum event age can be specified by the **Auto remove events** option. Choose **Do not remove events** if you do not want any events to be removed automatically. Anyway, it is always possible to remove logged events by clearing log manually.

System Tray

The Tray icon provides a quick access to some of the program functionality and serves to notify you of any significant changes taking place while the program is running when the main program window is minimized or hidden behind other windows. To configure the program behavior regarding the **System Tray**, click the **Preferences** button from the **Application Menu** and switch to the **System Tray** preference page using the corresponding link on the navigation bar to the left in the **Preferences** dialog within the **Miscellaneous** group `Pic 1`.
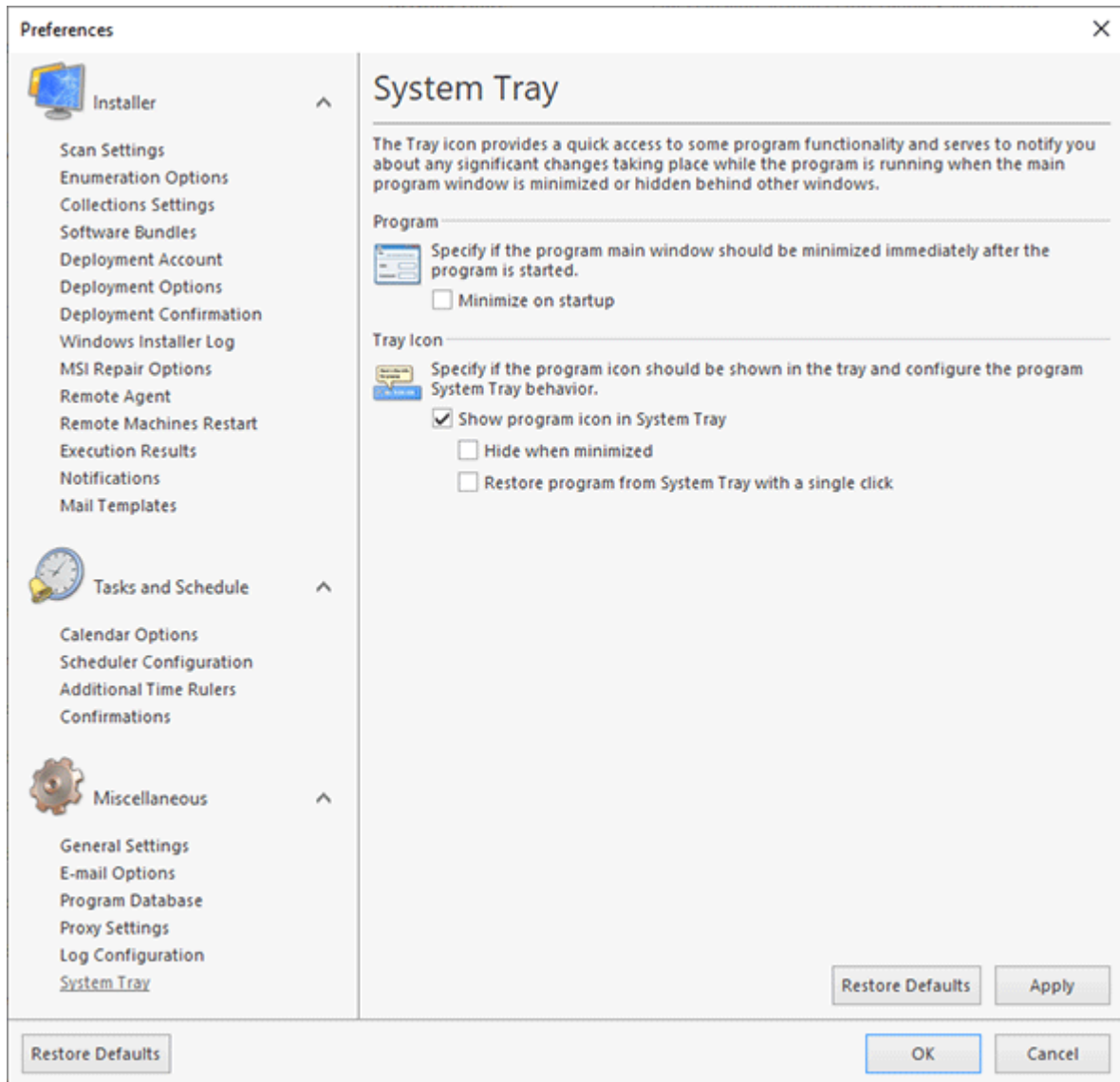
Pic 1. Configuring the System Tray behavior

If you prefer the program main window to be minimized during the program start, you should check the **Minimize on startup** option.

The **Show program icon in System Tray** option allows you to choose if the program icon should be shown in the tray. If it is enabled, you may also specify if the program should be hidden from the Windows taskbar when it is minimized to System Tray, and if the main window should be restored from the tray with a single or double click.

Chapter 10: Evaluation of the Program

EMCO Remote Installer is a shareware product but you can use it as long as the evaluation period does not expire to get a closer introduction to its main features. To activate the program you should enter the License Code EMCO Software provides you with after you have purchased the license for using EMCO Remote Installer. This chapter will cover the particularities of the evaluation mode, tell you how and where you can get the license code and how you can request the extended evaluation. Read this chapter carefully to face no difficulties during the EMCO Remote Installer evaluation.

Evaluation Wizard

As long as the EMCO Remote Installer is not activated on each program startup the **Evaluation Wizard** `Pic 1` is displayed on the screen, showing you the information about the evaluation process and providing with quick links for the program activation, purchase and extended evaluation request.
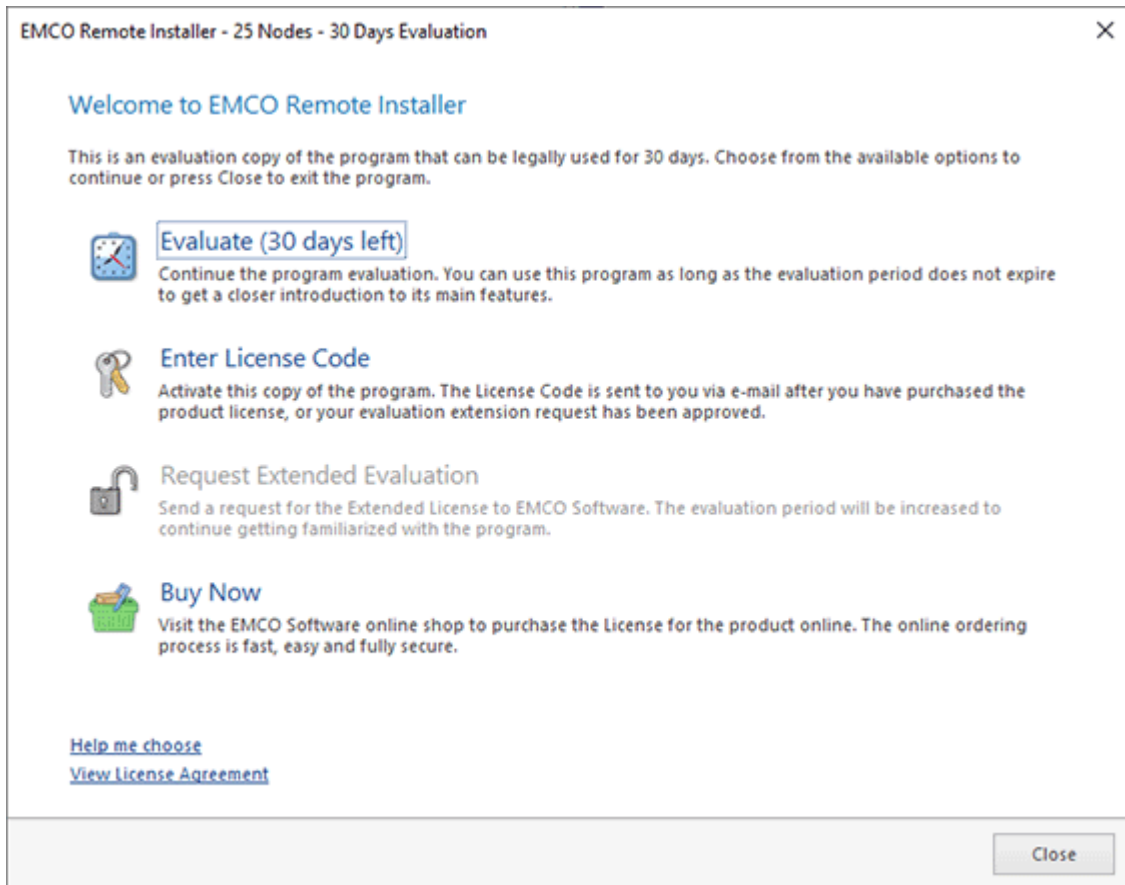
Pic 1. The EMCO Remote Installer Evaluation Wizard welcome page

The welcome page of the **Evaluation Wizard** allows you to choose between four options to continue. Those are **Evaluate**, **Enter License Code**, **Request extended evaluation** and **Buy now**. Optionally you can press **Exit** button to close the program. In this section we will help you to choose the option that will best fit your needs.

The **Evaluate** option shows you the time left until the evaluation period expires. You should choose this option to continue the evaluation process – the wizard will be closed and you can start working with Remote Installer. You can use the program as long as the evaluation period does not expire to get a closer introduction to its main features.

It you have already purchased the license for using the EMCO Remote Installer you should choose the **Enter License Code** option to activate the program. This options also should be chosen if the extended evaluation request has been approved by EMCO Software and you have been provided with the Extended License. If you are having problems with finding the License Code refer to the Where can I get my License Code? section of this document. After choosing the **Enter License Code** option the program activation page is displayed on the screen `Pic 2`.
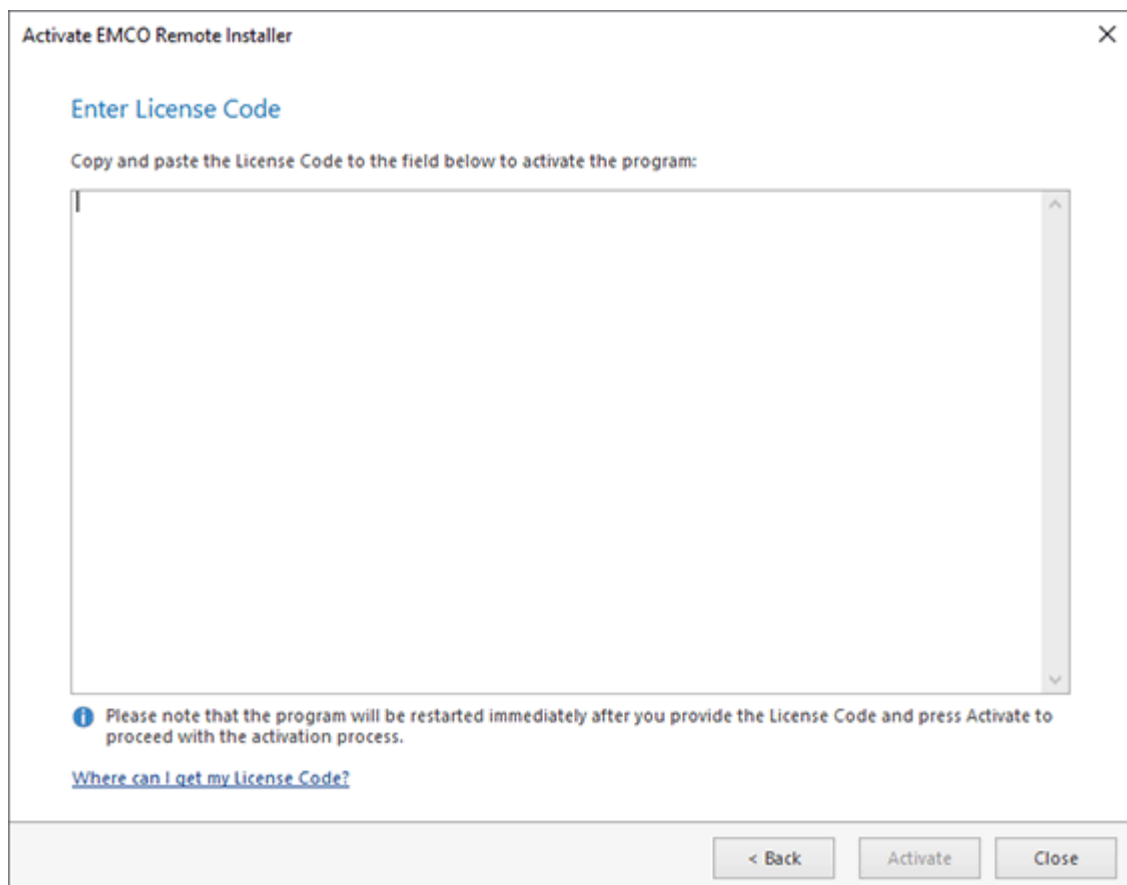
Pic 2. Activating EMCO Remote Installer

To activate EMCO Remote Installer copy and paste the License Code to the input field on this page and press **Activate** - the program will be restarted to activate.

If the evaluation period has expired and you are not sure you have fully introduced yourself to EMCO Remote Installer main features you can once request the extended evaluation. As soon as the request is processed by EMCO Software you are provided with the Extended License to prolong the evaluation period. To request the Extended License you should choose the **Request extended evaluation** option. After choosing this option the request form will appear on the screen `Pic 3`.

Pic 3. Requesting an extended evaluation
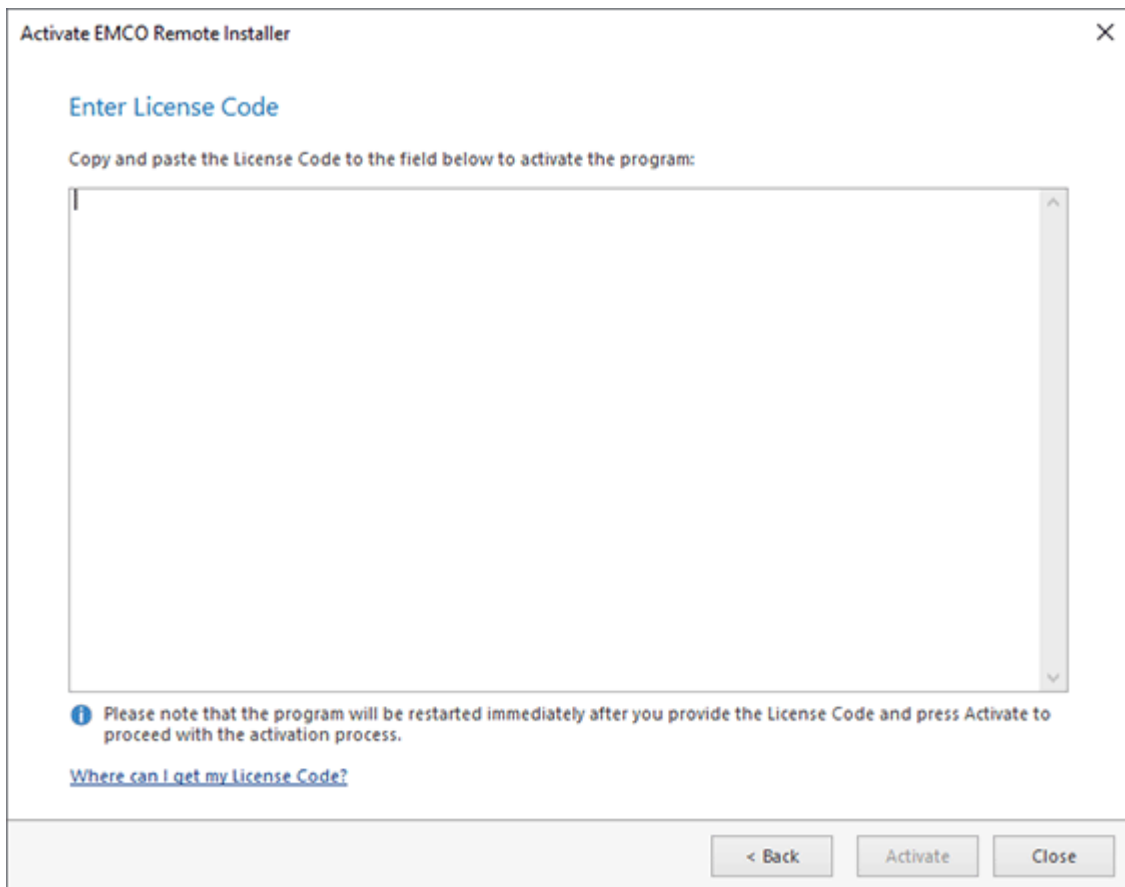
To request the Extended License fill the fields on the request form regarding the recommendations and press the **Send Request** button.

The **Evaluation Wizard** also provides you with the short cut action that allows you to visit EMCO Software web store. To use this feature choose the **Buy Now** option. The on-line ordering process is fast, easy, and fully secure.

Where can I get my License Code?

After you have purchased the license for using EMCO Remote Installer our experts will generate the License Code and send it to you via e-mail to the address you have specified during the purchasing process. You are supposed to receive two e-mail messages – one with the License Code written in the message body and one with the attached text file (license.txt), containing the license. It is your choice to use any message because both License Codes are identical.

To activate the program the License Code received via e-mail should be copied and pasted to the program activation form **Pic 1**. This form can be reached using the **Enter License Code** button from the **Information** group on the Ribbon bar or by choosing the appropriate option in the **Evaluation Wizard**.
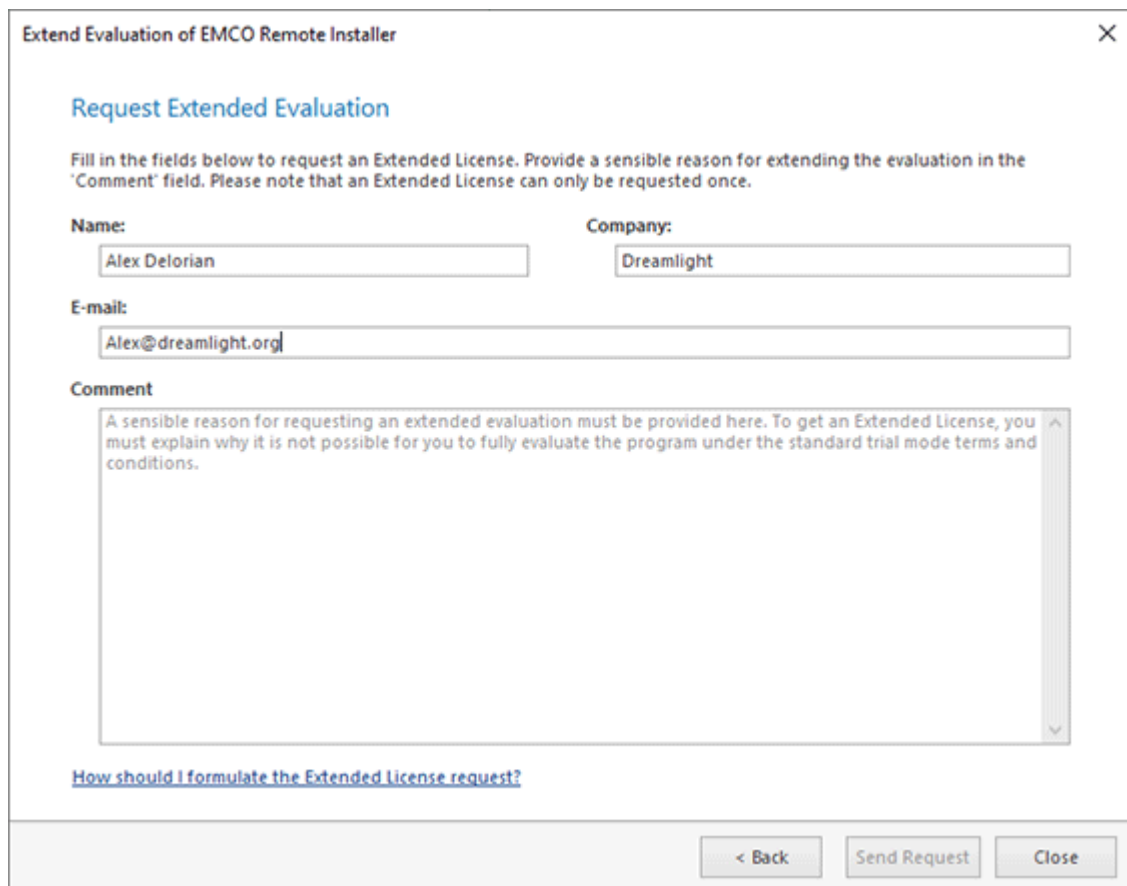
Pic 1. Activating EMCO Remote Installer

To activate Remote Installer, copy and paste the License Code to the input field and press **Activate** - the program will be restarted to activate.

How should I formulate the Extended License request?

The Extended License is used to prolong the evaluation period to get a closer look at EMCO Remote Installer. This feature can be reached by choosing the appropriate option in the **Evaluation Wizard**. Here we'll give you the recommendations on filling the **Request extended evaluation** form `Pic 1`.

Pic 1. The Request Extended Evaluation form

In the **Request extended evaluation** form you should obligatory specify your name in the **Name** field, company name in the **Company** field and your e-mail address in the **E-mail** field.

> ⓘ Though the **Comment** field is optional it is strongly recommended to use this field for providing EMCO Software with the reason of requesting the Extended License. Please notice that EMCO Software reserves the right to decline the request without providing a requester with any explanations.

If the extended license request is approved by EMCO Software experts you'll receive the License Code to the e-mail address specified.

Chapter 11: Program Updates

EMCO Software cares for versatile needs of the users of EMCO programs and fully understands their wish to have the most up-to-date software installed on there PCs. That is why we provide you with an easy update feature. You do not need to browse the Internet again and again to find out if any updates are available – Remote Installer will do this work for you. Checking for updates can be performed both manually and automatically. This chapter describes the Live Update process for the current major version of the program and the Major Update feature which allows you to get a brand new version of Remote Installer quickly and easily.

Live Update

Remote Installer can be easily updated with just a few clicks. The update process is performed via an Internet connection using preconfigured proxy settings.

Check for Updates icon	**Check for Updates** The **Check for Updates** button from the **Update** Ribbon group should be used to check for new versions of Remote Installer.

> Remote Installer can check for updates automatically. You can configure the program behavior regarding the automatic check for updates on the **General Settings** preference page.

To check for updates, click the **Check for Updates** button from the **Application Menu** or from the **Update** group of the **Program** Ribbon page. Remote Installer will check if any updates are available and if so, the **Live Update Wizard** `Pic 1` will appear on the screen.

Pic 1. The Live Update Wizard welcome page

The **Live Update Wizard** will introduce you to the changes made in the newer version and guide you through the whole updating process while showing the detailed download progress. When the download is finished, the program will be restarted to perform the actual update.

Major Update

Along with the **Live Update** feature, Remote Installer comes with a built-in function of automatic checking for Major Updates. The Major Update is an update to a brand-new version of Remote Installer that includes a number of significant changes.

You can install this version alongside the version you are using now. It will import the settings and data from your current version, so that you won't need to configure the new version in the same way you configured the one you are using at the moment. Such parallel installation allows you to inspect the new version and compare it with the previous one in your environment with your data and settings.

> ℹ The Major Update is installed alongside the version you currently use. The existing version is not automatically uninstalled from your PC, and you can continue using the program version you are accustomed to while having a look at the brand new one.

If the program detects availability of a Major Update, the **Major Update Wizard** Pic 1 will appear on the screen.

Pic 1. The Major Update Wizard welcome page

The **Major Update Wizard** will introduce you to the features available in the brand new version of Remote Installer and guide you through the update process. The message displayed at the bottom of the welcome page will let you know if the current License allows you to install and use the Major Update for free. When the download is finished, the new version installation will be run automatically.

Chapter 12: Main Program Actions

The main program actions are all gathered on the **Ribbon** bar and are grouped by the functions performed into pages. There are static pages, that are always displayed, and categories, containing contextual pages, that are displayed only when a specific context is active. As for the static pages, they are the following: **Home**, **Deployment**, **Software**, **View** and **Program**. These static pages are filled up with the pages available in the **Inventory Tools**, **Software Bundles Tools**, **Network Tools**, **Tasks and Schedule Tools** and **Execution Results Tools** categories.

This chapter is to describe the actions available on all the pages and can be used as a glossary while working with Remote Installer.

Home Ribbon Page

The **Home** Ribbon page contains all main actions related to the primary features of Remote Installer. This chapter will describe each group and the actions available in it for the **Home** page.

Software Ribbon Group

The **Software** Ribbon group should be used for managing installations on remote Machines and scanning remote Machines for software.

Deploy Software ▾	**Deploy Software** The **Deploy Software** button can be used to perform either quick installation or advanced remote deployment of software to the selected remote Machines.
Scan Software ▾	**Scan Software** The **Scan Software** button should be used to retrieve information on programs and updates installed on remote Machines.

Network Ribbon Group

The **Network** Ribbon group contains actions intended for filling the program network structure with Machines.

Enumerate Machines	**Enumerate Machines** The **Enumerate Machines** button should be used to display the **Enumerate Machines** wizard, which can help you with adding Machines to the program for further processing.
Scan Network	**Scan Network** The **Scan Network** button should be used to scan the entire network or specific Groups for Machines and add them to the program for further processing.
Add IP Range	**Add IP Range** The **Add IP Range** button should be used to add Machines to the program by scanning a specific range of IP addresses.

	Add Machine
Add Machine	The **Add Machine** button should be used to add a single Machine to a specific Group for further processing.

New Ribbon Group

The **New** Ribbon group contains the actions for creating new business objects within Remote Installer.

Bundle	**Bundle** The **Bundle** button should be used to create a new **Bundle** and add it to the **Software Bundles** repository.
Bundle from Template	**Bundle from Template** The **Bundle** from Template button allows you to create a **Bundle** from an already defined or new template.
Bundle Group	**Bundle Group** The **Bundle** Group button should be used to create a new **Bundle** Group and add it to the **Software Bundles** repository.
Collection	**Collection** The **Collection** button should be used to create a new Collection to group static Machines and Queries to fetch Machines dynamically.
Scheduled Task	**Scheduled Task** The **Scheduled Task** button should be used to create and schedule a new Task.

Deployment Ribbon Page

The **Deployment** Ribbon page contains actions for performing regular deployment and smart uninstall and repair.

Software Ribbon Group

The **Software** Ribbon group contains actions for executing generic remote deployment operations. The glyph of this group is used to open the **Deployment Options** preference page.

	Quick Install
Quick Install	The **Quick Install** button should be used to install software to the selected remote Machines by simply choosing the installation without providing any additional package configuration.

Deploy Software

The **Deploy Software** button allows you to execute software deployment.

Uninstall and Repair Ribbon Group

The **Uninstall and Repair** Ribbon group contains actions for executing inventory-based uninstall and repair of software.

Quick Uninstall

The **Quick Uninstall** button should be used to uninstall the products selected in the remote Machines' inventory from the respective Machines without any additional package configuration.

Quick Repair

The **Quick Repair** button should be used to repair the products selected in the remote Machines' inventory on the respective Machines without any additional package configuration.

Smart Uninstall and Repair

The **Smart Uninstall and Repair** button allows you to execute a smart uninstall or repair of software.

Bundles Ribbon Group

The **Bundles** Ribbon group contains actions for executing install, uninstall and repair of **Siftwar Bundles**.

Install

The **Install** button can be used to install the selected **Software Bundles** to remote Machines.

Uninstall

The **Uninstall** button can be used to uninstall the selected **Software Bundles** from remote Machines.

Repair

The **Repair** button can be used to repair the selected **Software Bundles** on remote Machines.

New Ribbon Group

The New Ribbon group contains actions for creating and scheduling Deploy Software and Smart Uninstall and Repair tasks for performing remote deployment on schedule.

Scheduled Task

The **Scheduled Task** button should be used to create and schedule a new task for performing deployment to remote Machines. You can choose between the Deploy Software and Smart Deployment tasks.

Software Ribbon Page

The **Software** Ribbon page contains the actions for retrieving information on programs and updates installed on remote Machines, software inventory management and analysis. This topic will describe each group and the actions available in it for the **Inventory** page.

Scan Ribbon Group

The **Scan** Ribbon group contains the actions for retrieving information on programs and updates installed on remote Machines.

Quick Scan

The **Quick Scan** button allows you to execute software scan for the selected Machines and Collections. The inventory snapshot is created with an auto-generated comment.

Scan Software

The **Scan Software** button should be used to retrieve information on programs and updates installed on remote Machines with an ability to define snapshot properties and a scope of Machines to be inventoried.

Inventory Ribbon Group

The **Inventory** Ribbon group contains the action for reviewing and managing software inventory.

Software Inventory

The **Software Inventory** button should be used to review the software inventory for the selected Machines.

Inventory Snapshots

The **Inventory Snapshots** button should be used to review the available inventory snapshots for the selected Machines.
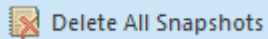
	Delete All Snapshots
	The **Delete All Snapshots** button should be used to delete all software inventory snapshots for the selected Machines.

New Ribbon Group

The **New** Ribbon group can be used to schedule new tasks for retrieving software inventory from remote Machines.
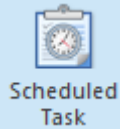
	Scheduled Task
	The **Scheduled Task** button should be used to create and schedule a new task for retrieving information on installed programs and updates from remote Machines.

View Ribbon Page

The **View** Ribbon page is used to control the program representation, such as the currently applied skin, visible views and their layout.

Layout Ribbon Group

The **Layout** Ribbon group should be used for a workspace layout management.
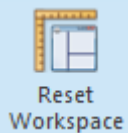
	Reset Workspace
	The **Reset Workspace** action should be used to restore the default windows', views' and dock panels' layout.

Show Ribbon Group

The **Show** Ribbon group should be used for managing the currently visible Remote Installer views.

☑ Welcome	**Welcome** Shows or hides the **Welcome Screen**. The **Welcome Screen** is designed to help you start working with Remote Installer.
☑ Software Inventory	**Software Inventory** Shows or hides the **Software Inventory** view. The **Software Inventory** view displays the most relevant list of programs and updates installed on remote Machines.
☑ Inventory Snapshots	**Inventory Snapshots** Shows or hides the **Inventory Snapshots** view. The **Inventory Snapshots** view displays all available snapshots for a specific set of Machines with an ability of snapshots comparison.

☑ Software Bundles	**Software Bundles** Shows or hides the **Software Bundles** view. The **Software Bundles** view displays the bundles repository. Each bundle represents a product including the steps required to install, repair and uninstall it.
☑ Tasks and Schedule	**Tasks and Schedule** Shows or hides the **Tasks and Schedule** view. The **Tasks and Schedule** view allows you to create and schedule predefined tasks for operating remote Machines.
☑ Network	**Network** Shows or hides the **Network** view. The **Network** view shows information on the entire pool of remote Machines introduced to Remote Installer. It consists of the Machines discovered during the network scan and Collections.
☑ Credentials	**Credentials** Shows or hides the **Credentials** view. The **Credentials** view allows you to provide the credentials to be used by the program to access Machines (while performing remote operations) and Active Directory domains (while fetching Machines from the network environment).
☑ Execution Results	**Execution Results** Shows or hides the **Execution Results** view. The **Execution Results** view shows the results of business operations on remote Machines.
☑ Log	**Log** Shows or hides the **Log** view. The **Log** view shows information on the events taking place during the program execution.
☑ All Machines	**All Machines** Shows or hides the **All Machines** view. The **All Machines** view shows the Machines available all over the network.
☑ Operations	**Operations** Shows or hides the **Operations** view. The **Operations** view shows detailed progress of each operation currently performed and allows canceling some or all running operations.

Skins Ribbon Group

The **Skins** Ribbon group provides you with an option of quick changing of the program skins.
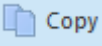
Skin Chooser

The **Skin Chooser** is a drop-down button that should be used to select the skin from the available skins to be applied to the program. The currently active skin is the highlighted one.

Program Ribbon Page

The **Program** Ribbon page contains service actions that are not connected to the business area of the program.

Clipboard Ribbon Group

The **Clipboard** Ribbon group contains the actions to copy/move objects to the clipboard and paste data from the clipboard.

Paste	**Paste** The **Paste** button should be used to add the objects that are currently available from the clipboard to a selected location in the currently focused view.
Cut	**Cut** The **Cut** button should be used to put the selected objects from the currently focused view to the clipboard and remove them from the source after pasting them to the destination.
Copy	**Copy** The **Copy** button allows you to put the selected objects from the currently focused view to the clipboard to be copied to the destination when pasting.

Update Ribbon Group

The **Update** Ribbon group is responsible for the product updates function. The glyph of this group opens the **General Settings** preference page enabling you to configure the auto-update options.

Check for Updates	**Check for Updates** The **Check for Updates** button should be used to check for new versions of Remote Installer.

Feedback Ribbon Group

You can use the **Feedback** Ribbon group to send EMCO Software a request for a new feature you are missing in Remote Installer or to report on problems you faced while working with the program.

Suggest a Feature	**Suggest a Feature** The **Suggest a Feature** button should be used to suggest a functionality you would like to see in the next versions of Remote Installer.
Report a Problem	**Report a Problem** The **Report a Problem** button should be used for reporting the problem you faced while working with Remote Installer.

Information Ribbon Group

The **Information** Ribbon group has a range of useful actions to manage licensing issues, get help or information you may require.

Manage License	**Manage License** The **Manage License** action should be used to review the current licensing state and choose from different product licensing options.
Buy Now	**Buy Now** The **Buy Now** button is only visible if Remote Installer is not activated. It provides you with a quick access to the EMCO web store.
Contact Support	**Contact Support** The **Contact Support** button should be used to get efficient technical assistance from EMCO Software support team.
EMCO on the Web	**EMCO on the Web** The **EMCO on the Web** button provides you with a short-cut to the EMCO website.
About	**About** It opens the **About** dialog to review the Remote Installer information, licensing information and the End-User License Agreement.

Inventory Tools Category

The Inventory Tools Ribbon category is displayed when the **Software Inventory** view or the **Inventory Snapshots** view is active and contains the **Inventory** page with actions for reviewing and managing software inventory or running smart uninstall and repair.

Inventory Contextual Ribbon Page

The **Inventory** contextual Ribbon page from the **Inventory Tools** category contains the actions for reviewing and managing software inventory or running smart uninstall and repair.

Uninstall and Repair Group

The **Uninstall and Repair** Ribbon group contains the actions for performing smart uninstall and/or repair of the software packages selected in the currently active view with software inventory.

Quick Uninstall	**Quick Uninstall** The **Quick Uninstall** button should be used to uninstall the products selected in the remote Machines' inventory from those Machines without additional packages configuration.

Quick Repair

The **Quick Repair** button should be used to repair the products selected in the remote Machines' inventory on those Machines without additional packages configuration.

Smart Uninstall and Repair

The **Smart Uninstall and Repair** button should be used to uninstall or repair the products selected in the remote Machines' inventory from those Machines with an ability to define additional configuration for each smart package.

Snapshots Ribbon Group

The **Snapshots** Ribbon group contains the actions for performing software inventory snapshots comparison.

Compare

The **Compare** button allows you to compare the lists of programs and updates retrieved during different scans for software.

View Mode Ribbon Group

The **View Mode** Ribbon group contains the actions for switching the view mode within the **Software Inventory** and the **Inventory Snapshots** views.

Specific Snapshots

The **Specific Snapshots** button should be used to switch the **Inventory Snapshots** view to the mode, where the software scan results are displayed only for a specific set of Machines.

All Snapshots

The **All Snapshots** button is used to switch the **Inventory Snapshots** view to the mode, where the snapshots for all scans ever performed on any Machine are displayed.

Programs

The **Programs** button should be used to switch to the currently active view displaying software inventory to the mode where a list of installed programs is displayed.

Updates

The **Updates** button should be used to switch to the currently active view displaying software inventory to the mode where a list of installed updates is displayed.

Tasks Ribbon Group

The **Tasks** Ribbon group contains the actions for scheduling new tasks to uninstall or repair the selected software packages or add these packages to an already existing task for being uninstalled or repaired.

New Scheduled Task	The **New Scheduled Task** button should be used to create a schedule a new task to uninstall or repair the selected software packages.
Add to Task	The **Add to Task** button can be used to add the selected software packages to a **Smart Uninstall and Repair** task for being uninstalled or repaired.

Software Bundles Tools Category

The **Software Bundles Tools** Ribbon category is displayed when the **Software Bundles** view is active and contains the **Software Bundles** page with actions for bundles management and deployment.

Software Bundles Contextual Ribbon Page

The **Software Bundles** contextual Ribbon page from the **Software Bundles Tools** category contains actions for **Software Bundles** management and deployment.

New Ribbon Group

The **New** Ribbon group contains actions for creating new Bundles, **Bundle Groups** and scheduled tasks for bundles deployment.

Bundle	**Bundle** The **Bundle** button should be used to create a new **Bundle** and add it to the **Software Bundles** repository.
Bundle from Template	**Bundle from Template** The **Bundle from Template** button allows you to create a **Bundle** from an already defined or new template.
Bundle Group	**Bundle Group** The **Bundle Group** button should be used to create a new **Bundle Group** and add it to the **Software Bundles** repository.

Deployment Ribbon Groups

The **Deployment** Ribbon group contains actions for installing, uninstalling or repairing **Software Bundles** on remote Machines.

Install	**Install** The **Install** button can be used to install the selected **Software Bundles** to remote Machines.
Uninstall	**Uninstall** The **Uninstall** button can be used to uninstall the selected **Software Bundles** from remote Machines.
Repair	**Repair** The **Repair** button can be used to repair the selected **Software Bundles** on remote Machines.

Tasks Ribbon Group

The **Tasks** Ribbon group contains actions for scheduling a new deployment task based on the selected Software Bundles and for adding the selected **Software Bundles** to any existing **Deploy Software** task for install, uninstall or repair.

New Scheduled Task	**New Scheduled Task** The **New Scheduled Task** button should be used to create and schedule a new task for performing install, uninstall or repair of the selected **Software Bundles** on remote Machines.
Add to Task	**Add to Task** The **Add to Task** button allows you to add the selected **Software Bundles to Deploy Software** tasks to install, uninstall or repair such bundles in the future.

Network Tools Category

The Network Tools Ribbon category is displayed when the **Network** view or the **All Machines** view is active and contains the **Network** page with actions for filling the program network structure with Machines and for managing network objects.
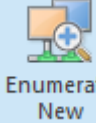
Network Contextual Ribbon Page

The **Network** contextual Ribbon page from the **Network Tools** category contains the actions for filling the program network structure with Machines and for managing network objects.

Enumeration Ribbon Group

The **Enumeration** Ribbon groups contains actions intended for filling the program network structure with Machines.

Enumerate Machines	**Enumerate Machines** The **Enumerate Machines** button should be used to display the Enumerate Machines wizard, which can help you with adding Machines to the program for further processing.
Scan Network	**Scan Network** The **Scan Network** button should be used to scan the entire network or specific Groups for Machines and to add them to the program for further processing.
Add IP Range	**Add IP Range** The **Add IP Range** button should be used to add Machines to the program by scanning a specific range of IP addresses.

Add Machine	**Add Machine** The **Add Machine** button should be used to add a single Machine to a specific Group for further processing.
Enumerate New	**Enumerate New** The **Enumerate New** button should be used to scan the selected containers for Machines keeping those not available during the enumeration process.
Enumerate	**Enumerate** The **Enumerate** button should be used to scan the selected containers for Machines removing those not available during the enumeration process.

Collections Ribbon Group

The **Collections** Ribbon group contains actions for creating Collections and Collections Snapshots; and adding Machines or Queries to existing Collections.

New	**New** The **New** button should be used to create a new Collection to group static Machines and Queries to fetch Machines dynamically.
Create Snapshot	**Create Snapshot** The **Create Snapshot** button should be used to create a snapshot from a Collection containing the currently effective set of Machines defined with this Collection.
Preview	**Preview** The **Preview** button allows you to review the currently effective set of Machines defined with the selected Collection.
Add to Collection	**Add to Collection** The **Add to Collection** button should be used to add the selected Machines and/or Machine Queries to a new or an already existing Collection.

Machines Ribbon Group

The **Machines** Ribbon group contains actions for refreshing the remote Machines data and checking their access status.

Check State	**Check State** The **Check State** button allows you to check the remote Machines state and to refresh the Machine data.

Remote Agent Ribbon Group

The **Remote Agent** Ribbon group contains actions for controlling the agent installed to remote Machines to perform remote operations.

Update	**Update** The **Update** button should be used to update the remote agent on the selected Machines.
Install	**Install** The **Install** button should be used to install the remote agent to the selected Machines.
Uninstall	**Uninstall** The **Uninstall** button can be used to remove the remote agent from the selected Machines.
Reinstall	**Reinstall** The **Reinstall** button allows you to reinstall the remote agent on the selected Machines.

Tasks and Schedule Tools Category

The **Tasks and Schedule Tools** Ribbon category is displayed when the **Tasks and Schedule** view is active. It consists of two pages: **Management** and **Presentation**. The **Management** page contains the actions for creating tasks, navigating the schedule and managing tasks' Machine Queues. The **Presentation** page is used to configure the view modes and the scheduler zoom factor.

Management Contextual Ribbon Page

The **Management** contextual Ribbon page from the **Tasks and Schedule Tools** category contains actions for managing scheduled tasks and tasks' Machine Queues and navigating within the scheduler.

New Ribbon Group

The **New** Ribbon group contains actions for creating regular and scheduled **Tasks**.

Regular Task	**Regular Task** The **Regular Task** button should be used to create a new **Task** without scheduling it.
Scheduled Task	**Scheduled Task** The **Scheduled Task** button should be used to create and schedule a new **Task**.

Recurring Task

The **Recurring Task** button should be used to create and schedule a new recurring **Task**.

Tasks Ribbon Group

The **Tasks** Ribbon group contains actions for running Tasks.

Run

The **Run** button should be used to run the selected Tasks. You can either execute the task for all Machines from the Machine Queue or only for those not processed during the latest execution due to errors.

Navigation Ribbon Group

The **Navigation** Ribbon group contains actions for navigating within the Scheduling area. The glyph of the group opens the **Calendar Options** preference page.

Backward

The **Backward** button should be used to navigate backward in the currently selected view within the **Scheduling** area.

Forward

The **Forward** button should be used to navigate forward in the currently selected view within the **Scheduling** area.

Today

The **Today** button enables you to quickly navigate to the today's date within the **Scheduling** area.

Go to Date

The **Go to Date** button should be used to navigate to a specific date within the **Scheduling** area.

Machine Queue Ribbon Group

The **Machine Queue** Ribbon group contains action for adding existing Collections to the current Machine Queue.

Link Collection

The **Link Collection** button allows you to add Collections from those defined in the program scope to the current Machine Queue.

Presentation Contextual Ribbon Page

The **Presentation** contextual Ribbon page from the **Tasks and Schedule Tools** category contains actions for switching between different view modes within the **Scheduling** area and for changing the level of details for the scheduler.

View Mode Ribbon Group

The **View Mode** Ribbon group contains actions for switching the view mode within the **Scheduling** area. The glyph of the group opens the **Scheduler Configuration** preference page.

Day	**Day** The **Day** button should be used to switch the **Scheduling** area to the **Day View**. If the **Day View** is already chosen, this button is highlighted.
Work Week	**Work Week** The **Work Week** button should be used to switch the **Scheduling** area to the **Work Week View**. If the **Work Week** View is already chosen, this button is highlighted.
Week	**Week** The **Week** button should be used to switch the **Scheduling** area to the **Week View**. If the **Week View** is already chosen, this button is highlighted.
Month	**Month** The **Month** button should be used to switch the **Scheduling** area to the **Month View**. If the **Month** View is already chosen, this button is highlighted.
Timeline	**Timeline** The **Timeline** button should be used to switch the **Scheduling** area to the **Timeline View**. If the **Timeline** View is already chosen, this button is highlighted.

Scale Ribbon Group

The **Scale** Ribbon group contains actions for configuring the level of details for the **Scheduling** area. The glyph of the group opens the **Additional Time Rulers** preference page.

Zoom In	**Zoom In** The **Zoom In** button should be used to increase the level of details for the currently active view within the **Scheduling** area.
Zoom Out	**Zoom Out** The **Zoom Out** button should be used to decrease the level of details for the currently active view within the **Scheduling** area.

Time Scales

The **Time Scales** button allows you to choose the scales displayed within the **Timeline** View of the **Scheduling** area.

Execution Results Tools Category

The **Execution Results Tools** Ribbon category is displayed when the **Execution Results** view is active. It contains the **Execution Results** page that is used to configure the scope of data displayed within the **Execution Results** view.

Execution Results Contextual Ribbon Page

The **Execution Results** contextual Ribbon page from the **Execution Results Tools** category contains actions for configuring the **Execution Results** view.

View Mode Ribbon Group

The **View Mode** Ribbon group contains action for switching the view mode within the **Execution Results** view.

All Runs

The **All Runs** button switches the **Execution Results** view to the mode in which runs for both tasks and individual operations from the specified date range are displayed.

Task Runs

The **Task Runs** button switches the **Execution Results** view to the mode in which only runs of tasks for the specified date range are displayed.

Individual Runs

The **Individual Runs** button switches the **Execution Results** view to the mode in which only execution results of individual operations for the specified date range are displayed.

Link with Selection

The **Link with Selection** button should be used to turn on and off the option of synchronizing the results displayed in the Task Runs mode of the **Execution Results** view with the tasks selected within the **Task and Schedule** view.

Chapter 13: Requirements

Please carefully read and follow all requirements, listed here, or you may not be able to successfully use the product. You can contact our support if you experience a problem during the product use.

System Requirements

Computer running Remote Installer must meet the following requirements:

Minimum Hardware Requirements

- Intel Core Processor or equivalent

- 4 GB of RAM

- 2 GB of free disk space

Recommended Hardware Requirements

- 6th Gen Intel Core Processor or equivalent

- 8 GB of RAM

- 10 GB of free disk space

Supported Platforms Windows XP (with SP3 or later), Windows XP x64 (with SP2 or later), Windows 2003 (with SP2 or later), Windows 2003 x64 (with SP2 or later), Windows 2003 R2, Windows 2003 R2 x64, Windows Vista, Windows Vista x64, Windows 2008, Windows 2008 x64, Windows 2008 R2, Windows 7, Windows 7 x64, Windows 8, Windows 8 x64, Windows 2012, Windows 8.1, Windows 8.1 x64, Windows 2012 R2, Windows 10, Windows 10 x64, Windows 2016

Requirements

- Administrative rights on the local computer

- Microsoft .NET Framework 4.5 or above (recommended), Microsoft .NET Framework 4.0 (minimum)

- Ability to access ADMIN$ share on remote computers

- Enabled NetBIOS over TCP/IP

Requirements for Remote Computers

Remote computers, accessed by Remote Installer must meet following requirements.

- Platform: Windows XP (with SP3 or later), Windows XP x64 (with SP2 or later), Windows 2003 (with SP2 or later), Windows x64 2003 (with SP2 or later), Windows 2003 R2, Windows 2003 R2 x64, Windows Vista, Windows Vista x64, Windows 2008, Windows 2008 x64, Windows 2008 R2, Windows 7, Windows 7 x64, Windows 8, Windows 8 x64, Windows 2012, Windows 8.1, Windows 8.1 x64, Windows 2012 R2, Windows 10, Windows 10 x64, Windows 2016

- A remote access with a Local or Domail administrator rights

- Enabled NetBIOS over TCP/IP

- An ability to ping the computer within 1500 ms

- Started services: Computer Browser, Remote Registry

- File and Printer sharing enabled

- Enabled access to the ADMIN$ share

- Windows Installer 3.1

- TCP ports opened: 135, 139, 445

- UDP ports opened: 137, 138

Chapter 14: Edition Upgrade

The program has multiple editions with different features, so you can select the one that suits your needs.

> **Edition Upgrade**
>
> The **Edition Upgrade** provides you with an ability of benefiting from update to a more comprehensive edition of Remote Installer with a help of the **Edition Upgrade Wizard** that will help you choose an appropriate edition and purchase a license for using it.

The **Edition Upgrade Wizard** `Pic 1` was designed to make the upgrade process easier. This wizard can be reached by clicking an appropriate hyper link in the **About** dialog or by using the **Edition Upgrade** button from the **Program** Ribbon page.
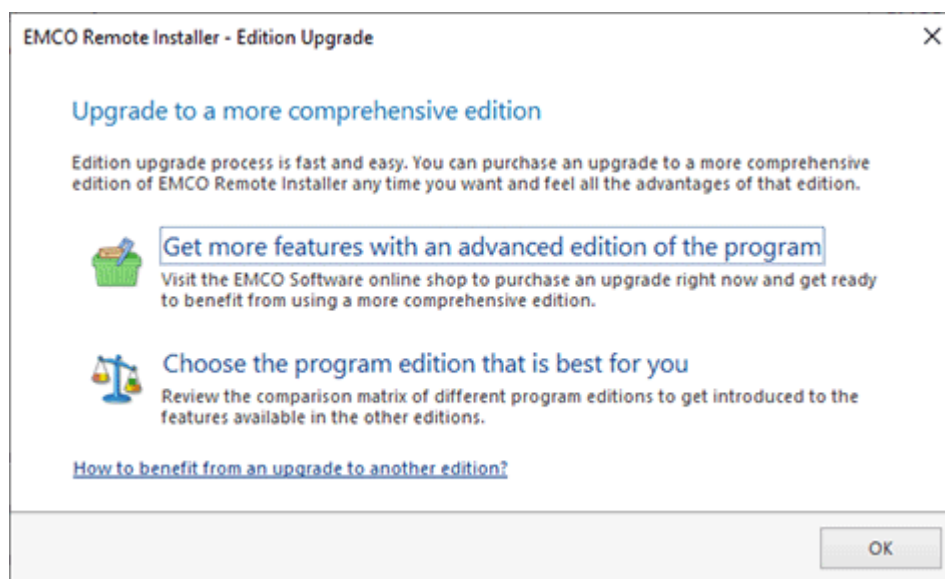
Pic 1. The Edition Upgrade Wizard

With a help of the **Edition Upgrade Wizard** you can purchase an upgrade to more comprehensive edition of Remote Installer with a single click on the **Get more features with an advanced edition of the program** option or introduce yourself to the features available in the other edition of the program using the **Choose the program edition that is best for you** option. This option will open a feature list web page that shows you the detailed comparison matrix of the features available in different Remote Installer editions so that you can review all the features of each edition before choosing the one that best fits your needs.

Chapter 15: How can I leave my Feedback?

EMCO Software always takes care of its customers, and your opinion means a lot to us. For this reason, our programs have built-in features for your feedback. You can suggest a feature you want to see in new program versions or report a technical problem you have faced using the program. Specifying your contact information on the feedback forms ensures that you will be informed of any changes with regard to the reported issue, our plans for implementing the suggested feature or fixing the reported bug. Those actions can be found in the **Feedback** Ribbon group of the Program page.

Suggest a Feature	

Suggest a Feature

The **Suggest a Feature** button from the **Feedback** Ribbon group should be used to suggest a functionality you would like to see in the next versions of Remote Installer.

Remote Installer comes with a wide range of features, but if you feel some functionality is missing, you can always suggest a new feature to us that you want to see in the program. To suggest a new feature, you should press the **Suggest a Feature** button from the **Feedback** Ribbon group. After pressing this button, you will see the **Feature Suggestion** dialog `Pic 1` on the screen where you are offered to enter your contact information and describe your suggestion.

Pic 1. The feature suggestion form

Press **Send** when you are done with filling out the form to send your suggestion.

Report a Problem

The **Report a Problem** button should be used to report a problem you have faced while working with Remote Installer.

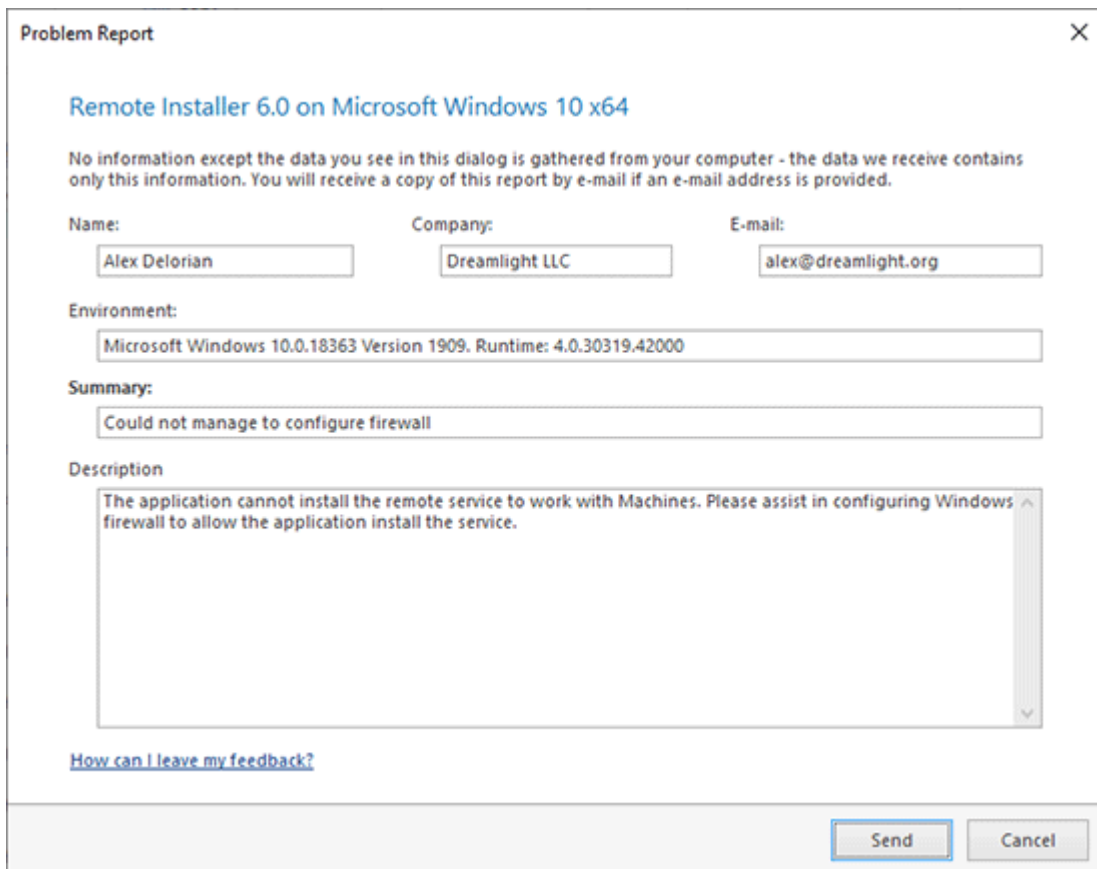Remote Installer is easy to use and very stable. Nevertherless, if you have faced any difficulty or problem while working with it, you can send us a problem report. To send such a report, you should press the **Report a Problem** button from the **Feedback** Ribbon group. When this button is pressed, the **Problem Report** dialog **Pic 2** will appear on the screen where you are offered to enter your contact information and describe your problem.

Pic 2. The problem report form

In the **Environment** field, you can provide us with a description of the specific environment used while working with the program. Press **Send** when you are done with filling out the form to send your report.

Do not hesitate to contact EMCO Software - we are always glad to receive your feedback and are doing our best to satisfy our customers' preferences.

Chapter 16: About EMCO Software

EMCO creates mission-critical software to manage network computers remotely and automate network administration.

Our company was founded in 2001 in Reykjavik, Iceland. Managing Windows networks as network administrators, we could not find tools that would help us automate our routine network administration tasks, so we decided to create such tools for fellow administrators and ourselves.

Today we offer innovative software that help IT specialists and network administrators to automate their Windows network management tasks. Our software tools are focused on remote management of Windows computers across networks and allow administrators to perform routine tasks on all managed computers with a few mouse clicks. We automate software audit and deployment, power management, hosts monitoring and other computer administration tasks.

Learn more: https://emcosoftware.com.

Our Customers

Being suitable for managing networks of any size, our products cater to the needs of 25,000+ customers in 85 countries around the globe. They are Fortune 100 corporations and small businesses, as well as governments, military institutions, universities, public schools, libraries and charities.

Our customers rely on EMCO products for managing their mission-critical network infrastructure. Using our products, network administrators monitor, audit, deploy and manage 3,000,000+ network devices every day.

Chapter 17: Contact Information

We would be glad to help you with any questions and problems you might have. Use the contact information below.

Contact Sales	Contact Support
Our sales team is standing by to answer your questions about purchasing or licensing EMCO products. Submit a request, send us an e-mail or call us: Contact Sales.	Our support team is here to help you with any technical product-related issues you may have. We provide free technical support for all our products, including freeware. Submit a request or send us an e-mail: Contact Support.