



# QUICKSTART GUIDE

## SYSTEMS IMAGING

Learn how to *quickly* configure the **imaging of your workstations** using the Kaspersky Security Center.

This is a *QuickStart* guide of this process.

For more in-depth information, please refer to the official Kaspersky Security Center documentation

## Kaspersky Security Center 10 – Systems Imaging Guide

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Kaspersky Security Center gives administrators the ability to deploy system images to network computers. This feature is unlocked as part of the Systems Management feature.

This guide assumes that the proper license has already been applied to Kaspersky Security Center. If this has not been done, please see the [Security Center & Endpoint Version 10 Licensing Quick Start Guide](#) for instructions.

### Prerequisites

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- A **Systems Management** license, either included standalone or as part of a Kaspersky Endpoint Security Advanced or Total license
- **Windows Assessment and Deployment Kit (WADK)** installed to the server running Kaspersky Security Center
  - o Both the **Deployment Tools** and **Windows Preinstallation Environment (Windows PE)** features must be installed
- The **DHCP Server** feature must be installed to a server that is not also running Kaspersky Security Center

### Notes

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*There are two methods to create an installation package which contains a system image. The first method is to capture an operating system image from a reference computer. The second method is to create an installation package from a WIM file.*

*For the first method, please [continue to page 2](#).*

*For the second method, please [skip to page 11](#).*

*If an installation package containing a system image has been created and is ready for configuration, please [skip to page 16](#).*

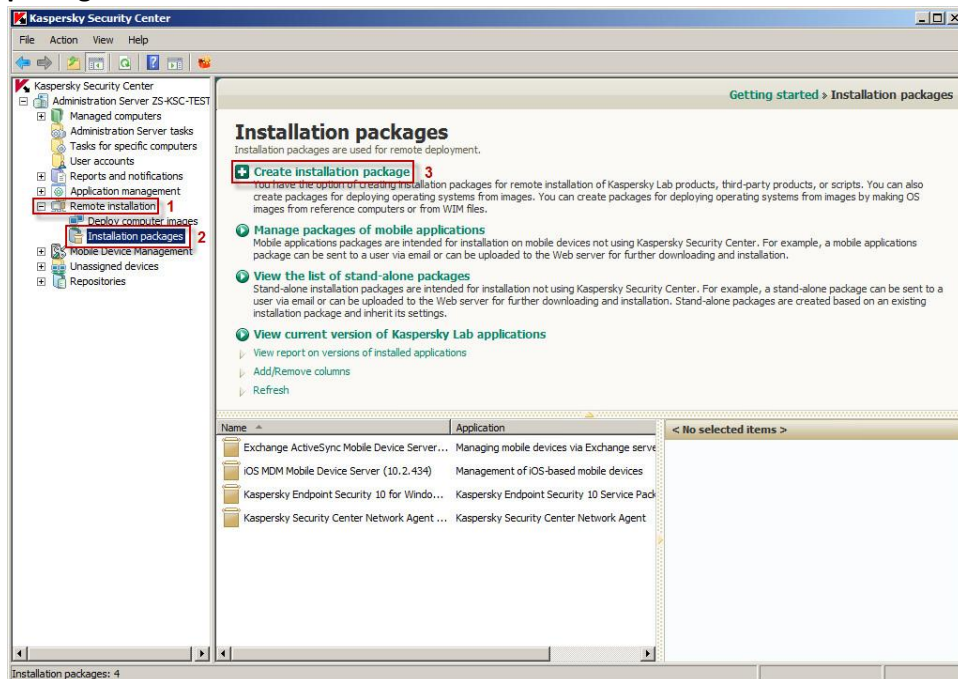
*If a system image has been configured and is ready for deployment to a bare metal machine, please [skip to page 22](#).*

*If a system image has been configured and is ready for deployment to an existing machine, please [skip to page 26](#).*

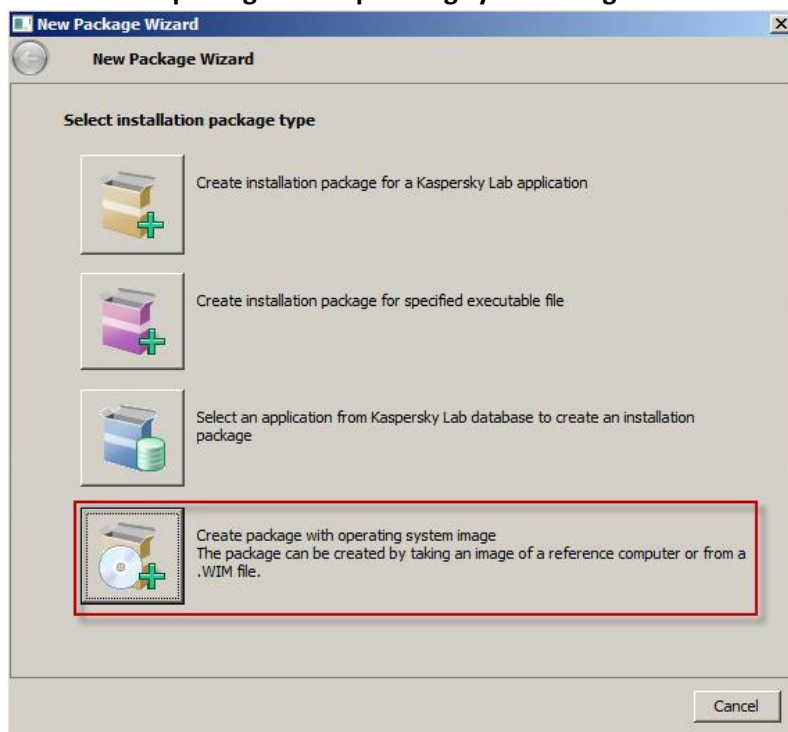
## Capturing an Operating System Image from a Reference Computer

Follow the steps, below, on the server running Kaspersky Security Center.

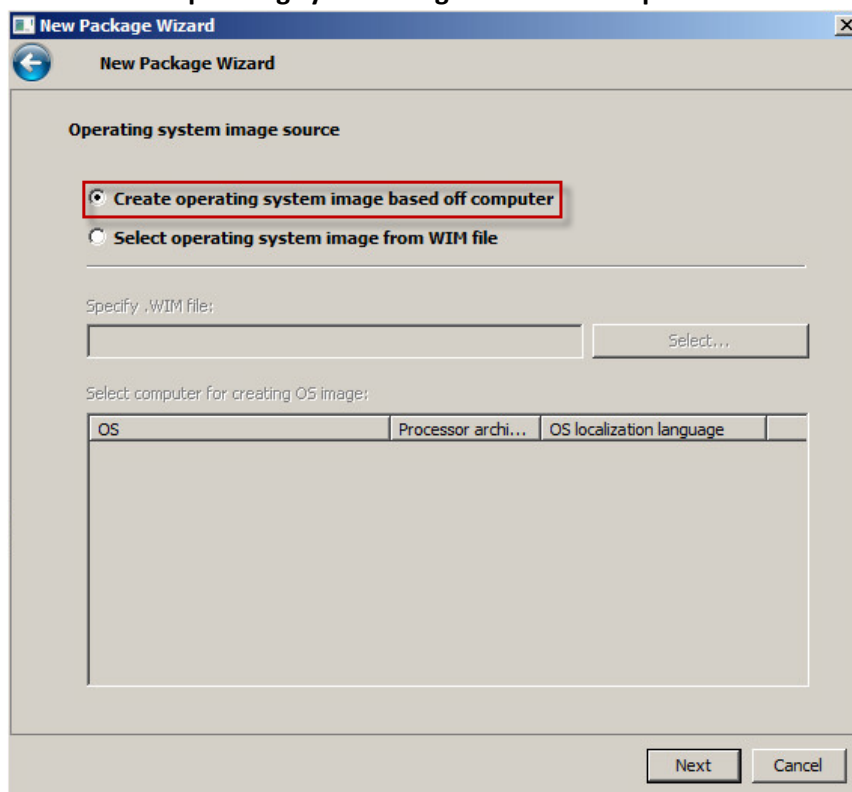
1. Expand the **Remote installation** node. Select **Installation packages**. Click **Create installation package**.



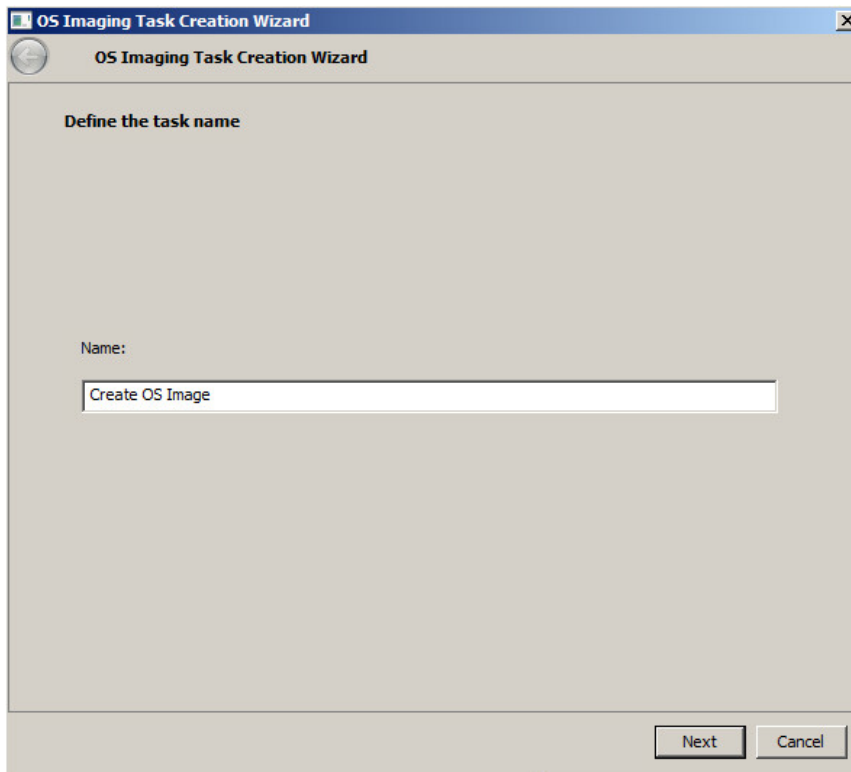
2. Select **Create package with operating system image**.



3. Select **Create operating system image based off computer**. Click **Next**.

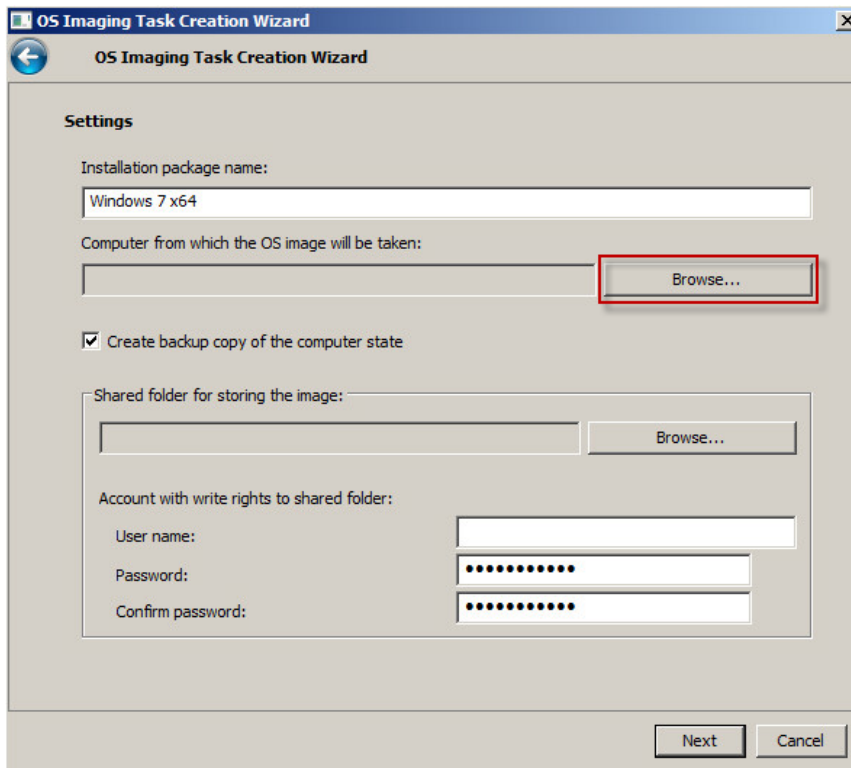


4. Define a task name. Click **Next**.



The screenshot shows the 'OS Imaging Task Creation Wizard' window. The title bar reads 'OS Imaging Task Creation Wizard'. The main area is titled 'Define the task name'. Below this, there is a 'Name:' label followed by a text input field containing the text 'Create OS Image'. At the bottom right of the window, there are two buttons: 'Next' and 'Cancel'.

5. Define an installation package name. Click **Browse...**

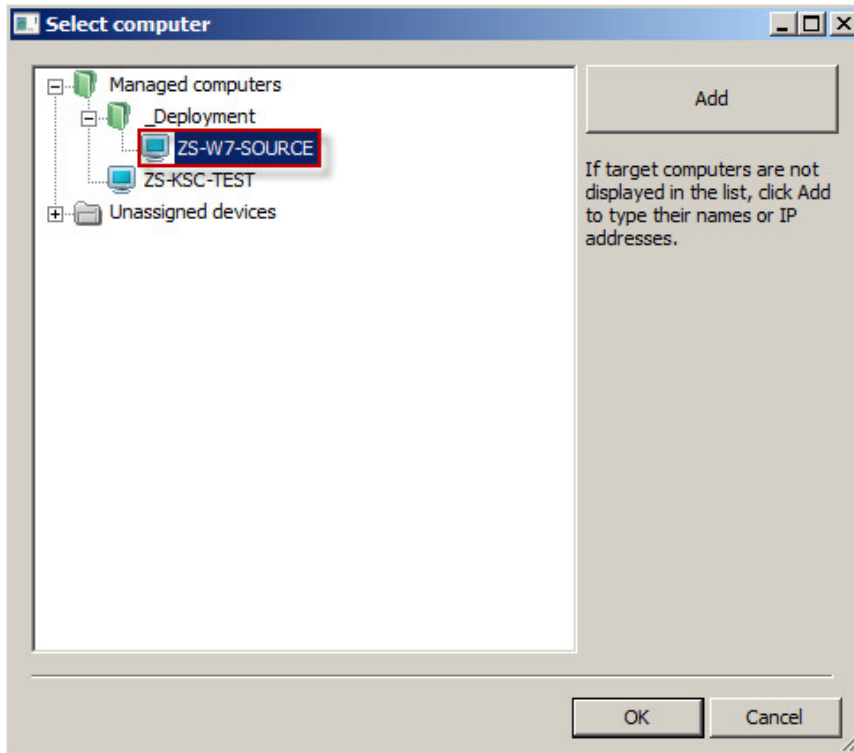


The screenshot shows the 'OS Imaging Task Creation Wizard' window in the 'Settings' step. The title bar reads 'OS Imaging Task Creation Wizard'. The main area is titled 'Settings'. It contains several fields and options:

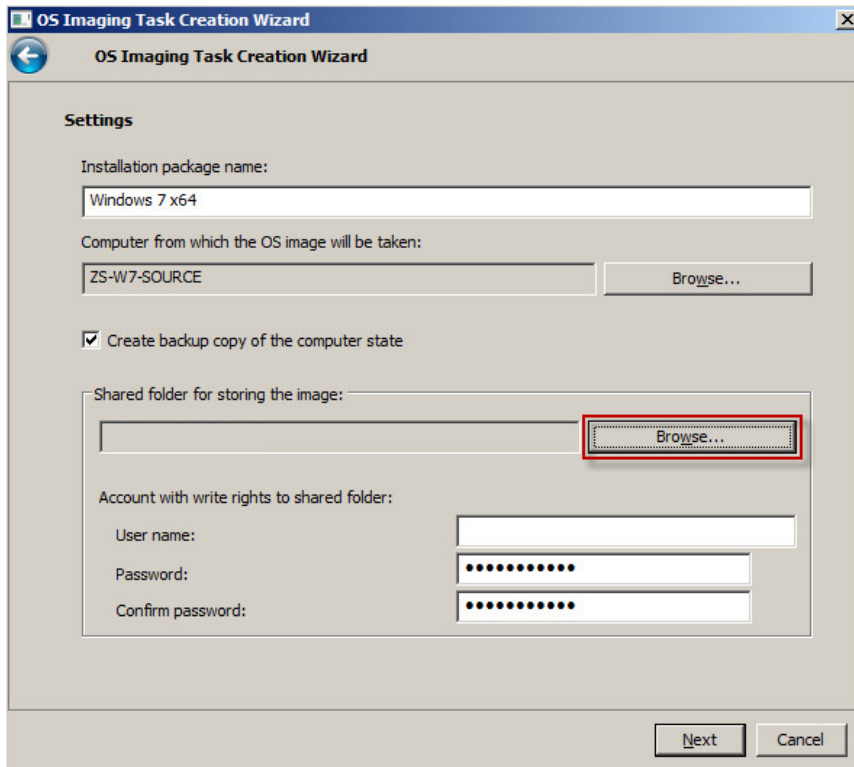
- 'Installation package name:' followed by a text input field containing 'Windows 7 x64'.
- 'Computer from which the OS image will be taken:' followed by an empty text input field and a 'Browse...' button highlighted with a red rectangle.
- A checked checkbox labeled 'Create backup copy of the computer state'.
- 'Shared folder for storing the image:' followed by an empty text input field and a 'Browse...' button.
- 'Account with write rights to shared folder:' section with three input fields:
  - 'User name:' followed by an empty text input field.
  - 'Password:' followed by a text input field with masked characters (dots).
  - 'Confirm password:' followed by a text input field with masked characters (dots).

At the bottom right of the window, there are two buttons: 'Next' and 'Cancel'.

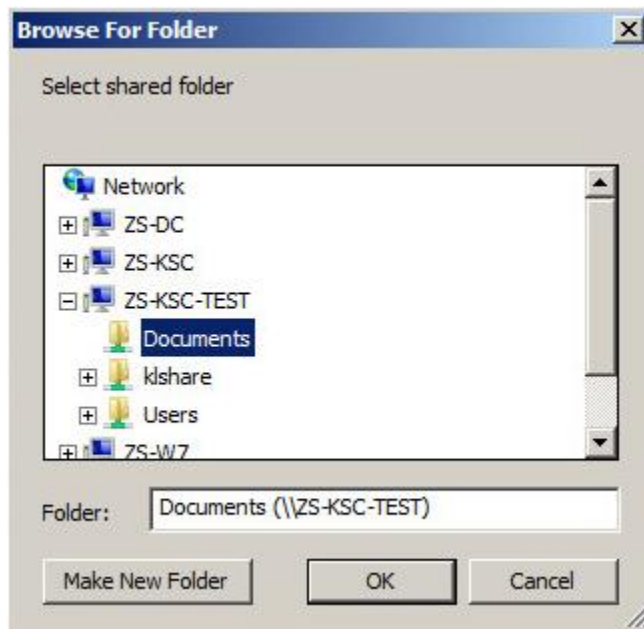
6. Select the computer from which an image should be created. Click **OK**.



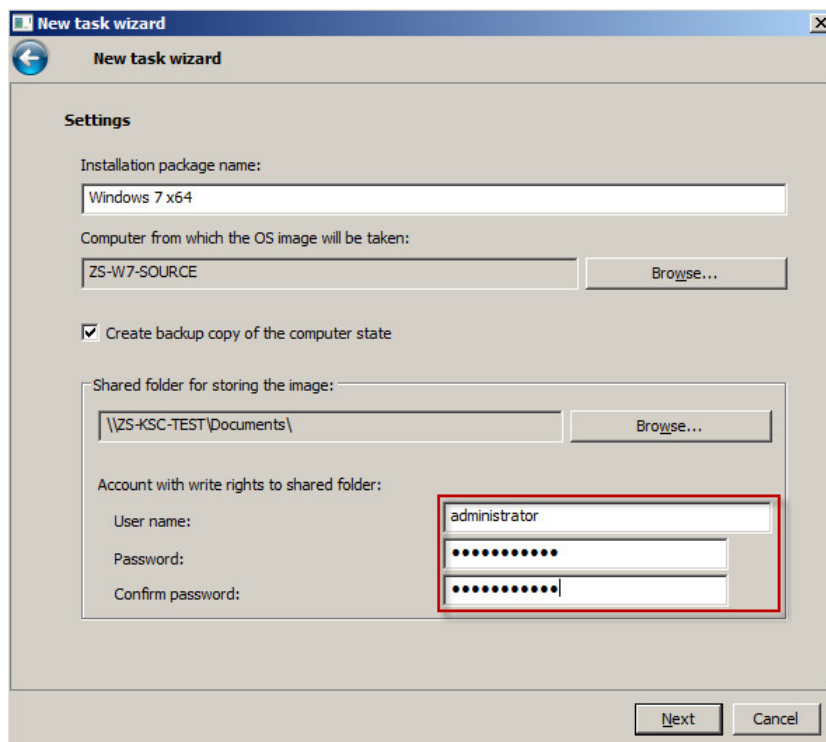
7. Click **Browse...** to select a shared folder to store the image.



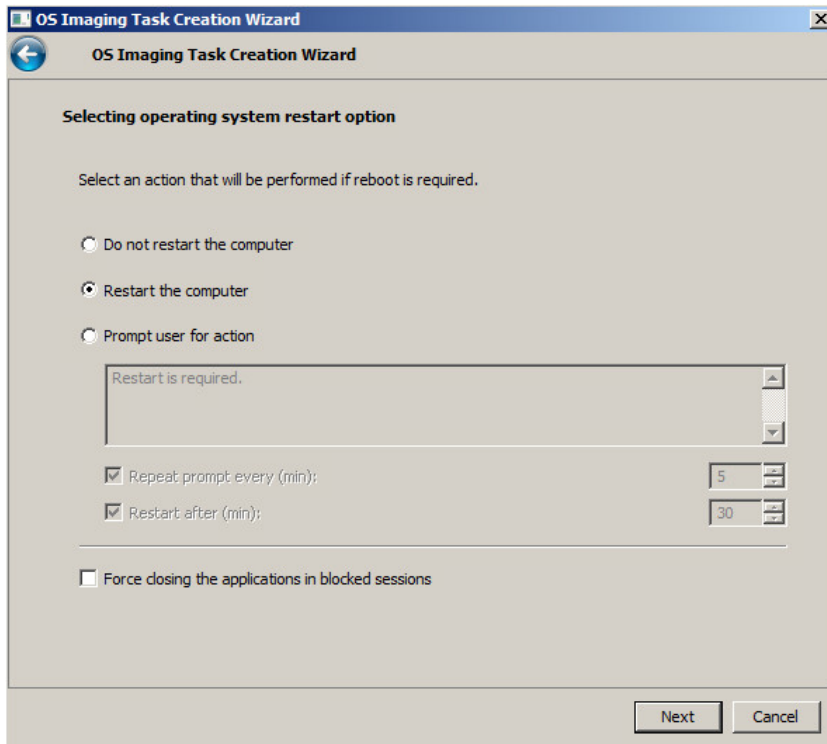
8. Select the desired shared folder. In this example, the manually-shared **Documents** folder is selected. Click **OK**.



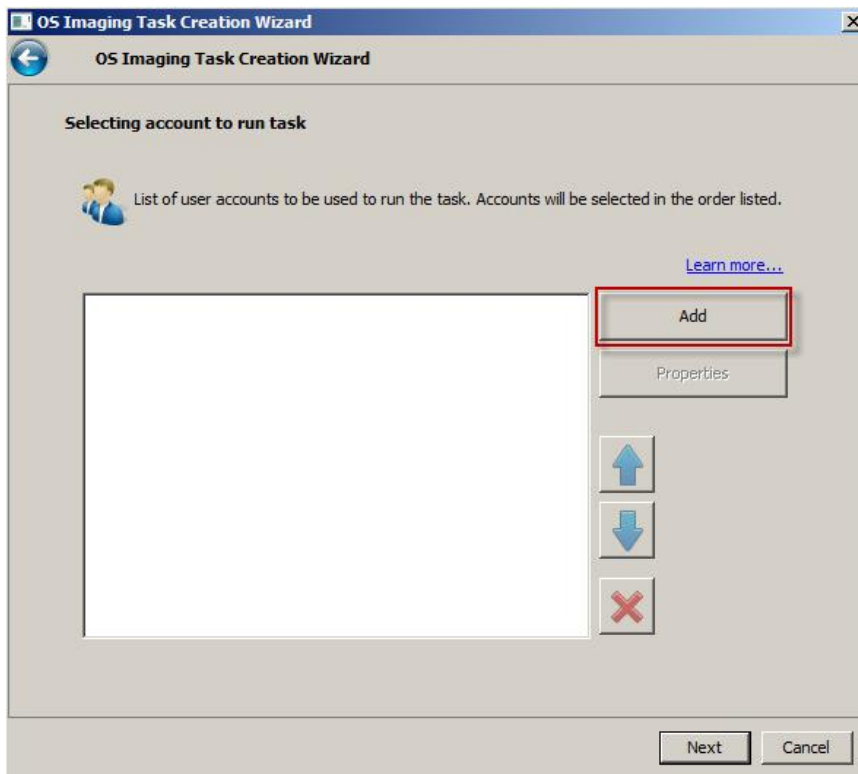
9. Enter the credentials to an account that has sufficient privileges to write to the selected folder. Click **Next**.



10. Select an option to determine what should happen if a reboot of the source computer is required. In this example, a forced reboot is selected. Click **Next**.

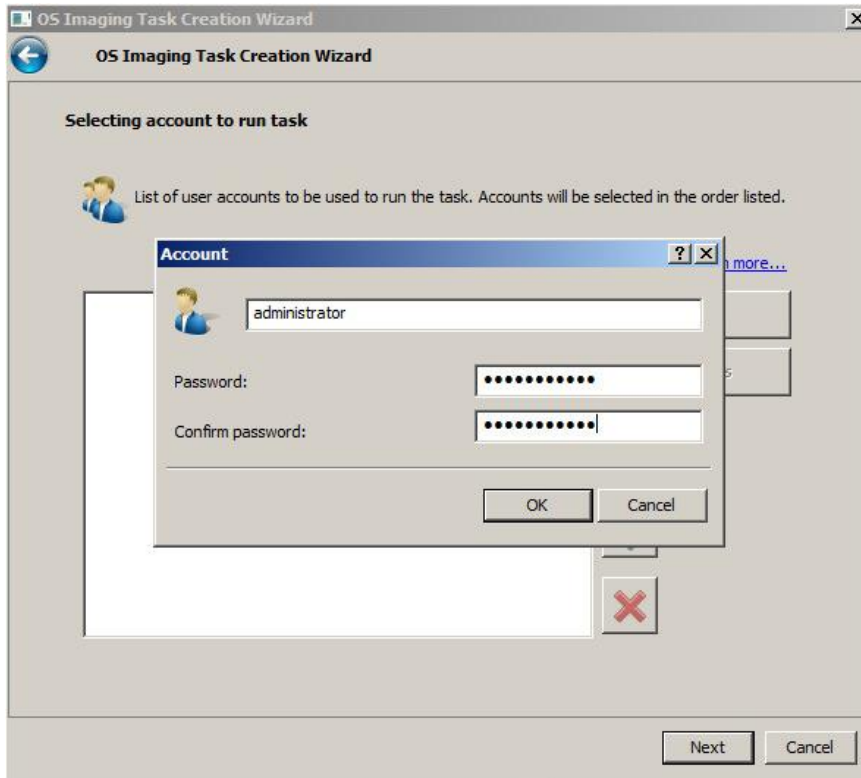


11. Click **Add** to run the task as a certain account.

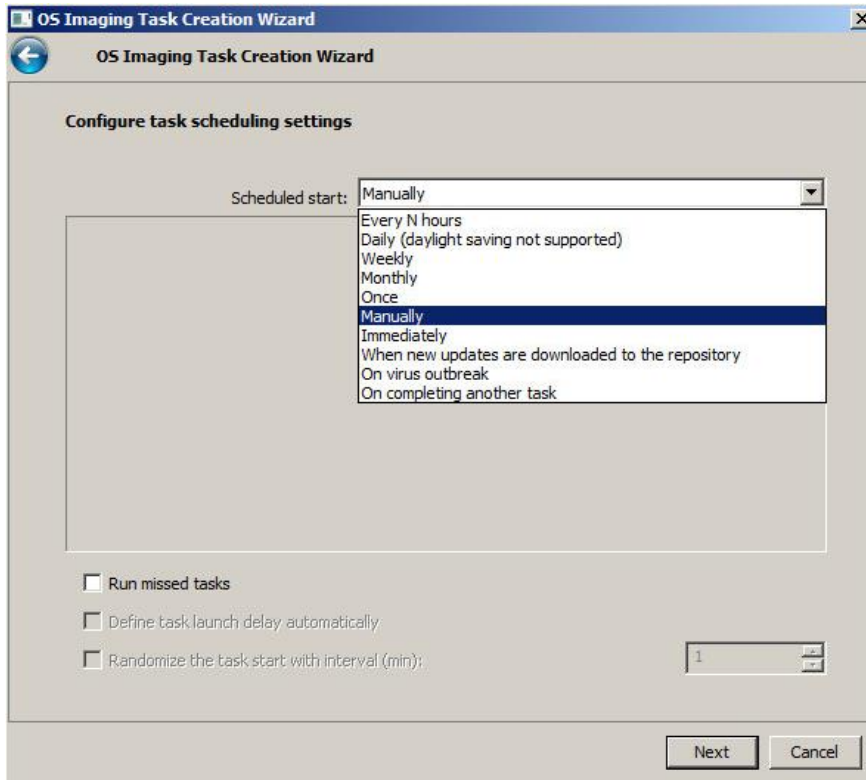




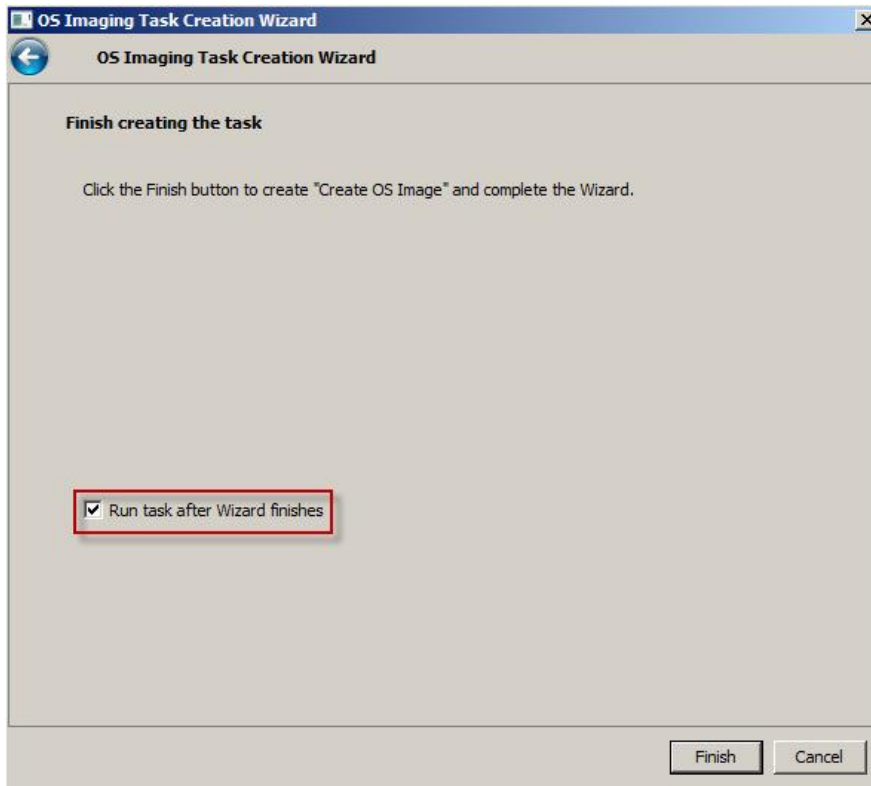
12. Fill in the information for the desired account(s). Click **OK**, then click **Next**.



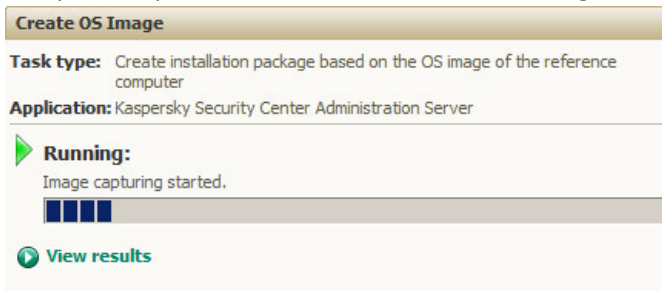
13. Select the desired schedule for the task. In this example, **Manually** is selected. Click **Next**.



14. Select **Run task after Wizard finishes** to run the task immediately if the **Immediately** option was not selected in the previous step. Click **Finish**.



15. The task should now be running on the desired computer. The amount of time the task takes to complete depends on several variables, including the size of the image and network speed.



16. The source computer will boot into WinPE to start a backup. The task status will remain the same. This creates the folder **OSDEPL\_BACKUP** in the share.

```

X:\windows\system32\cmd.exe - startnet.cmd
16.11.2015 09:50:55.488 Windows IP Configuration Host Name . . . . .
. . . : minint-01aarb4 Primary Dns Suffix . . . . . : Node Type . . . .
. . . : Hybrid IP Routing Enabled. . . . . : No WINS Proxy
Enabled. . . . . : NoEthernet adapter Ethernet: Connection-specific DNS
Suffix . . . . . : Description . . . . . : Intel(R) PRO/1000 MT Network
Connection Physical Address. . . . . : 00-50-56-AF-AC-80 DHCP Enable
d. . . . . : Yes Autoconfiguration Enabled . . . . . : Yes Link-lo
cal IPv6 Address . . . . . : fe80::bc29:30f7:d926:c6d6%3(Preferred) IPv4 Addr
ess. . . . . : 192.168.169.5(Preferred) Subnet Mask . . . . .
. . . . . : 255.255.255.0 Lease Obtained. . . . . : Monday, November
16, 2015 9:50:38 AM Lease Expires . . . . . : Monday, November 23, 2
015 9:50:38 AM Default Gateway . . . . . : 192.168.169.1 DHCP Server
. . . . . : 192.168.169.1 DHCPv6 IAID . . . . . : 503
52214 DHCPv6 Client DUID. . . . . : 00-01-00-01-1D-DB-CF-C6-00-50-56-AF-
AC-80 DNS Servers . . . . . : 8.8.8.8
8.8.4.4 NetBIOS over Tcpip. . . . . : Enabled
16.11.2015 09:50:55.534 Attempt to send event OSDE_CAPTURING_READY_TO_START.
16.11.2015 09:50:55.581 Attempt to send event is OK.
16.11.2015 09:50:55.581 Thread was created.
16.11.2015 09:50:55.581 Connect to share: \\ZS-KSC-TEST\Documents\
16.11.2015 09:50:55.753 The connection to share is established.
16.11.2015 09:50:55.753 Try create folder \\192.168.169.101\Documents\OSDEPL_BAC
KUP\9a9894b6-338c-479c-8d14-d86635c0ea6a\
16.11.2015 09:50:55.753 Backup...

```

17. The source computer will reboot into Windows, and reboot again into WinPE after a short time to start an image capture. The task status will remain the same. This creates the folder **OSDEPL\_WORKING** in the share.

```

X:\windows\system32\cmd.exe - startnet.cmd
. . . : minint-pwqe5fo Primary Dns Suffix . . . . . : Node Type . . . .
. . . : Hybrid IP Routing Enabled. . . . . : No WINS Proxy
Enabled. . . . . : NoEthernet adapter Ethernet: Connection-specific DNS
Suffix . . . . . : Description . . . . . : Intel(R) PRO/1000 MT Network
Connection Physical Address. . . . . : 00-50-56-AF-AC-80 DHCP Enable
d. . . . . : Yes Autoconfiguration Enabled . . . . . : Yes Link-lo
cal IPv6 Address . . . . . : fe80::c8c7:e383:2dfb:ca07%3(Preferred) IPv4 Addr
ess. . . . . : 192.168.169.5(Preferred) Subnet Mask . . . . .
. . . . . : 255.255.255.0 Lease Obtained. . . . . : Monday, November
16, 2015 10:42:19 AM Lease Expires . . . . . : Monday, November 23,
2015 10:42:19 AM Default Gateway . . . . . : 192.168.169.1 DHCP Serv
er . . . . . : 192.168.169.1 DHCPv6 IAID . . . . . : 5
0352214 DHCPv6 Client DUID. . . . . : 00-01-00-01-1D-DB-DB-E3-00-50-56-A
F-AC-80 DNS Servers . . . . . : 8.8.8.8
8.8.4.4 NetBIOS over Tcpip. . . . . : Enabled
16.11.2015 10:42:35.351 Attempt to send event OSDE_CAPTURING_READY_TO_START.
16.11.2015 10:42:35.382 Attempt to send event is OK.
16.11.2015 10:42:35.398 Thread was created.
16.11.2015 10:42:35.398 Connect to share: \\ZS-KSC-TEST\Documents\
16.11.2015 10:42:35.476 The connection to share is established.
16.11.2015 10:42:35.476 Try create folder \\192.168.169.101\Documents\OSDEPL_WOR
KING\9a9894b6-338c-479c-8d14-d86635c0ea6a\ca0d8206-1687-4167-8822-c21cfd5d2e7a\
xec\
16.11.2015 10:42:35.585 Try capture image...

```

18. When the image capture has completed, the source computer will start to restore from the backup taken earlier.

```

X:\windows\system32\cmd.exe - startnet.cmd
Suffix . . . : Description . . . . . : Intel(R) PRO/1000 MT Network
Connection Physical Address . . . . . : 00-50-56-AF-AC-80 DHCP Enable
d. . . . . : Yes Autoconfiguration Enabled . . . . . : Yes Link-lo
cal IPv6 Address . . . . . : fe80:c8c7:e383:2dfb:ca07%3(Preferred) IPv4 Addr
ess. . . . . : 255.255.255.0 Lease Obtained. . . . . : Monday, November
16, 2015 10:42:19 AM Lease Expires . . . . . : Monday, November 23,
2015 10:42:19 AM Default Gateway . . . . . : 192.168.169.1 DHCP Serv
er . . . . . : 192.168.169.1 DHCPv6 IAID . . . . . : 5
0352214 DHCPv6 Client DUID. . . . . : 00-01-00-01-1D-DB-DB-E3-00-50-56-A
F-AC-80 DNS Servers . . . . . : 8.8.8.8
8.8.4.4 NetBIOS over Tcpip. . . . . : Enabled
16.11.2015 10:42:35.351 Attempt to send event OSDE_CAPTURING_READY_TO_START.
16.11.2015 10:42:35.382 Attempt to send event is OK.
16.11.2015 10:42:35.398 Thread was created.
16.11.2015 10:42:35.398 Connect to share: \\ZS-RSC-TEST\Documents\
16.11.2015 10:42:35.476 The connection to share is established.
16.11.2015 10:42:35.476 Try create folder \\192.168.169.101\Documents\OSDEPL_WOR
KING\9a9894b6-338c-479c-8d14-d86635c0ea6a\ca0d8206-1687-4167-8822-c21cfd5d2e7a\
xec\
16.11.2015 10:42:35.585 Try capture image...
16.11.2015 11:31:26.544 Capturing ok.
16.11.2015 11:31:26.544 The capturing completed.
16.11.2015 11:31:26.544 Try to restore...

```

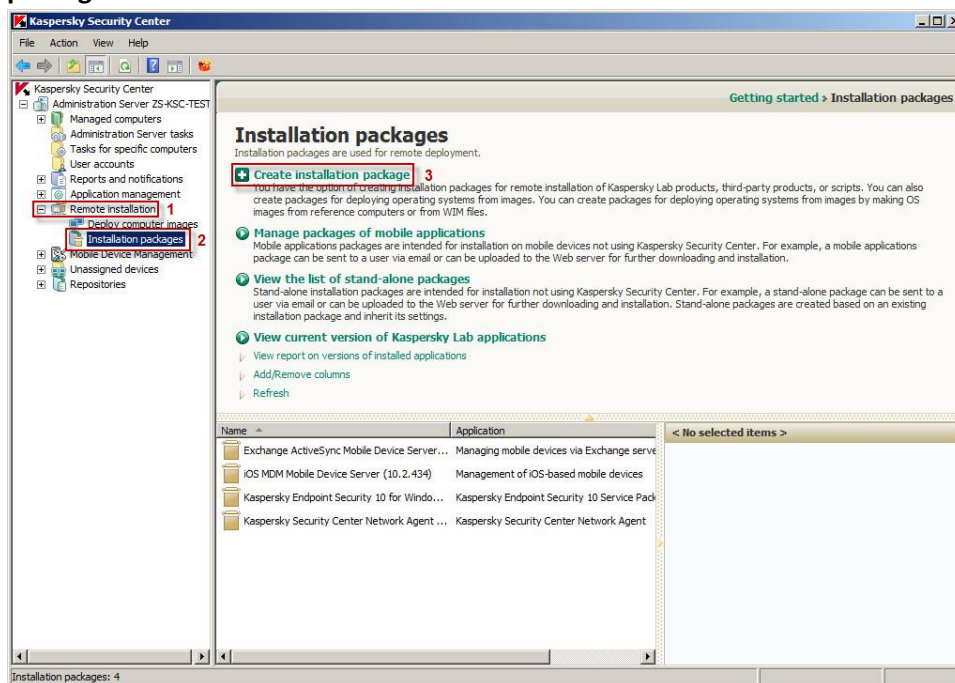
19. The image can be viewed in the Security Center in the **Installation packages** sub-node of the **Remote installation** node.

Name	Application	Version number
Exchange ActiveSync Mobile Device Server...	Managing mobile devices via Exchange server	10.2.434
iOS MDM Mobile Device Server (10.2.434)	Management of iOS-based mobile devices	10.2.434
Kaspersky Endpoint Security 10 for Windo...	Kaspersky Endpoint Security 10 Service Pack 1 for Windows	10.2.2.10535
Kaspersky Security Center Network Agent ...	Kaspersky Security Center Network Agent	10.2.434
Windows 7 x64	Microsoft Windows 7 Professional Service Pack 1 (build 7601), 64-bit	6.1.7601

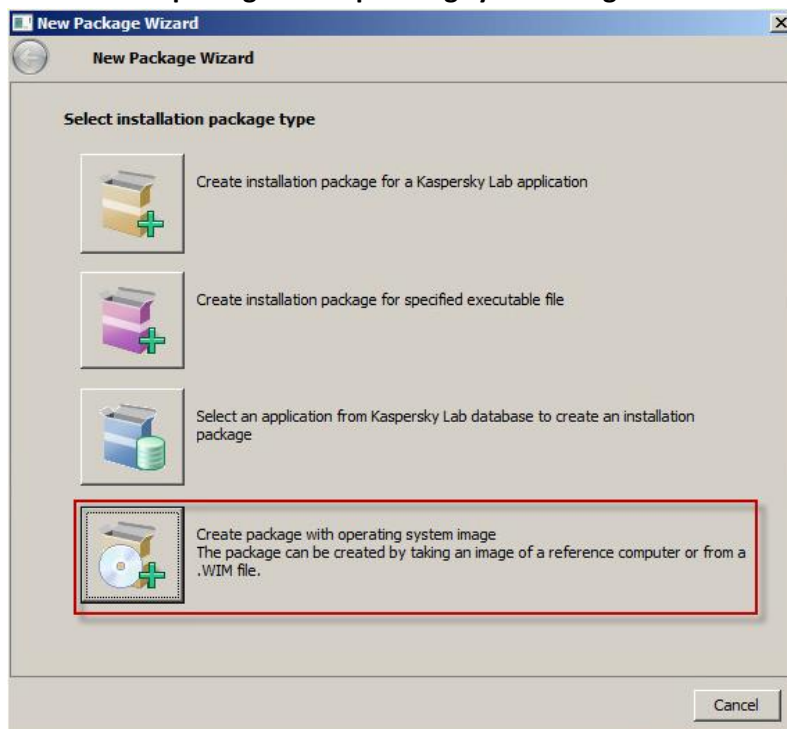
Before the image is deployed, it can be configured to include any necessary drivers and modify the `sysprep.exe` configuration file. For instructions on how to prepare the image, please [skip to page 16](#).

Follow the steps, below, on the server running Kaspersky Security Center.

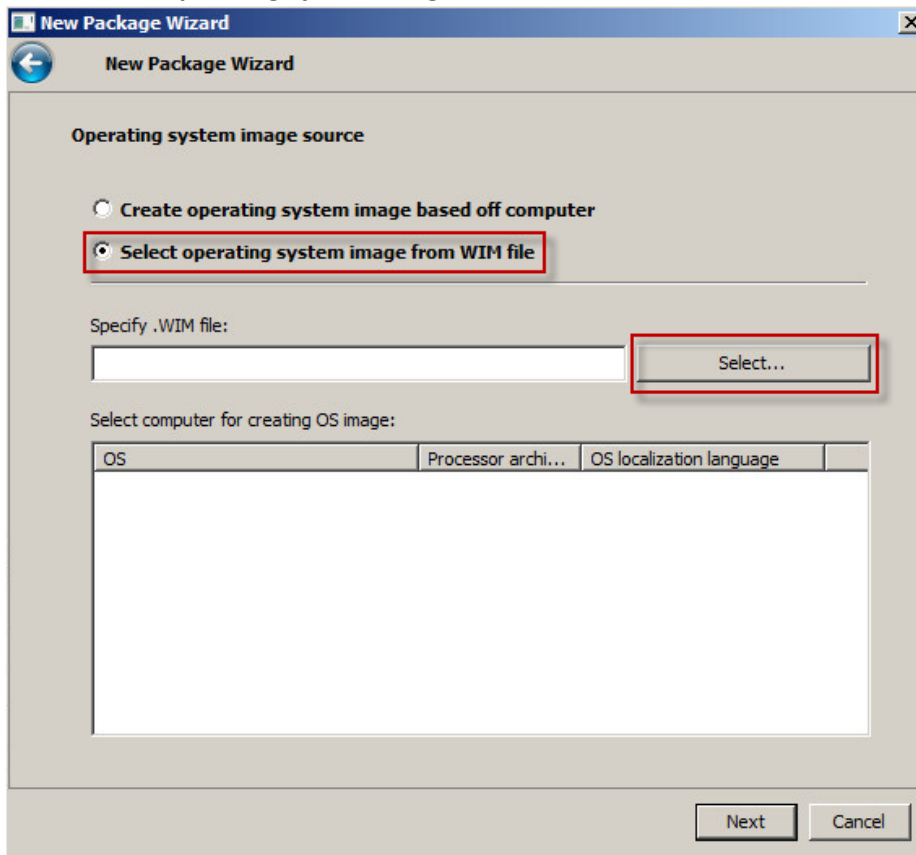
1. Expand the **Remote installation** node. Select **Installation packages**. Click **Create installation package**.



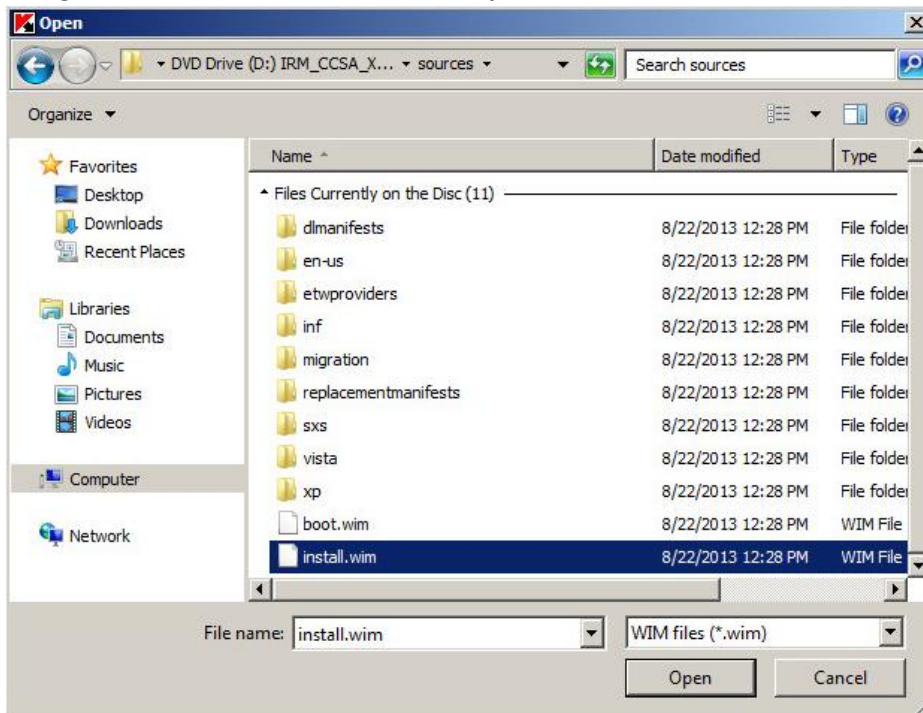
2. Select **Create package with operating system image**.



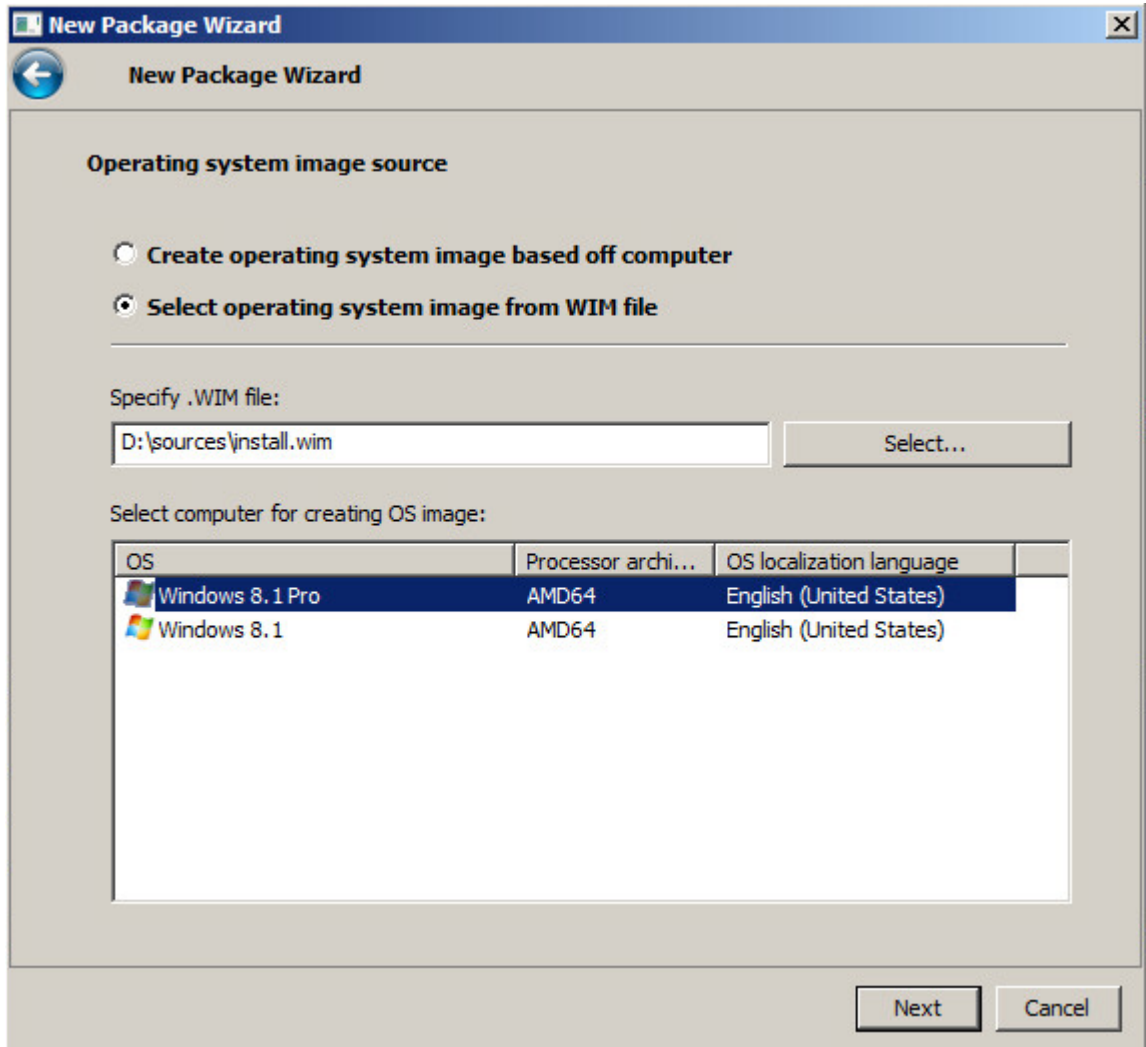
3. Select **Select operating system image from WIM file**. Click **Select....**



4. Navigate to the desired WIM file. Click **Open**.



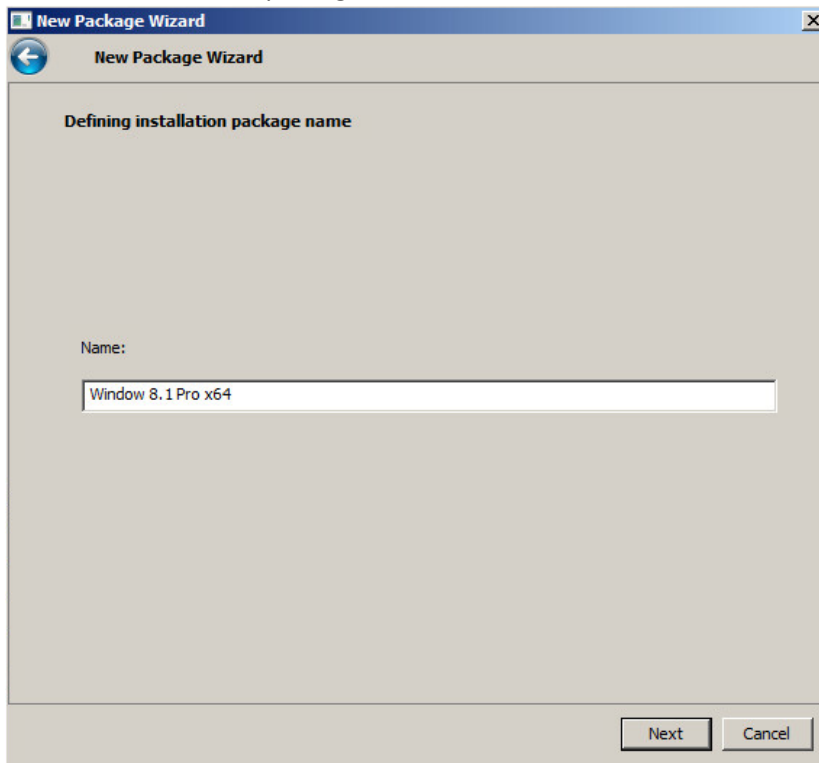
5. Select the desired OS image. In this example, **Windows 8.1 Pro** is selected. Click **Next**.



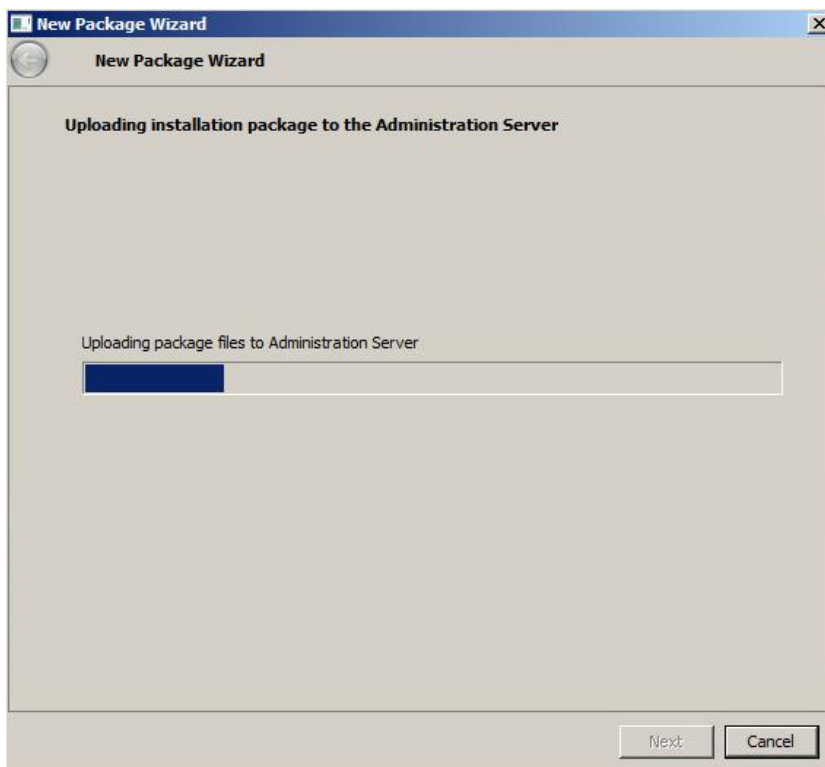
6. Wait for the image files to be extracted to a temporary folder.



7. Define an installation package name. Click **Next**.

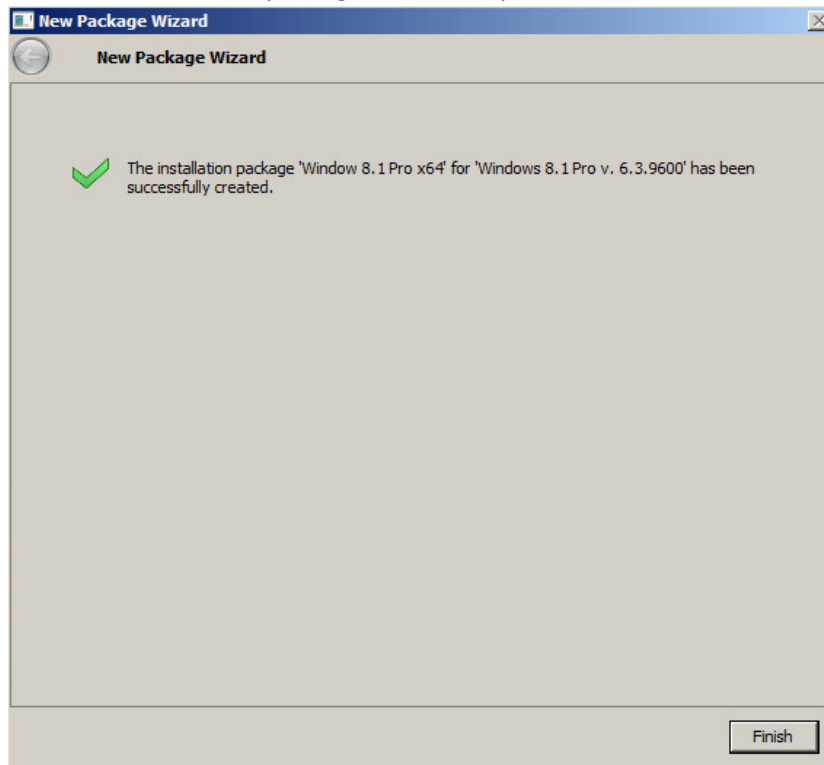


8. Wait for the package files to be uploaded to the Administration Server. This may take several minutes.





9. Click **Finish** when the package has been uploaded.



10. The image can be viewed in the Security Center in the **Installation packages** sub-node of the **Remote installation** node.

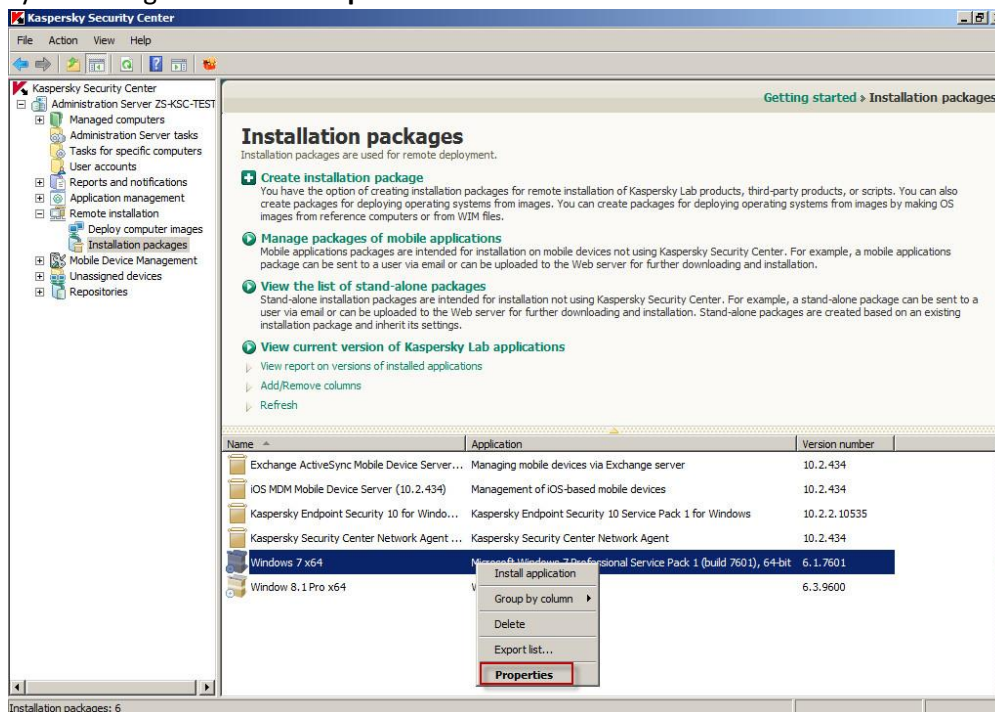
Name	Application	Version number
Exchange ActiveSync Mobile Device Server...	Managing mobile devices via Exchange server	10.2.434
iOS MDM Mobile Device Server (10.2.434)	Management of iOS-based mobile devices	10.2.434
Kaspersky Endpoint Security 10 for Windo...	Kaspersky Endpoint Security 10 Service Pack 1 for Windows	10.2.2.10535
Kaspersky Security Center Network Agent ...	Kaspersky Security Center Network Agent	10.2.434
Windows 7 x64	Microsoft Windows 7 Professional Service Pack 1 (build 7601), 64-bit	6.1.7601
Window 8.1 Pro x64	Windows 8.1 Pro	6.3.9600

*Before the image is deployed, it can be configured to include any necessary drivers and modify the `sysprep.exe` configuration file. For instructions on how to prepare the image, please [continue to page 16](#).*

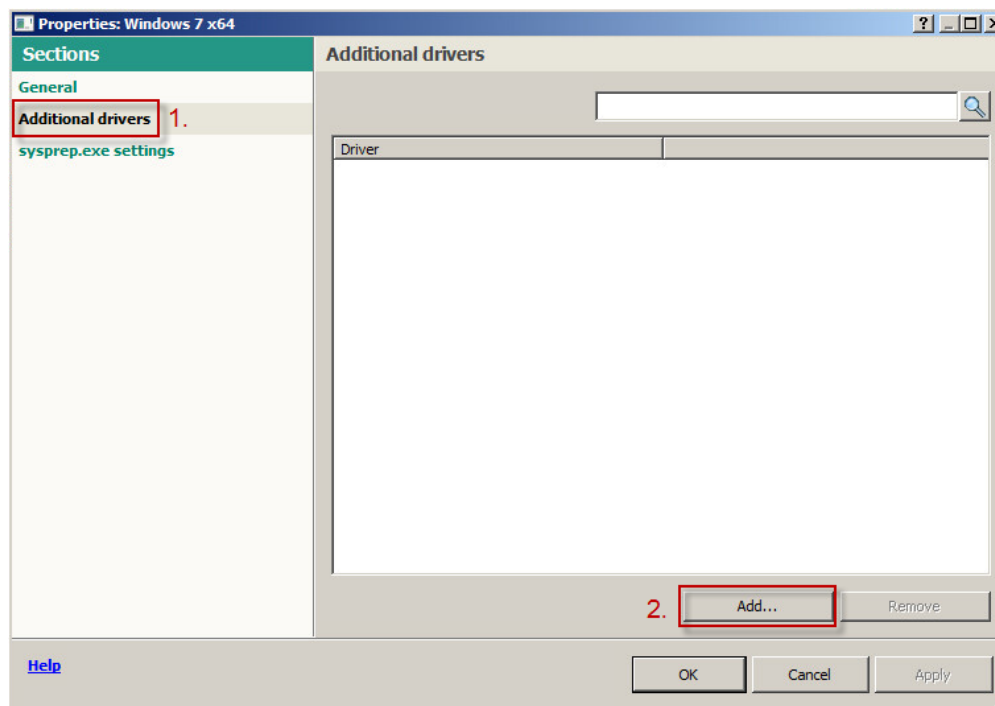
## Preparing an Operating System Image for Deployment to a Target Computer

Follow the steps, below, on the server running Kaspersky Security Center.

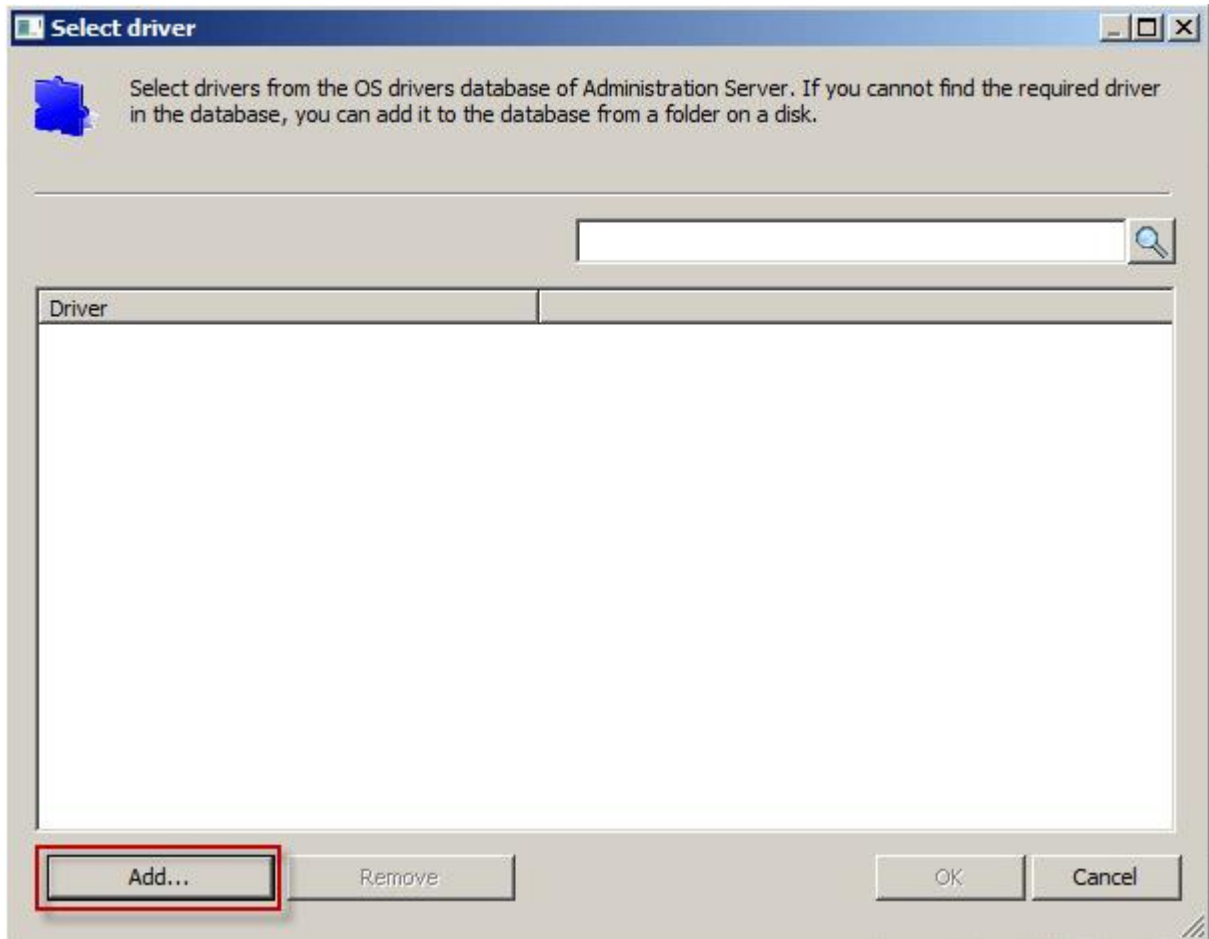
1. Expand the **Remote installation** node. Select **Installation packages**. Right-click on the desired system image and select **Properties**.



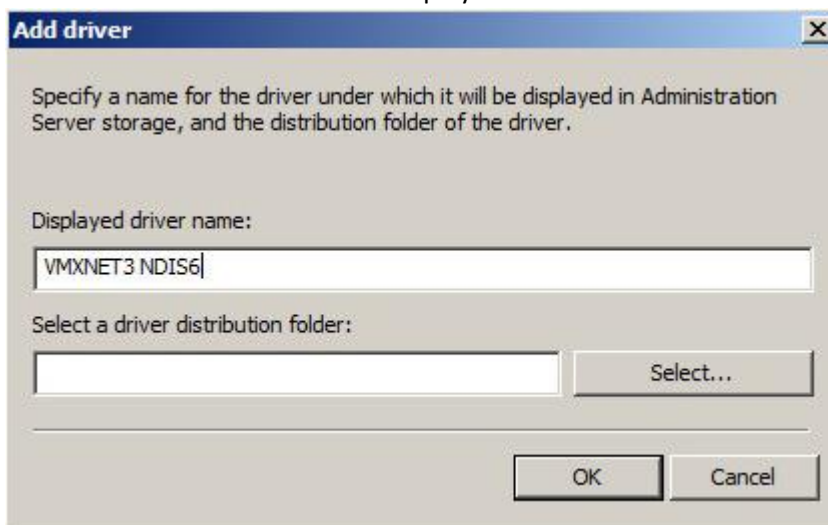
2. Select **Additional drivers**. Click **Add...**



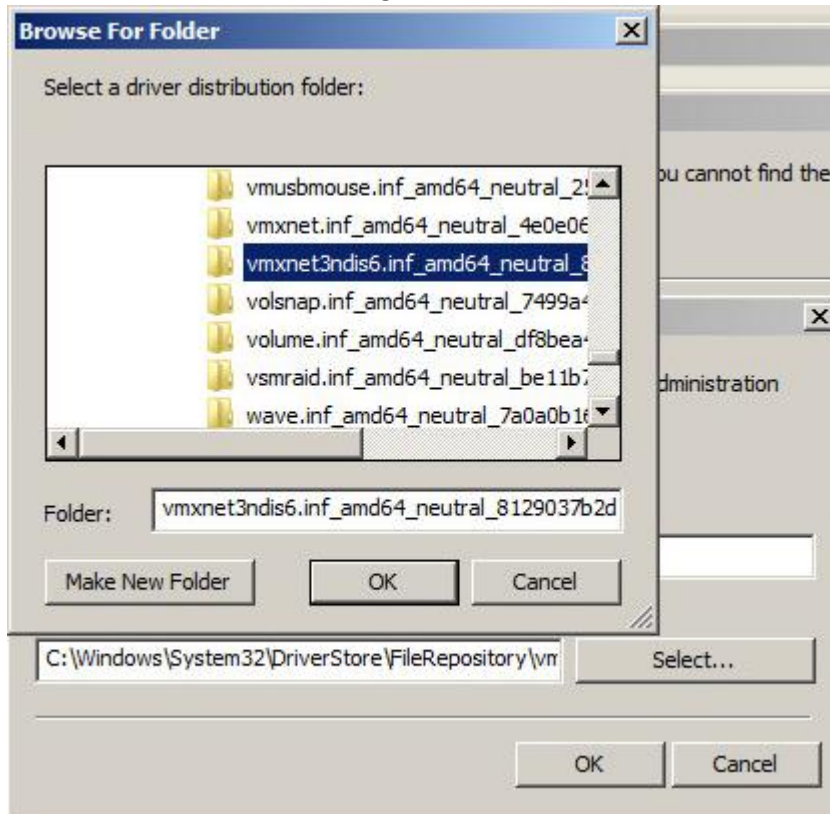
3. Select the desired driver and click **OK**. If the driver has not been added to the Administration Server database, click **Add...**



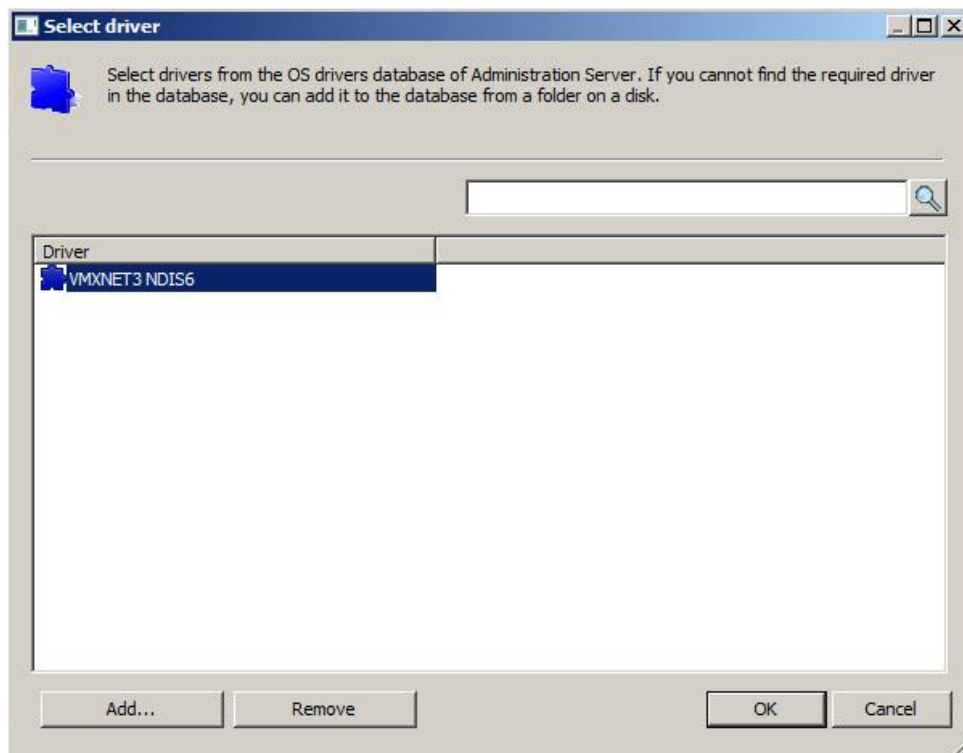
4. Define the name that should be displayed for the desired driver. Click **Select...**



- Browse for the folder containing the desired driver. Click **OK**, then **OK** again.

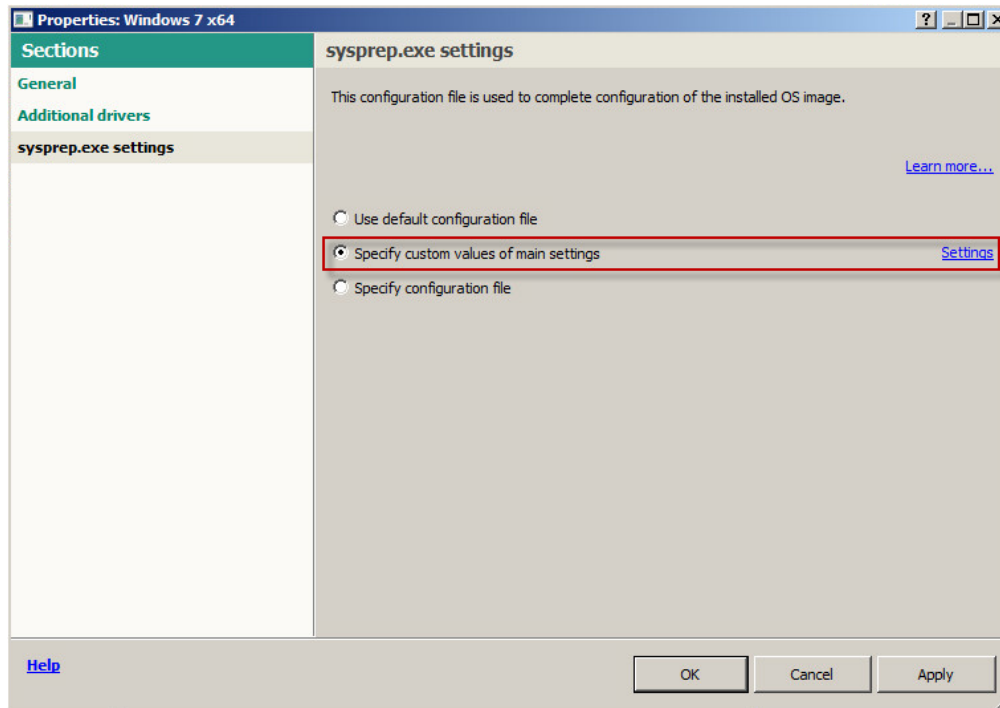


- The driver now appears in the **Select driver** list and can be added into the deployment package. Select the driver and click **OK**.

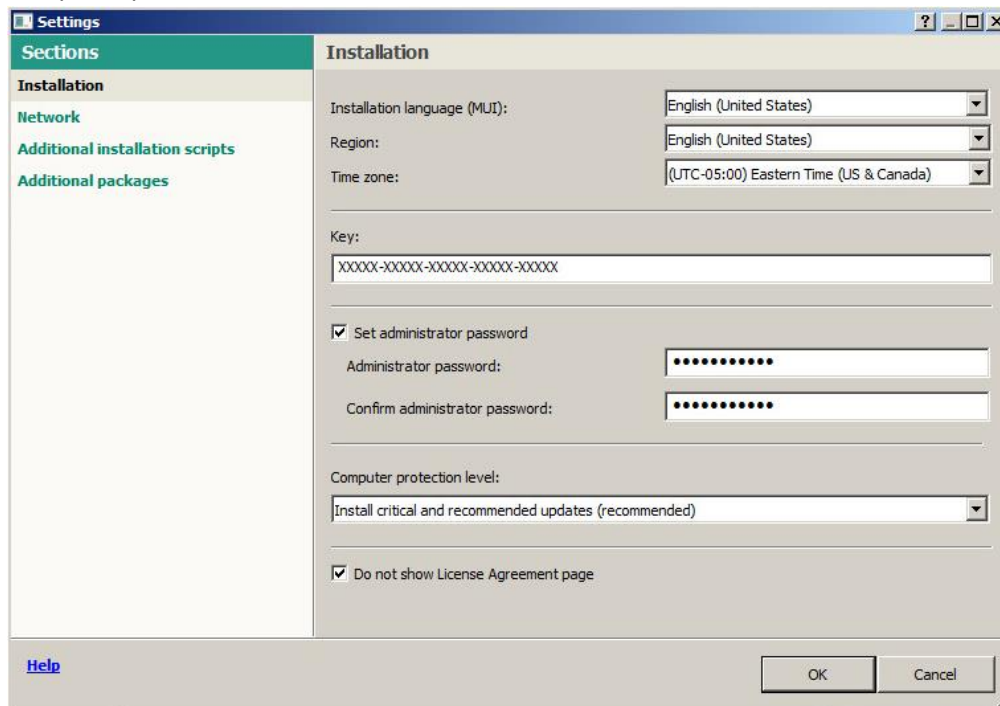


7. Select **sysprep.exe settings** to select or modify the configuration file for the system image. To modify, select **Specify custom values of main settings**. Click **Settings**.

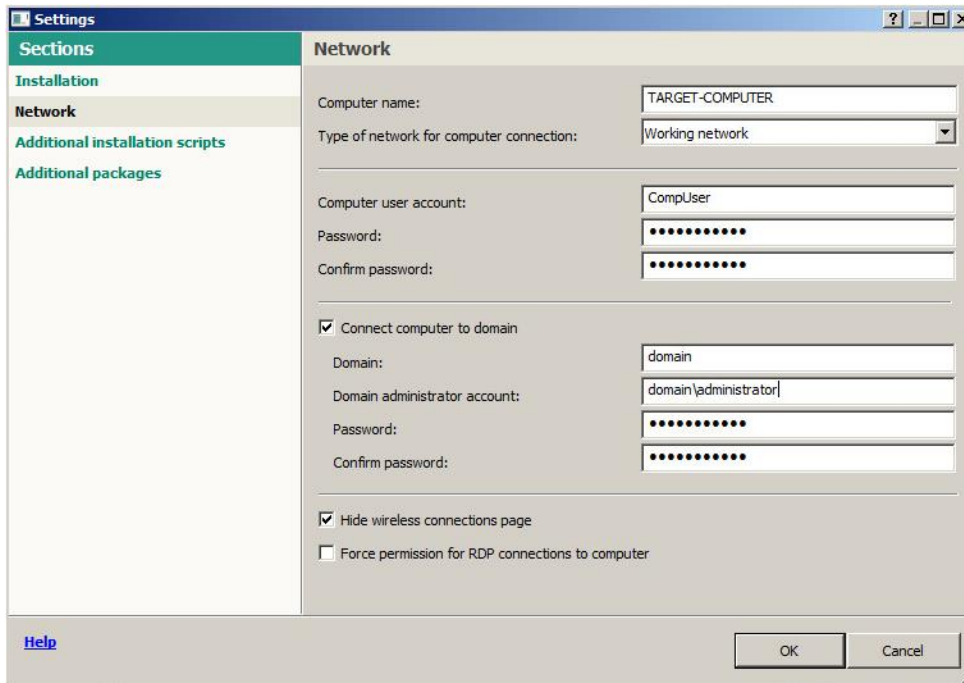
*Note that these settings can also be customized during OS deployment.*



8. Select **Installation**. This section allows an administrator to select the Installation language (MUI), Region, and Time zone, specify a Key, set the local administrator password, and define the computer protection level.



9. Select **Network**. This section allows an administrator to specify the computer name and type of network, create a computer user account, and connect the computer to a domain.

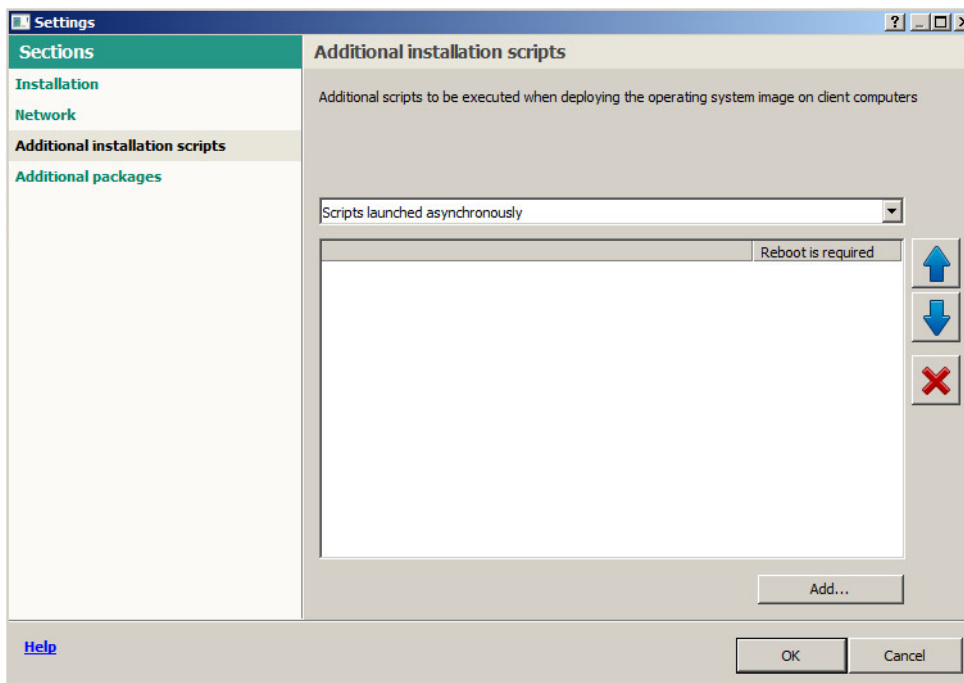


The screenshot shows the 'Settings' window with the 'Network' section selected. The 'Sections' pane on the left lists 'Installation', 'Network', 'Additional installation scripts', and 'Additional packages'. The 'Network' section contains the following fields and options:

- Computer name: TARGET-COMPUTER
- Type of network for computer connection: Working network
- Computer user account: CompUser
- Password: [Redacted]
- Confirm password: [Redacted]
- Connect computer to domain
  - Domain: domain
  - Domain administrator account: domain\administrator
  - Password: [Redacted]
  - Confirm password: [Redacted]
- Hide wireless connections page
- Force permission for RDP connections to computer

Buttons for 'OK' and 'Cancel' are at the bottom right, and a 'Help' link is at the bottom left.

10. Select **Additional installation scripts**. This section allows an administrator to specify scripts to execute when deploying the system image to a target machine. The scripts may be launched asynchronously, synchronously, at the first system logon, or when the operating system installation is finalized.

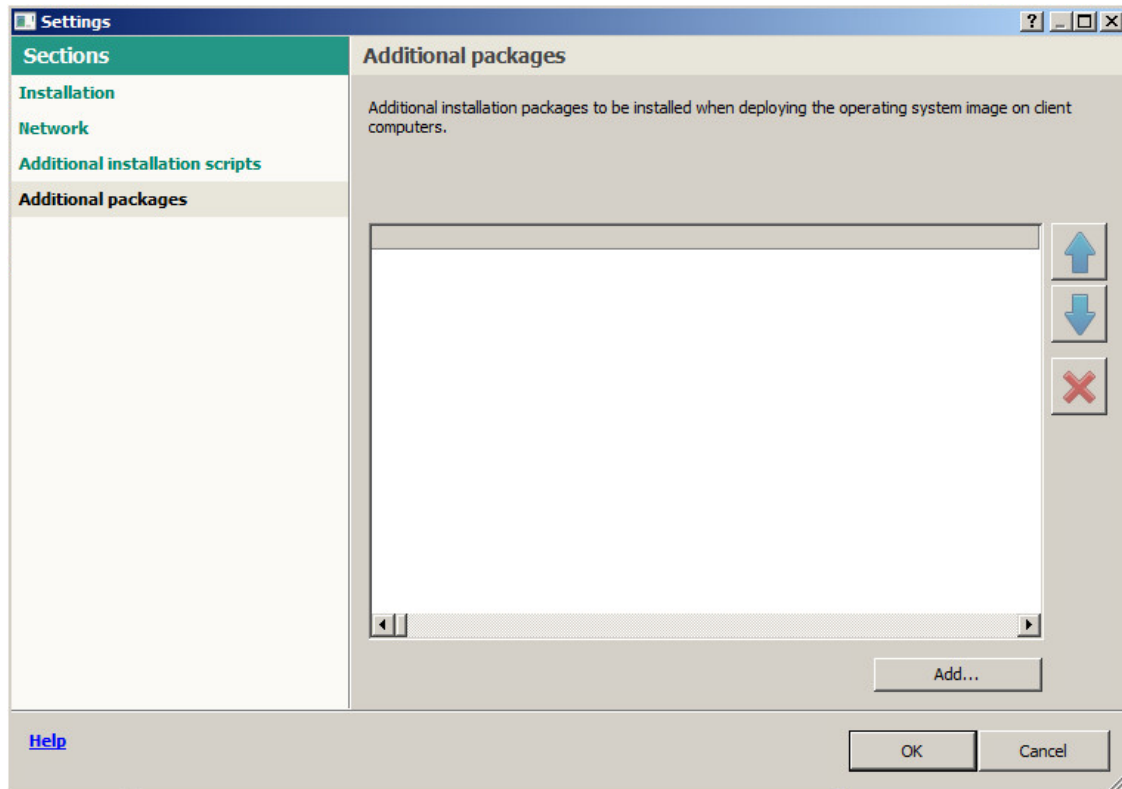


The screenshot shows the 'Settings' window with the 'Additional installation scripts' section selected. The 'Sections' pane on the left lists 'Installation', 'Network', 'Additional installation scripts', and 'Additional packages'. The 'Additional installation scripts' section contains the following elements:

- Additional scripts to be executed when deploying the operating system image on client computers
- Scripts launched asynchronously (dropdown menu)
- Reboot is required (checkbox)
- Buttons for up, down, and delete (X)
- Add... button

Buttons for 'OK' and 'Cancel' are at the bottom right, and a 'Help' link is at the bottom left.

11. Select **Additional packages**. This section allows an administrator to deploy additional software when deploying the system image. Clicking **Add...** lists the applicable packages from the Security Center storage.



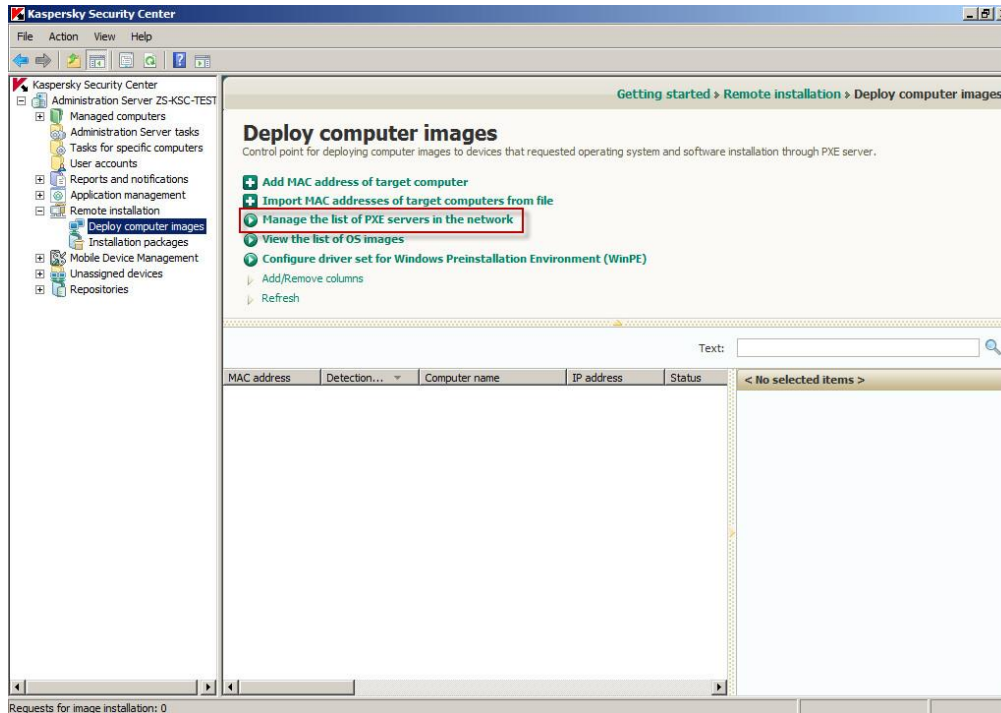
The system image is now prepared for deployment to a target computer. For instructions on how to deploy an image to a target bare metal computer, please [continue to page 22](#).

For instructions on how to deploy an image to an existing computer, please [skip to page 26](#).

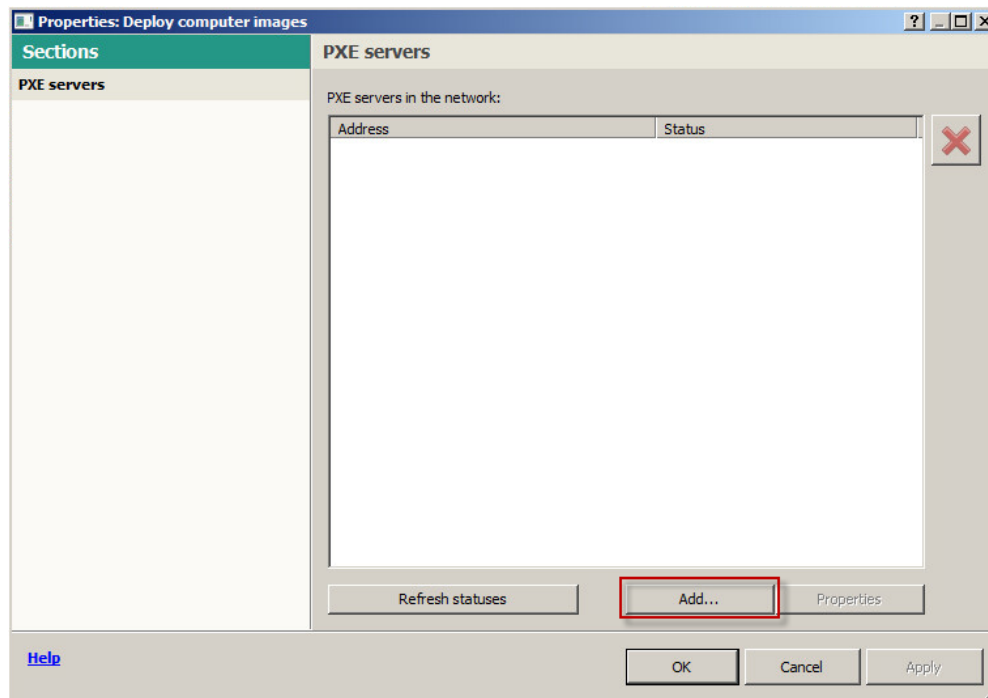
## Deploying an Operating System Image to a Bare Metal Computer

Follow the steps, below, on the server running Kaspersky Security Center.

1. Expand the **Remote Installation** node. Select **Deploy computer images**. Click **Manage the list of PXE servers in the network**.

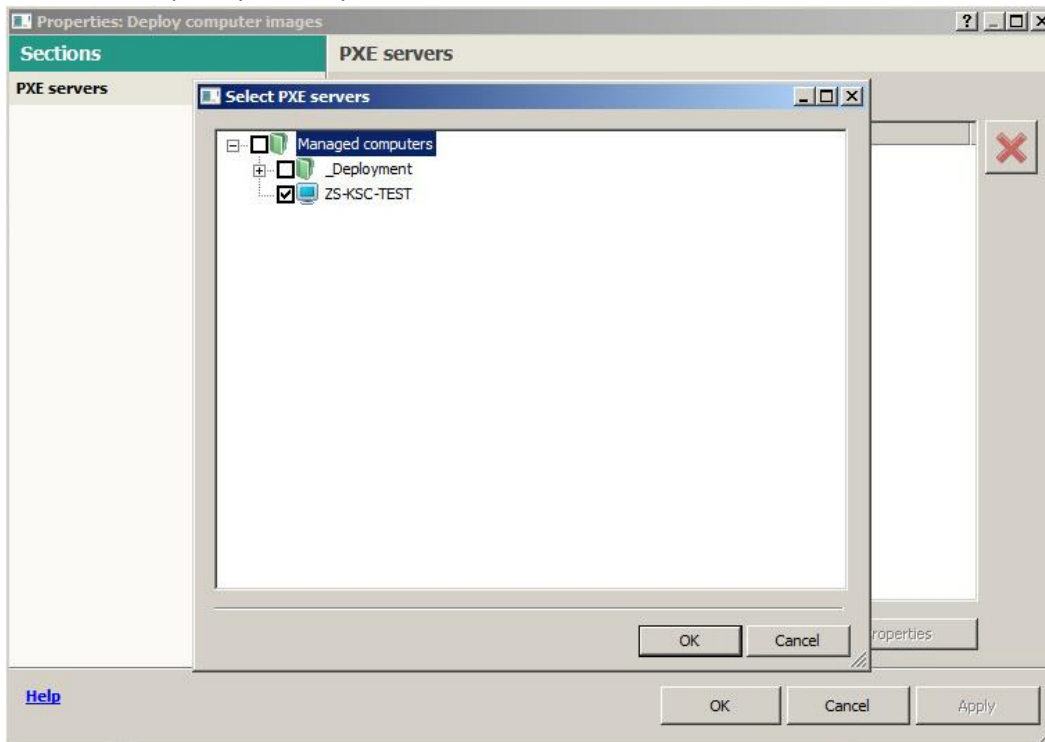


2. Click **Add...**



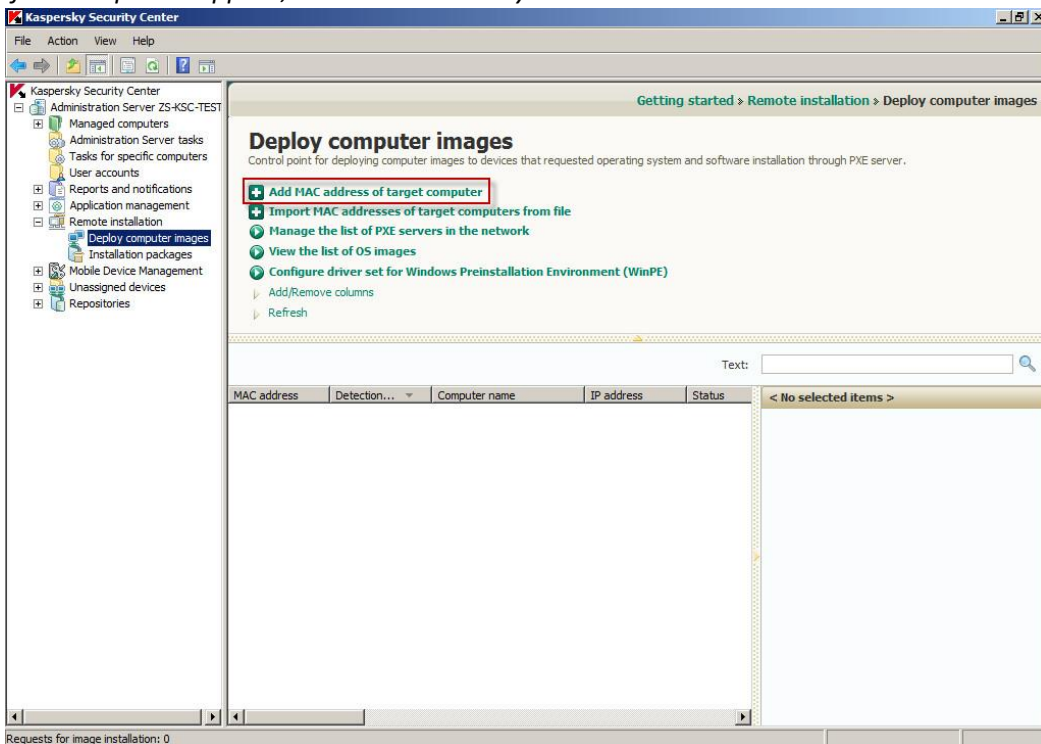


3. Select the Kaspersky Security Center server. Click **OK** three times.

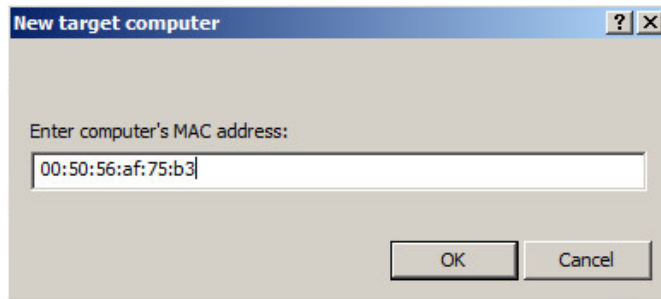


4. Return to the **Deploy computer images** node. Click **Add MAC address of target computer** if the list of computers is empty.

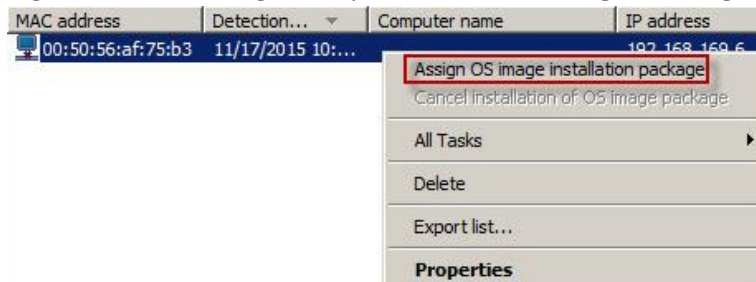
*If no computers appear, no machines have yet booted into WinPE.*



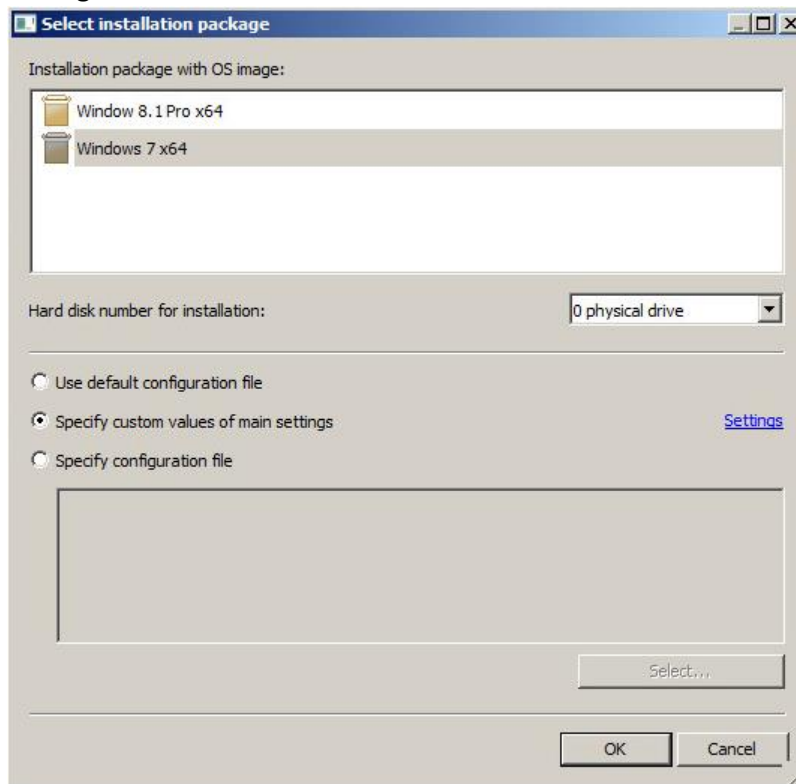
5. Enter the target computer's MAC address, with each group of two hexadecimal digits separated by colons (:). Click **OK**.



6. Right-click on the target computer and select **Assign OS image installation package**.



7. Select the installation package containing the desired OS image, the desired disk number for installation, and the desired configuration file. For this example, **Specify custom values of main settings** has been selected. Click **OK**.



8. The target computer will receive the image.

```

X:\windows\system32\cmd.exe - startnet.cmd
cal IPv6 Address . . . . . : fe80::284b:6e1f:2767:55f8%3(Preferred)   IPv4 Addr
ess. . . . . : 255.255.255.0   : 192.168.169.6(Preferred)   Subnet Mask . . . . . :
17, 2015 6:39:31 PM Lease Expires . . . . . : Tuesday, November
2015 6:39:30 PM Default Gateway . . . . . : 192.168.169.1   DHCP Serv
er . . . . . : 192.168.169.1   DHCPv6 IAD . . . . . : 5
0352214   DHCPv6 Client DUID. . . . . : 00-01-00-01-1D-DD-9D-3A-00-50-56-A
F-75-B3   DNS Servers . . . . . : 8.8.8.8
8.8.4.4   NetBIOS over Tcpip. . . . . : Enabled
17.11.2015 18:39:36.685 Attempt to register.
17.11.2015 18:39:36.685 My ip and mac: 192.168.169.6, 005056af75b3.
17.11.2015 18:39:37.247 Registration number is 3.
17.11.2015 18:39:37.263 Attempt to send status PCS_INITIAL.
17.11.2015 18:39:37.263 Received command PCC_IDLE.
17.11.2015 18:43:07.123 Received command PCC_START_INSTALL.
17.11.2015 18:43:07.138 Connect to share: \\ZS-KSC-TEST\KLSHARE
17.11.2015 18:43:07.248 Path to image: 0sImages\pxe_osimage_package_6.1.7601\exe
c\os_image.wim
17.11.2015 18:43:07.248 diskpart /s script.txt
17.11.2015 18:43:21.904 Attempt to send status PCS_OSIMAGE_INSTALL_INPROG.
17.11.2015 18:43:21.935 Received command PCC_IDLE.
17.11.2015 18:43:21.935 The image is being applied.
17.11.2015 18:43:21.935 imagex.exe /apply "\\192.168.169.101\KLSHARE\0sImages\px
e_osimage_package_6.1.7601\exec\os_image.wim" 1 C:
  
```

In the Security Center console, the installation status of the target computer will change to **Deploying OS image**.

Installation request send time:	11/17/2015 10:45:59 AM
MAC address:	00:50:56:af:75:b3
<b>Installation status:</b>	<b>Deploying OS image</b>
Installation status description:	Connected.
Installation package:	Windows 7 x64
IP address:	192.168.169.6
Computer name:	
MAC addresses conflict	No
Motherboard:	440BX Desktop Reference Platform
CPU:	Intel(R) Xeon(R) CPU E5-2640 v2 @ 2.00GHz
RAM:	
Drive:	VMware Virtual disk SCSI Disk Device
Network adapter:	Intel(R) PRO/1000 MT Network Connection

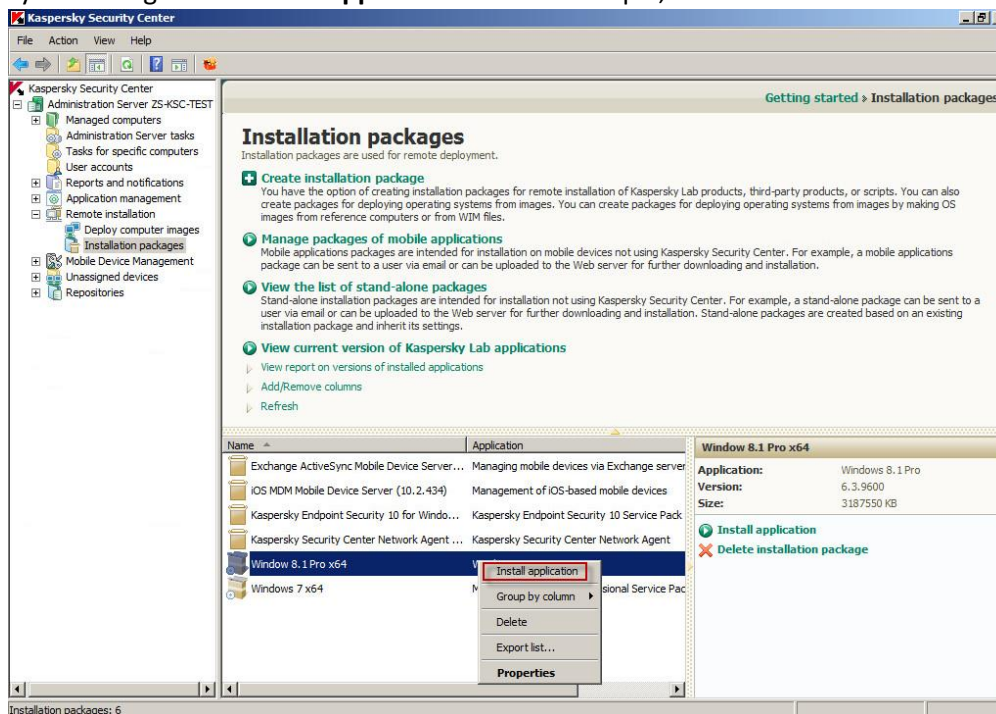
9. When the deployment has succeeded, the target computer will boot into Windows setup and apply the settings in the configuration file, if applicable.

*The image has now been deployed from the Security Center server to a bare metal machine. The target computer is now ready for use.*

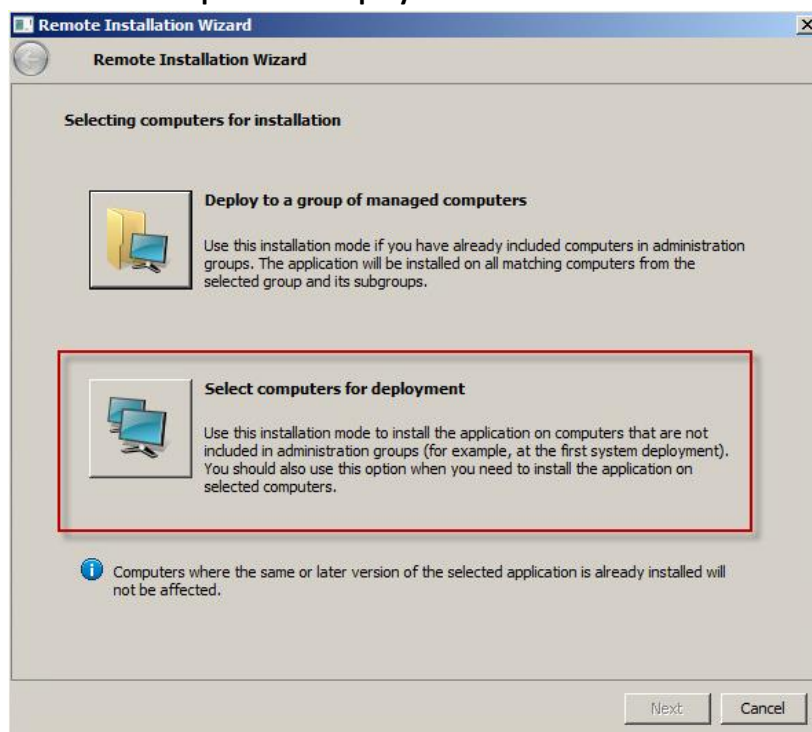
## Deploying an Operating System Image to an Existing Computer

Follow the steps, below, on the server running Kaspersky Security Center.

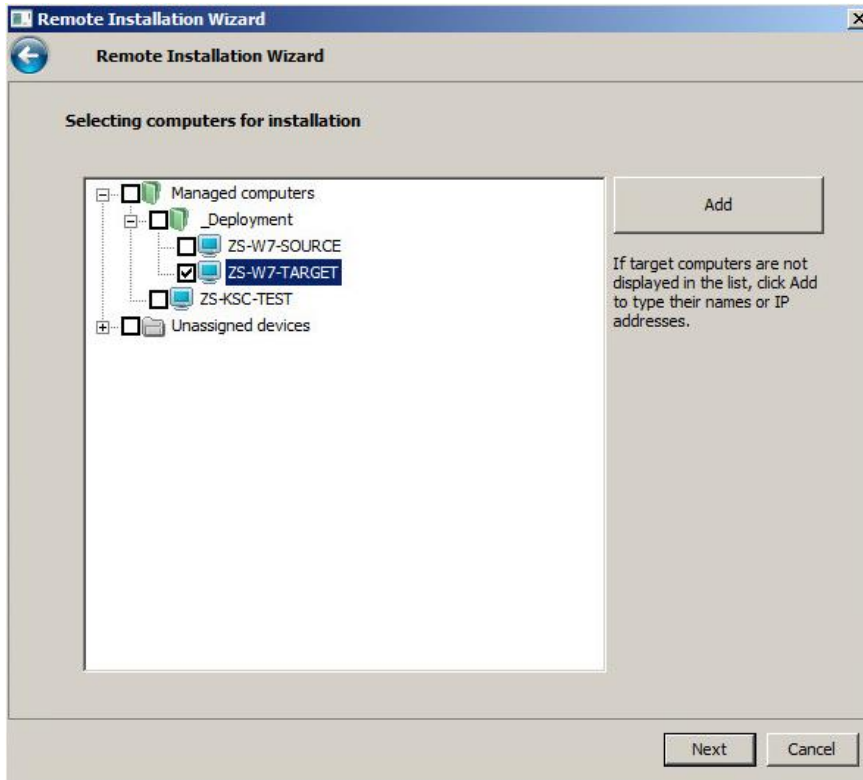
1. Expand the **Remote Installation** node. Select **Installation packages**. Right-click on the desired system image. Click **Install application**. In this example, **Windows 8.1** has been selected.



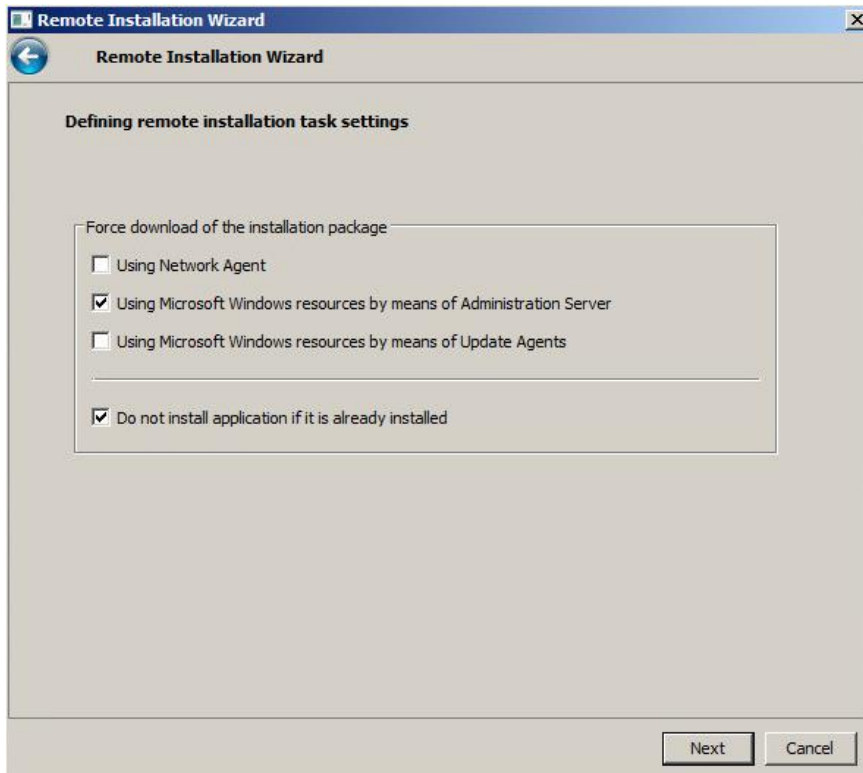
2. Click **Select computers for deployment**.



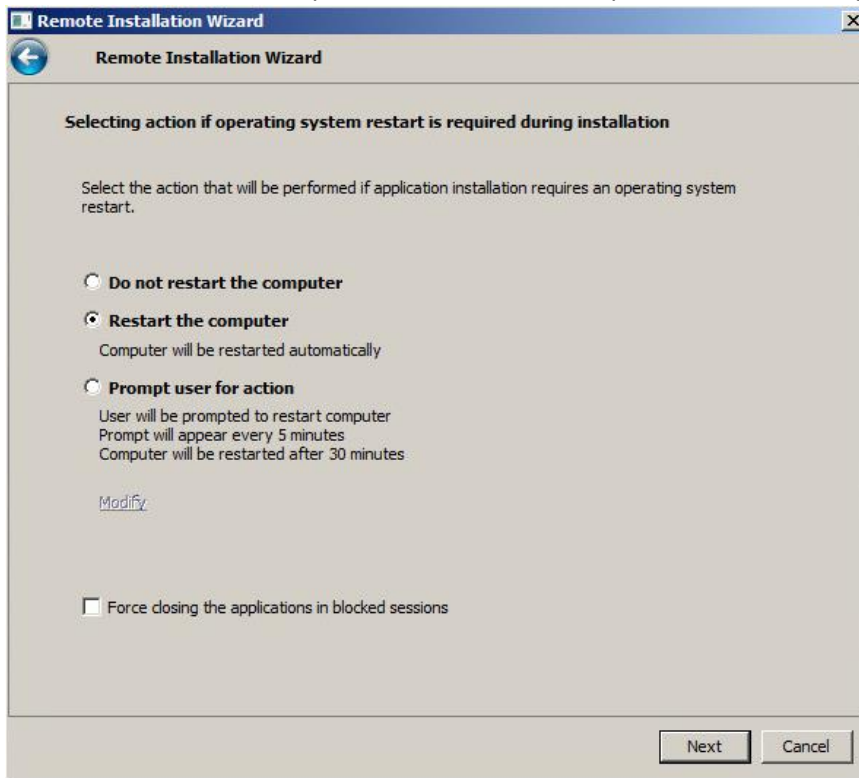
3. Select the desired computer(s) to deploy the system image. Click **Next**.



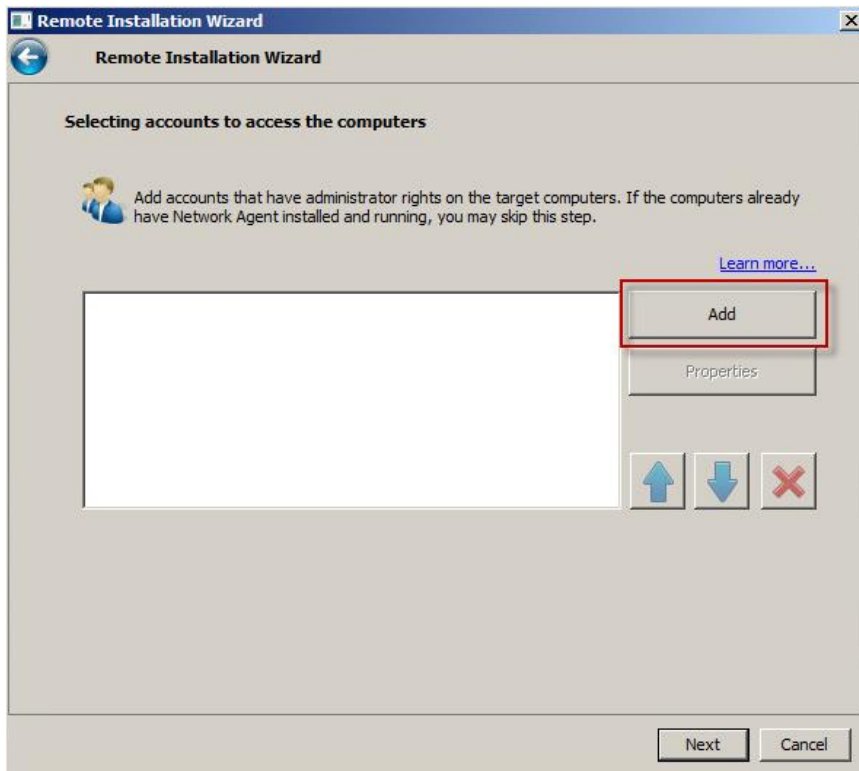
4. Select the desired methods for downloading the installation package. For this example, **Using Microsoft Windows resources by means of Administration Server** has been selected.



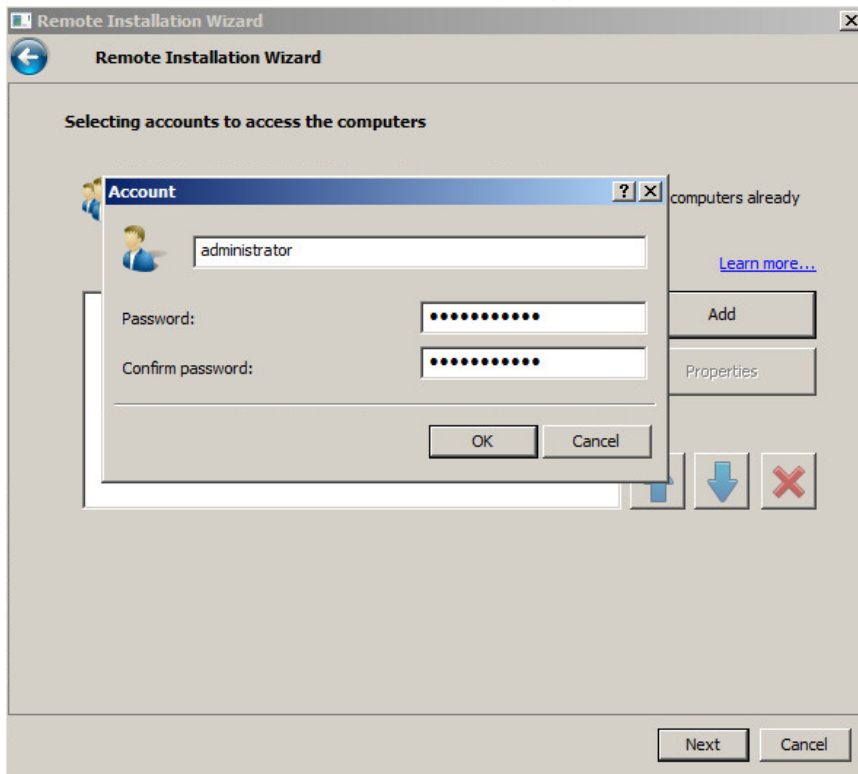
5. Select the desired restart procedure. For this example, **Restart the computer** has been selected.



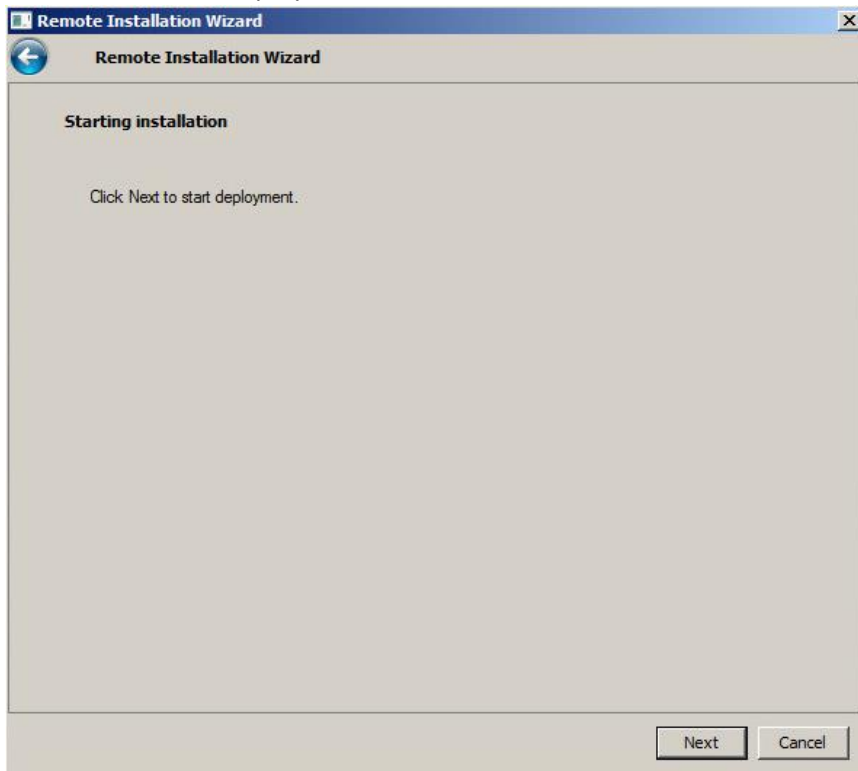
6. Click **Add**.



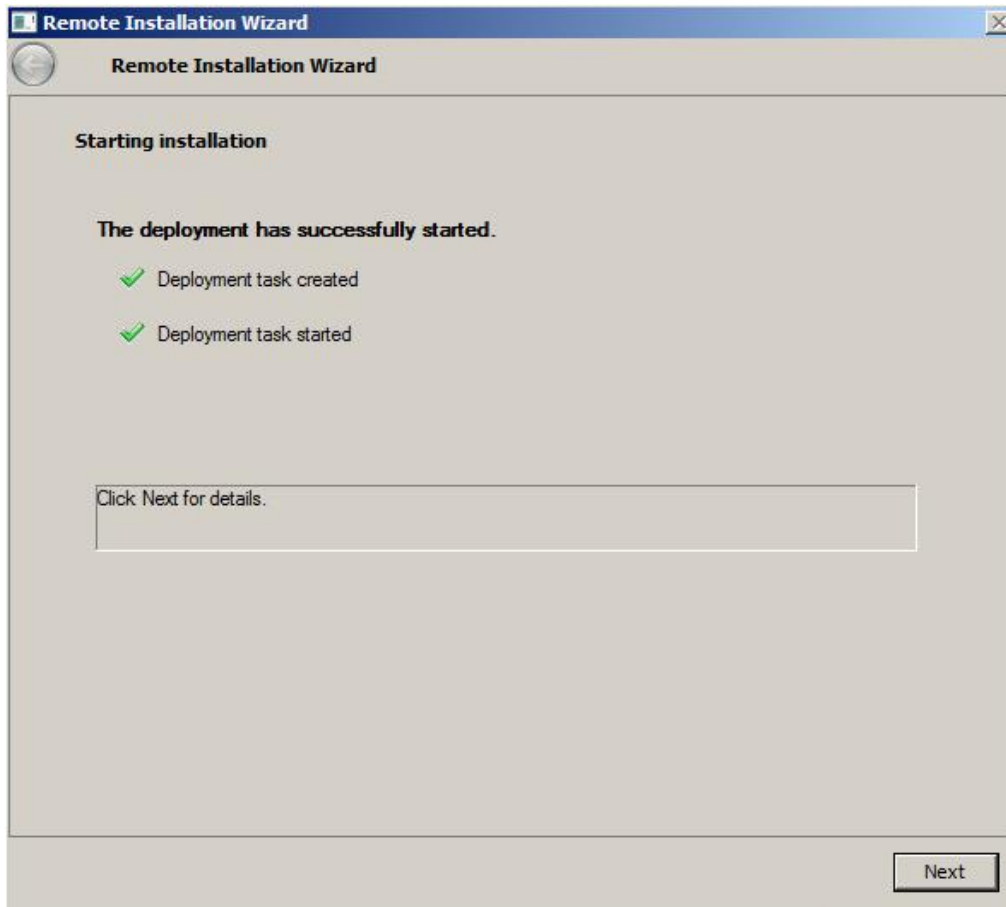
7. Fill in the information for the desired account(s). Click **OK**, then click **Next**.



8. Click **Next** to start deployment.



9. A deployment task will be created and will automatically start on the selected computers. Click **Next**.

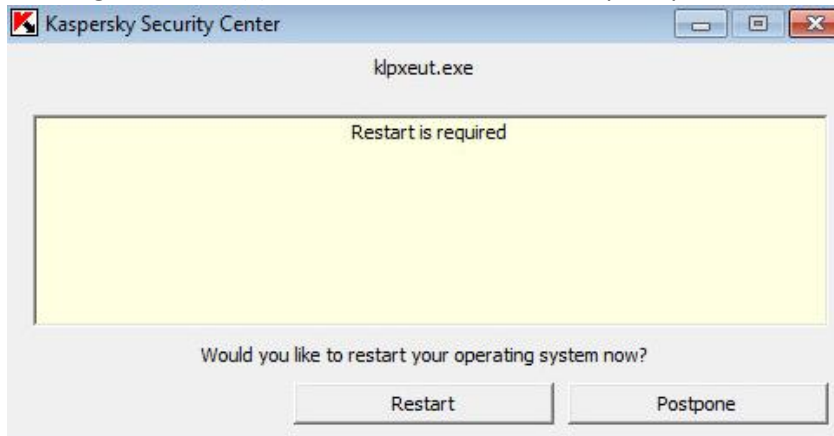


10. The installation files will be copied over to the target machine(s) and will begin to run.

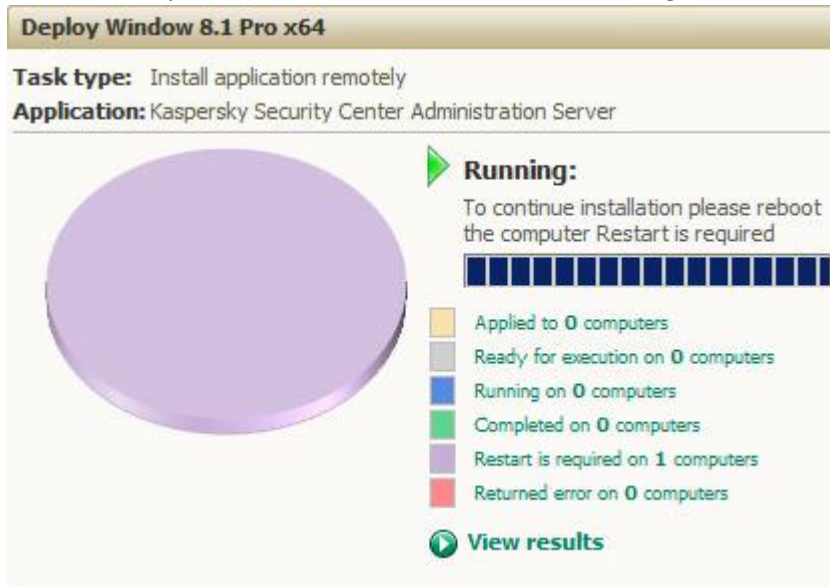




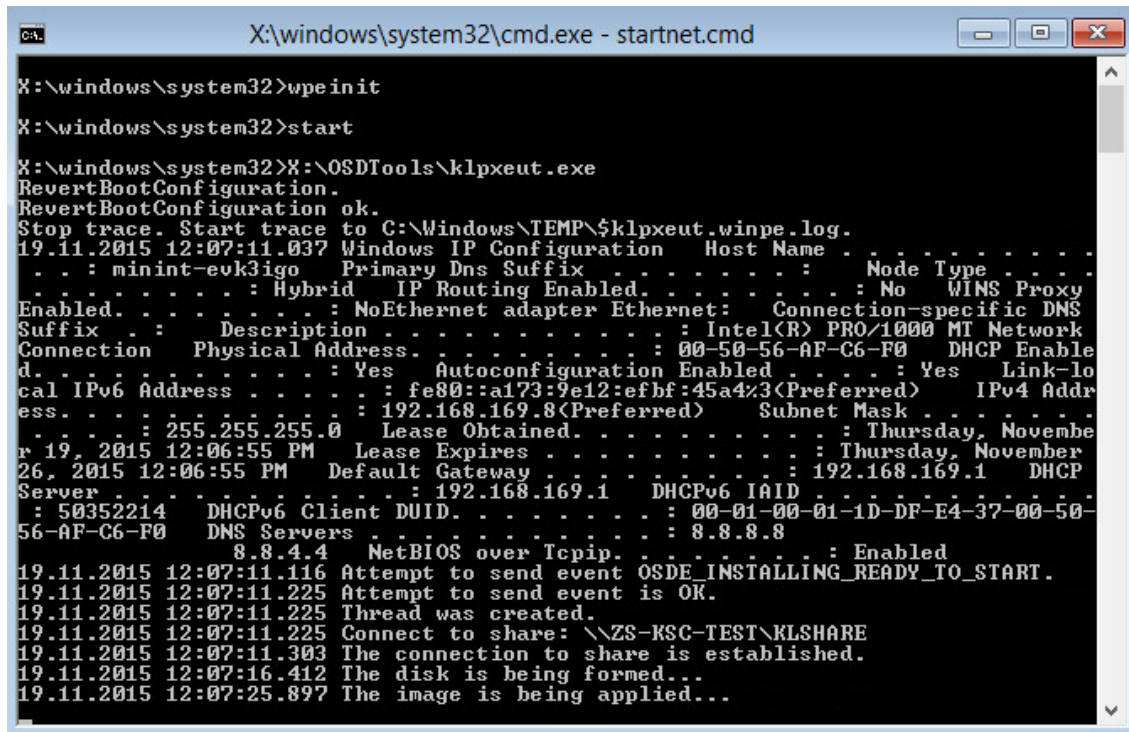
11. The target machine(s) will need to be rebooted. If prompted, click **Restart**.



In the Security Center console, the task status will change to **Restart is required**.



12. The target computer will receive the image and start to apply it. This process will take several minutes.



```
X:\windows\system32\cmd.exe - startnet.cmd
X:\windows\system32>wpeinit
X:\windows\system32>start
X:\windows\system32>X:\OSDTools\klpexeut.exe
RevertBootConfiguration.
RevertBootConfiguration ok.
Stop trace. Start trace to C:\Windows\TEMP\$klpexeut.winpe.log.
19.11.2015 12:07:11.037 Windows IP Configuration Host Name . . . . .
. . . : minint-evk3igo Primary Dns Suffix . . . . . : Node Type . . . . .
Enabled. . . . . : Hybrid IP Routing Enabled. . . . . : No WINS Proxy
Suffix . . . . . : NoEthernet adapter Ethernet: Connection-specific DNS
Description . . . . . : Intel(R) PRO/1000 MT Network
Connection Physical Address . . . . . : 00-50-56-AF-C6-F0 DHCP Enable
d. . . . . : Yes Autoconfiguration Enabled . . . . . : Yes Link-lo
cal IPv6 Address . . . . . : fe80::a173:9e12:efbf:45a4%3(Preferr
ess. . . . . : 192.168.169.8(Preferrred) Subnet Mask . . . . .
r 19. 2015 12:06:55 PM Lease Obtained. . . . . : Thursday, Novembe
26, 2015 12:06:55 PM Lease Expires . . . . . : Thursday, November
Server . . . . . : 192.168.169.1 DHCPv6 IAID
: 50352214 DHCPv6 Client DUID . . . . . : 00-01-00-01-1D-DF-E4-37-00-50-
56-AF-C6-F0 DNS Servers . . . . . : 8.8.8.8
8.8.4.4 NetBIOS over Tcpip. . . . . : Enabled
19.11.2015 12:07:11.116 Attempt to send event OSDE_INSTALLING_READY_TO_START.
19.11.2015 12:07:11.225 Attempt to send event is OK.
19.11.2015 12:07:11.225 Thread was created.
19.11.2015 12:07:11.225 Connect to share: \\ZS-KSC-TEST\KLSHARE
19.11.2015 12:07:11.303 The connection to share is established.
19.11.2015 12:07:16.412 The disk is being formed...
19.11.2015 12:07:25.897 The image is being applied...
```

13. When the deployment has succeeded, the target computer will boot into Windows setup and apply the settings in the configuration file, if applicable.

*The image has now been deployed from the Security Center server to a machine with an existing operating system. The target computer is now ready for use.*