



Acronis[®] Backup & Recovery[®] 10 Advanced Server Virtual Edition

Update 5

Installation Guide

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1 Before installation

This section answers questions that might arise before the product installation.

1.1 Acronis Backup & Recovery 10 components

This section contains a full list of Acronis Backup & Recovery 10 components with a brief description of their functionality.

Acronis Backup & Recovery 10 includes the following main types of components.

Components for a managed machine (agents)

These are applications that perform data backup, recovery and other operations on the machines managed with Acronis Backup & Recovery 10. Agents require a license to perform operations on each managed machine. Agents have multiple features, or add-ons, that enable additional functionality and so might require additional licenses.

Components for centralized management

These components, delivered with the advanced editions, provide the centralized management capability. Usage of these components is not licensed.

Console

The console provides Graphical User Interface and remote connection to the agents and other Acronis Backup & Recovery 10 components. Usage of the console is not licensed.

Bootable media builder

With bootable media builder, you can create bootable media in order to use the agents and other rescue utilities in a rescue environment. Availability of the agent add-ons in a rescue environment depends on whether an add-on is installed on the machine where the media builder is working.

1.1.1 Agent for Windows

This agent enables disk-level and file-level data protection under Windows.

Disk backup

Disk-level data protection is based on backing up either a disk or a volume file system as a whole, along with all the information necessary for the operating system to boot; or all the disk sectors using the sector-by-sector approach (raw mode). A backup that contains a copy of a disk or a volume in a packaged form is called a disk (volume) backup or a disk (volume) image. It is possible to recover disks or volumes as a whole from such backup, as well as individual folders or files.

File backup

File-level data protection is based on backing up files and folders residing on the machine where the agent is installed or on a network share. Files can be recovered to their original location or to another place. It is possible to recover all files and folders that were backed up or select which of them to recover.

Other operations

Conversion to a virtual machine

Rather than converting a disk backup to a virtual disk file, which requires additional operations to bring the virtual disk into use, Agent for Windows performs the conversion by recovering a disk backup to a new virtual machine of any of the following types: VMware Workstation, Microsoft Virtual PC, Parallels Workstation, Citrix XenServer Open Virtual Appliance (OVA) or Red Hat KVM. Files of the fully configured and operational machine will be placed in the folder you select. You can start the machine using the respective virtualization software or prepare the machine files for further usage.

Disk management

Agent for Windows includes Acronis Disk Director Lite - a handy disk management utility. Disk management operations, such as cloning disks; converting disks; creating, formatting and deleting volumes; changing a disk partitioning style between MBR and GPT or changing a disk label, can be performed either in the operating system or using bootable media.

1.1.1.1 Universal Restore

The Universal Restore add-on enables you to use the restore to dissimilar hardware functionality on the machine where the agent is installed, and create bootable media with this functionality. Universal Restore handles differences in devices that are critical for Windows start-up, such as storage controllers, motherboard or chipset.

1.1.1.2 Deduplication

This add-on enables the agent to back up data to deduplicating vaults managed by Acronis Backup & Recovery 10 Storage Node.

1.1.1.3 Agent for Hyper-V

Acronis Backup & Recovery 10 Agent for Hyper-V protects virtual machines residing on a Hyper-V virtualization server. The agent allows for backing up virtual machines from the host without having to install agents on each virtual machine. The agent installs on Windows 2008 Server x64 (any edition) or Microsoft Hyper-V Server 2008 as an add-on to Acronis Backup & Recovery 10 Agent for Windows.

Acronis Backup & Recovery 10 Agent for Hyper-V cannot be installed with Acronis Online Backup license.

Integration services have to be installed on the guest systems.

1.1.2 Agent for Linux

This agent enables disk-level and file-level data protection under Linux.

Disk backup

Disk-level data protection is based on backing up either a disk or a volume file system as a whole, along with all information necessary for the operating system to boot; or all the disk sectors using the sector-by-sector approach (raw mode.) A backup that contains a copy of a disk or a volume in a

packaged form is called a disk (volume) backup or a disk (volume) image. It is possible to recover disks or volumes as a whole from such backup, as well as individual folders or files.

File backup

File-level data protection is based on backing up files and directories residing on the machine where the agent is installed or on a network share accessed using the smb or nfs protocol. Files can be recovered to their original location or to another place. It is possible to recover all files and directories that were backed up or select which of them to recover.

1.1.2.1 Deduplication

This add-on enables the agent to back up data to deduplicating vaults managed by Acronis Backup & Recovery 10 Storage Node.

1.1.3 Agent for ESX/ESXi

Acronis Backup & Recovery 10 Agent for ESX/ESXi protects virtual machines residing on a VMware ESX or ESXi virtualization server. The agent allows for backing up virtual machines from the host without having to install agents on each virtual machine.

The agent is delivered as a virtual appliance.

1.1.4 Components for centralized management

This section lists the components included in the Acronis Backup & Recovery 10 editions that provide the centralized management capability. Besides these components, Acronis Backup & Recovery 10 Agents have to be installed on all machines that need data protection.

1.1.4.1 Management Server

Acronis Backup & Recovery 10 Management Server is the central server that drives data protection within the enterprise network. The management server provides the administrator with:

- a single entry point to the Acronis Backup & Recovery 10 infrastructure
- an easy way to protect data on numerous machines using backup policies and grouping
- enterprise-wide monitoring and reporting functionality
- the ability to create centralized vaults for storing enterprise backup archives
- the ability to manage storage nodes.

If there are multiple management servers on the network, they operate independently, manage different machines and use different centralized vaults for storing archives.

The management server's databases

The management server uses three Microsoft SQL databases:

- The configuration database that stores the list of registered machines and other configuration information, including backup policies created by the administrator.
- The synchronization database used for synchronization of the management server with registered machines and storage nodes. This is a database with rapidly changing operational data.

- The reporting database that stores the centralized log. This database may grow large. Its size depends on the logging level you set.

The configuration and synchronization databases should reside on the same Microsoft SQL Server (called an operational server) preferably installed on the same machine as the management server. The reporting database can be configured on the same or different SQL server.

When installing a management server, you can select for both operational and reporting servers what server to use. The following options are available:

1. Microsoft SQL Server 2005 Express that comes with the installation package and installs on the same machine. In this case, an SQL server instance with three databases will be created on the machine.
2. Microsoft SQL Server 2008 (any edition) previously installed on any machine.
3. Microsoft SQL Server 2005 (any edition) previously installed on any machine.

VMware vCenter integration

This feature provides the capability to view virtual machines managed by a VMware vCenter Server in the management server GUI, view the backup status of these machines in the vCenter, and automatically register virtual machines created by Acronis Backup & Recovery 10 in the vCenter.

Integration is available in all Acronis Backup & Recovery 10 advanced editions; a license for Virtual Edition is not required. No software installation is required on the vCenter Server.

This feature also enables automatic deployment and configuration of Agent for ESX/ESXi to any ESX/ESXi server, that is not necessarily managed by the vCenter.

1.1.4.2 Storage Node

Acronis Backup & Recovery 10 Storage Node is a server aimed to optimize usage of various resources (such as the corporate storage capacity, the network bandwidth, or the managed machines' CPU load) required for the enterprise data protection. This goal is achieved through organizing and managing the locations that serve as dedicated storages of the enterprise backup archives (managed vaults).

The storage nodes enable creating highly scalable and flexible, in terms of the hardware support, storage infrastructure. Up to 20 storage nodes can be set up, each being able to manage up to 20 vaults. The administrator controls the storage nodes centrally from the Acronis Backup & Recovery 10 Management Server. Direct console connection to a storage node is not possible.

Setting up the storage infrastructure

Install the storage nodes, add them to the management server (the procedure is similar to the managed machine registration) and create centralized vaults. When creating a centralized vault, specify the path to the vault, the storage node that will manage the vault, and the management operations to be performed on the vault.

A managed vault can be organized:

- on the hard drives local to the storage node
- on a network share
- on a Storage Area Network (SAN)
- on a Network Attached Storage (NAS)

- on a tape library locally attached to the storage node.

The management operations are as follows.

Storage node-side cleanup and validation

Archives, stored in unmanaged vaults, are maintained by the agents that create the archives. This means that each agent not only backs up data to the archive, but also executes service tasks that apply to the archive, the retention rules and validation rules specified by the backup plan. To relieve the managed machines of unnecessary CPU load, execution of the service tasks can be delegated to the storage node. Since the tasks' schedule exists on the machine the agent resides on, and therefore uses that machine's time and events, the agent has to initiate the storage node-side cleanup and the storage node-side validation according to the schedule. To do so, the agent must be online. Further processing is performed by the storage node.

This functionality cannot be disabled in a managed vault. The next two operations are optional.

Deduplication

A managed vault can be configured as a deduplicating vault. This means that identical data will be backed up to this vault only once to minimize the network usage during backup and storage space taken by the archives. For more information, please see the "Deduplication" section in the User Guide.

Encryption

A managed vault can be configured so that anything written to it is encrypted and anything read from it is decrypted transparently by the storage node, using a vault-specific encryption key stored on the node server. In case the storage medium is stolen or accessed by an unauthorized person, the malefactor will not be able to decrypt the vault contents without access to this specific storage node.

If the archive is already encrypted by the agent, the storage node-side encryption is applied over the encryption performed by the agent.

1.1.4.3 PXE Server

Acronis PXE Server allows for booting machines into Acronis bootable components through the network.

The network booting:

- Eliminates the need to have a technician onsite to install the bootable media into the system that has to be booted
- During group operations, reduces the time required for booting multiple machines as compared to using physical bootable media.

1.1.4.4 License Server

The server enables you to manage licenses of Acronis products and install the components that require licenses.

For more information about Acronis License Server please see "Using Acronis License Server (p. 14)".

1.1.5 Management Console

Acronis Backup & Recovery 10 Management Console is an administrative tool for remote or local access to Acronis Backup & Recovery 10 agents, and in the product editions that include the centralized management capability, to the Acronis Backup & Recovery 10 Management Server.

The console has two distributions for installation on Windows and installation on Linux. While both distributions enable connection to any Acronis Backup & Recovery 10 agent and Acronis Backup & Recovery 10 Management Server, we recommend that you use the console for Windows if you have a choice between the two. The console that installs on Linux has limited functionality:

- remote installation of Acronis Backup & Recovery 10 components is not available
- the Active Directory-related features, such as browsing the AD, are not available.

1.1.6 Bootable Media Builder

Acronis Bootable Media Builder is a dedicated tool for creating bootable media. There are two media builder distributions for installation on Windows and installation on Linux.

The media builder that installs on Windows can create bootable media based on either Windows Preinstallation Environment, or Linux kernel. The Universal Restore (p. 5) add-on enables you to create bootable media with the restore to dissimilar hardware functionality. Universal Restore handles differences in devices that are critical for Windows start-up, such as storage controllers, motherboard or chipset.

The media builder that installs on Linux creates bootable media based on Linux kernel.

The Deduplication (p. 5) add-on enables you to create bootable media with the back up to a deduplicating vault functionality. This add-on can be installed to either of the media builder distributions.

1.1.7 Acronis Wake-on-LAN Proxy

Acronis Wake-on-LAN Proxy enables Acronis Backup & Recovery 10 Management Server to wake up for backup machines located in another subnet. Acronis Wake-on-LAN Proxy installs on any server in the subnet where the machines to be backed up are located.

1.2 Supported operating systems

Acronis License Server

- Windows XP Professional SP2+ (x86, x64)
- Windows 2000 SP4 – all editions except for the Datacenter edition
- Windows Server 2003/2003 R2 - the Standard and Enterprise editions (x86, x64)
- Windows Small Business Server 2003/2003 R2 (x86)
- Windows Vista - all editions except for Vista Home Basic and Vista Home Premium (x86, x64)
- Windows 7 SP1 - all editions except for the Starter and Home editions (x86, x64)
- Windows Server 2008 - the Standard and Enterprise editions (x86, x64)
- Windows Small Business Server 2008 (x64)
- Windows Small Business Server 2011

- Windows Server 2008 R2 SP1 - the Standard, Enterprise, Datacenter, Foundation editions
- Windows MultiPoint Server 2010

Acronis Backup & Recovery 10 Management Console

- Windows XP Professional SP2+ (x86, x64)
- Windows 2000 SP4 – all editions except for the Datacenter edition
- Windows Server 2003/2003 R2 - the Standard and Enterprise editions (x86, x64)
- Windows Small Business Server 2003/2003 R2 (x86)
- Windows Vista - all editions (x86, x64)
- Windows 7 SP1 - all editions (x86, x64)
- Windows Server 2008 - the Standard and Enterprise editions (x86, x64)
- Windows Small Business Server 2008 (x64)
- Windows Small Business Server 2011
- Windows Server 2008 R2 SP1 - the Standard, Enterprise, Datacenter, Foundation editions
- Windows MultiPoint Server 2010

Acronis Backup & Recovery 10 Management Server and Acronis Backup & Recovery 10 Storage Node

- Windows XP Professional SP3 (x86, x64)
- Windows 2000 SP4 – all editions except for the Datacenter edition
- Windows Server 2003/2003 R2 - the Standard and Enterprise editions (x86, x64)
- Windows Small Business Server 2003/2003 R2 (x86)
- Windows Vista - all editions except for Vista Home Basic and Vista Home Premium (x86, x64)
- Windows 7 SP1* - all editions except for the Starter and Home editions (x86, x64)
- Windows Server 2008 - the Standard and Enterprise editions (x86, x64)
- Windows Small Business Server 2008 (x64)
- Windows Small Business Server 2011
- Windows Server 2008 R2 SP1* - the Standard, Enterprise, Datacenter, Foundation editions
- Windows MultiPoint Server 2010*

* Acronis Backup & Recovery 10 Storage Node handles tape libraries and autoloaders by using Removable Storage Management (RSM). Since Windows 7, Windows Server 2008 R2 and Windows MultiPoint Server 2010 do not support RSM, a storage node installed in these operating systems does not support tape libraries and autoloaders.

Acronis Backup & Recovery 10 Agent for ESX/ESXi

- VMware ESX Infrastructure 3.5 Update 2+
- VMware ESX/ESXi 4.0 and 4.1

The Agent for ESX/ESXi is delivered as a virtual appliance.

The Agent for ESX/ESXi supports all VMware ESXi licenses except for the free license. This is because the agent uses the Remote Command Line appliance, and free VMware ESXi restricts access to this appliance to read-only access. The agent works during the VMware ESXi evaluation period. Once a free VMware ESXi serial key is entered, the Agent for ESX/ESXi will stop functioning.

Acronis Backup & Recovery 10 Agent for Hyper-V

- Windows Server 2008/2008 R2 (x64) with Hyper-V
- Microsoft Hyper-V Server 2008/2008 R2

This agent installs on a Hyper-V host as an add-on to Acronis Backup & Recovery 10 Agent for Windows.

Acronis Backup & Recovery 10 Agent for Windows

- Windows XP Professional SP2+ (x86, x64)
- Windows 2000 SP4 – all editions except for the Datacenter edition
- Windows Server 2003/2003 R2 - the Standard and Enterprise editions (x86, x64)
- Windows Small Business Server 2003/2003 R2 (x86)
- Windows Vista - all editions except for Vista Home Basic and Vista Home Premium (x86, x64)
- Windows 7 SP1 - all editions except for the Starter and Home editions (x86, x64)
- Windows Server 2008 - the Standard and Enterprise editions (x86, x64)
- Windows Small Business Server 2008 (x64)
- Windows Small Business Server 2011
- Windows Server 2008 R2 SP1 - the Standard, Enterprise, Datacenter, Foundation editions
- Windows MultiPoint Server 2010

Acronis Backup & Recovery 10 Agent for Linux

- Linux with kernel 2.4.20 or later (including 2.6.x kernels) and glibc 2.3.2 or later
- Various 32-bit and 64-bit Linux distributions, including:
 - Red Hat Enterprise Linux 4.x and 5.x
 - Red Hat Enterprise Linux 6
 - Ubuntu 9.04 (Jaunty Jackalope), 9.10 (Karmic Koala) and 10.04 (Lucid Lynx)
 - Fedora 11 and 12
 - SUSE Linux Enterprise Server 10 and 11
 - Debian 4 (Lenny) and 5 (Etch)
 - CentOS 5
- Agent for Linux is in fact a 32-bit executable. For authentication, the agent uses system libraries, 32-bit versions of which are not always installed by default with 64-bit distributions. When using the agent on a 64-bit RedHat based distribution (such as RHEL, CentOS, Fedora), or on a 64-bit SUSE distribution, make sure that the following 32-bit packages are installed in the system:

```
pam.i386  
libselinux.i386  
libsepol.i386
```

These packages should be available in the repository of your Linux distribution.

- Before installing the product on a system that does not use RPM Package Manager, such as an Ubuntu system, you need to install this manager manually; for example, by running the following command (as the root user):

```
apt-get install rpm
```

Acronis products do not support systems with Extensible Firmware Interface (EFI). Although it is possible to restore a GPT partition with Acronis if Windows is installed on it, the restored system will not be bootable.

Acronis Backup & Recovery 10 can back up and recover operating systems if they are installed in BIOS/MBR mode, even if they run on EFI-capable servers. Most servers have BIOS settings that allow booting the installation CD in BIOS/MBR mode instead of EFI mode. The MBR mode ensures that after installation the boot disk is partitioned in MBR standard, not GPT.

1.3 System requirements

The components installed in operating systems

| Component | Memory (above the OS and running applications) | Disk space required during installation or update | Disk space occupied by the component(s) | Additional |
|--|--|---|--|---|
| The components installed in Windows | | | | |
| Complete installation | 300 MB | 2.7 GB | 1.7 GB including SQL Express Server | |
| Agent for Windows | 120 MB | 700 MB | 260 MB | |
| Agent for Hyper-V (add-on) | See "Agent for Windows" | 50 MB | 20 MB | |
| Bootable Media Builder | 80 MB | 700 MB | 300 MB | CD-RW or DVD-RW drive |
| Management Console | 30 MB | 950 MB | 450 MB | Screen resolution 1024*768 pixels or higher |
| Management Server | 40 MB | 250 MB 400 MB for SQL Express Server | 250 MB 400 MB for SQL Express Server | |
| Wake-on-LAN Proxy | Negligible | 30 MB | 5 MB | |
| Storage Node | 100 MB | 150 MB | 150 MB When using a tape library, space required for tapes database: approx. 1 MB per 10 archives | Recommended hardware: 4 GB RAM High speed storage such as hardware RAID |
| License Server | Negligible | 25 MB | 25 MB | |
| PXE Server | 5 MB | 80 MB | 15 MB | |
| The components installed in Linux | | | | |
| Complete installation | 160 MB | 400 MB | 250 MB | |
| Agent for Linux | 65 MB | 150 MB | 70 MB | |
| Bootable Media Builder | 70 MB | 240 MB | 140 MB | |
| Management Console | 25 MB | 100 MB | 40 MB | |

| The components installed on VMware ESX(i) server | | | | |
|--|--|------|------|--|
| Agent for ESX/ESXi Virtual Appliance | 512 MB (the Virtual Appliance memory setting) | 5 GB | 5 GB | CPU reservation: minimum 300 MHz recommended In a vCenter cluster, a shared storage is required |

Network interface card or virtual network adapter is a common requirement for all the components.

Bootable media

| Media type | Memory | ISO image size | Additional |
|---------------------|--------|----------------|------------|
| Based on Windows PE | 512 MB | 300 MB | |
| Linux-based | 256 MB | 130 MB | |

1.4 Licensing policy

Acronis Backup & Recovery 10 licensing is based on the number of machines managed and protected by the product. Acronis Backup & Recovery 10 agents require a license to perform operations on each managed machine. The method of license check is different for stand-alone product editions and editions that enable centralized management.

Editions with centralized management

These are the following editions:

Acronis Backup & Recovery 10 Advanced Server (ABR10 AS)

Acronis Backup & Recovery 10 Advanced Server Virtual Edition (ABR10 AS VE)

Acronis Backup & Recovery 10 Advanced Server SBS Edition (ABR10 AS SBS)

Acronis Backup & Recovery 10 Advanced Workstation (ABR10 AW)

These editions include Acronis License Server that has to be installed prior to agent installation. License keys can be imported to the Acronis License Server from .txt or .eml files during the server installation or later on. For ABR10 AS, one license key enables installation of the agent on a physical host and four virtual machines. For ABR10 AS VE, one license key enables installation of the agent on a physical host and on an unlimited number of hosted virtual machines.

Acronis Backup & Recovery 10 agent connects to Acronis License Server every time the agent service is started and then every 1–5 days, as specified by the agent configuration parameters. If the agent is unable to connect to the license server or does not find the appropriate license key for 1-60 days (as specified by the configuration parameters), it stops working until there has been a successful license check.

By default, the agent tries to connect to the license server every day and keeps working without a license server or license for 30 days.

Revoking licenses

If a managed machine is taken out of service permanently and replaced, or the machine's network card is replaced (which normally results in changing the MAC address), you can revoke the corresponding license in order to make it available again.

According to Acronis End User License Agreement:

You may reassign a Software License if you retire the licensed Hardware due to permanent Hardware failure. If you reassign a Software License, the Hardware to which you reassign the license becomes the new licensed Hardware for that particular Software License.

1.5 Using Acronis License Server

Acronis License Server is a mechanism that tracks licenses of Acronis products.

A license key is associated with the Media Access Control address (MAC address) of the machine managed by Acronis Backup & Recovery 10 agent. In cases when the machine has multiple network interface cards (NICs), the license key is associated with the first enumerated physical NIC and its MAC address.

Acronis License Server can import multiple license keys from .txt or .eml files, saving you from the time-consuming procedure of typing in numbers.

When upgraded, recovered or reinstalled, the Acronis License Server keeps all the imported licenses intact. However, it is recommended that you copy the file(s) with license keys to removable media, or create a hard copy of that file(s) and keep it in a safe place. This ensures that you have license data available in case of hardware failure.

Viewing information about licenses

1. Run the Acronis Backup & Recovery 10 Management Console.
2. Click **Manage licenses**. Connect to the machine where Acronis License Server is installed. This will display all license keys available on the license server. One license key can contain multiple licenses.

Right-click on the column headings bar to choose the details to display: Product name, License key, Import date, Expiration date and Total number of licenses assigned to each license key, as well as how many of them are available (i.e. free) and used. For example, if one license corresponds to one license key, Total=1, Available=1, Used=0 (if the license is free) or Available=0, Used=1 (if the license has been acquired).

3. To display more information about used licenses, select **View usage info** on the sidebar. (This item does not appear while all licenses are free).

This viewing mode lists all licenses that are acquired. Right-click on the column headings bar to choose the details to display: Product name, Host name, Host address, License key, Acquire date (date of deployment or installation that used the license) and Renewal date.

You can sort any list using **View > Arrange Icons by**.

Removing licenses

To completely remove a license from the Acronis License Server, select it from the list of available licenses and click **Remove license** on the sidebar.

Revoking licenses

Revoking makes used licenses available again. You may need it when:

- A managed machine is taken out of service permanently.
Revoke the license from the machine either before or after taking out the machine.
- A network card is replaced on a managed machine.
Replacing a network card on a machine normally results in changing the MAC address and thus the agent on this machine becomes inoperable. Revoke the license from the machine either before or after replacing a network card. Once the machine is turned on, the agent accesses the license server and acquires any of the available licenses automatically. Thus the agent becomes fully operable.

To revoke a license:

1. In the **Available licenses** view, select the product
2. Click **View usage info** on the sidebar
3. Select the host from which you wish to revoke the license (see the **Host name** column)
4. Click **Revoke license** on the sidebar.

When an agent is uninstalled, its license is revoked from the license server if the license server is accessible at the time of uninstallation. This is the case for all agents except for Acronis Backup & Recovery 10 Agent for ESX/ESXi.

Using the Acronis License Server Management Tool

The LicenseServerCmdLine.exe file is located in the license server installation folder, by default it is \Program Files\Acronis\LicenseServer.

LicenseServerCmdLine.exe uses the following syntax:

```
LicenseServerCmdLine [command] [option1] [option2]
```

LicenseServerCmdLine.exe supports the following commands and command options:

```
--status [servername or server IP-address]
```

Displays the status of the specified license server, i.e. the number of total/free licenses for each Acronis product.

```
--import [servername] [license key]
```

Adds a new license key to the specified license server. You can specify multiple license keys (space separated).

```
--import-file [servername] [filename]
```

Imports license keys from a .txt or .eml file.

```
--help
```

Shows usage.

2 Installation of Acronis Backup & Recovery 10

This section helps answer questions that might arise during the product installation.

2.1 Local installation (Windows)

You have a choice between downloading a full installation package and a small executable package that will download only those components that you select to install, from the Acronis Web site.

2.1.1 Preparation

Install Acronis License Server and import the licenses. You can skip this step when using a trial license key or when installing the product for online backup only.

To install the license server:

1. Start the setup program.
2. Click **Install Acronis License Server**.
3. Accept the terms of the license agreement.
4. Click **Import keys from file...** and specify the file containing the list of license keys. You can specify multiple files one by one or enter the license keys manually.

Details. You will be able to import additional license keys later at any moment, by specifying a file containing the keys or by typing them in manually.

5. Use the default values for **Install to:** and **Install for:**
6. Proceed with installation.

Acronis Backup & Recovery 10 uses TCP port 9876 for local installation and for communication between components. The setup program automatically opens this port through Windows Firewall. If you use a different firewall, make sure that the port is open for both incoming and outgoing requests through that firewall.

2.1.2 Installation procedure

Do the following to install Acronis Backup & Recovery 10:

1. Run the Acronis Backup & Recovery 10 setup file.
2. Click **Install Acronis Backup & Recovery 10**.
3. Do either of the following:
 - To install the product with full functionality (including online backup), click **Fully-functional Acronis Backup & Recovery 10**.
 - To install the product for online backup only, click **Acronis Backup & Recovery 10 for online backup only**.

4. If you chose to install the fully-functional product, specify the name or IP address of the Acronis License Server. Otherwise, skip this step.

5. Select the product edition that you want to install.

Management Console, Management Server, and Storage Node are the same in all editions. When installing any of these components, you can select the **Install the components that are available in all editions...** check box instead of selecting the edition. The installation will not use up a license in either case.

6. Select the components and specify the component features that you want to install.
7. If prompted, specify one or more of the following parameters depending on your component selection:

- Credentials for the Acronis Backup & Recovery 10 component services. By default, the setup program will create a dedicated user account for each service. See "Specifying credentials for Acronis services (p. 17)".
- The names of Microsoft SQL servers to be used by Acronis Backup & Recovery 10 Management Server. See "Specifying Microsoft SQL servers (p. 18)".
- Whether to register Acronis Backup & Recovery 10 Agent for Windows and/or Acronis Backup & Recovery 10 Storage Node on the management server. See "Registering components on the management server (p. 18)".
- The names of users who will be allowed to connect to the machine remotely. See "Specifying users allowed to connect remotely (p. 19)".

The summary window displays the list of components that will be installed on the machine.

Note: *In Windows, when canceling the installation process, only the last package is removed. Other components, if any, remain installed.*

2.1.3 Specifying credentials for Acronis services

The Acronis Backup & Recovery 10 Agent for Windows, Acronis Backup & Recovery 10 Management Server, and Acronis Backup & Recovery 10 Storage Node components run as services. When installing any of these components, you need to specify the account under which the component's service will run.

For each service, you can either create a dedicated user account (recommended in most cases) or specify an existing account of a local or domain user—for example: `.\LocalUser` or `DomainName\DomainUser`.

If you choose to create dedicated user accounts for the services, the setup program will create the following user accounts:

- For the Acronis Backup & Recovery 10 Agent for Windows service, **Acronis Agent User**
- For the Acronis Backup & Recovery 10 Management Server service, **AMS User**
- For the Acronis Backup & Recovery 10 Storage Node service, **ASN User**

The newly created accounts are given the following privileges:

- All three accounts are assigned the **Log on as a service** user right.
- The Acronis Agent User user account is assigned the **Adjust memory quotas for a process** and **Replace a process level token** user rights.
- The Acronis Agent User and ASN User user accounts are included in the **Backup Operators** group.
- The AMS User user account is included in the **Acronis Centralized Admins** group.

The setup program will assign the above listed user rights to any existing account you specify for a corresponding service.

If you choose to specify an existing user account for the agent service or the storage node service, make sure that this account is a member of the **Backup Operators** group, before proceeding with the installation.

If you choose to specify an existing user account for the management server service, this account will be added to the **Acronis Centralized Admins** group automatically.

If the machine is part of an Active Directory domain, make sure that the domain's security policies do not prevent the accounts described in this section (whether existing or newly created) from having the above listed user rights.

Important: After the installation, do not specify a different user account for a component's service. Otherwise, the component may stop working.

2.1.4 Specifying Microsoft SQL servers

When installing Acronis Backup & Recovery 10 Management Server, you need to specify the Microsoft SQL servers for the management server's databases:

- **The operational SQL server** ensures synchronization of the Acronis Backup & Recovery 10 components and stores the policies configuration.
- **The reporting SQL server** stores the operation log and statistics. The database stored on this server may become considerably large over time.

For each SQL server, select one of the following:

- Microsoft SQL Server 2005 Express that comes with the installation package and installs on the same machine. In this case, an SQL server instance will be created on the machine.
- Microsoft SQL Server 2008 (any edition) previously installed on any machine.
- Microsoft SQL Server 2005 (any edition) previously installed on any machine.

Recommendations

For the operational SQL server, we recommend selecting a server that resides on the same machine as the management server—for example, Microsoft SQL Server 2005 Express that comes with the installation package.

For the reporting SQL server, you can choose the same server as for the operational SQL server, or a different server—not necessarily on the same machine.

2.1.5 Registering components on the management server

When installing Acronis Backup & Recovery 10 Agent for Windows or Acronis Backup & Recovery 10 Storage Node (or both), you need to specify whether to register these components on Acronis Backup & Recovery 10 Management Server.

After the agent is registered on the management server, the machine can be centrally managed by management server administrators. Such machine is called a registered machine.

After the storage node is registered on the management server, registered machines can back up data to and recover data from the storage node's centralized vaults.

To register the agent and/or the storage node during installation (recommended):

1. Click **Register on the management server installed on the specified machine**.
2. Specify the name or IP address of the machine with the management server. That machine must be online. It can be the local machine—for example, when the management server is among the components you are installing.
3. Specify the user name and password of a user who is a member of the Acronis Centralized Admins group on the management server's machine. If you are installing the management server

on the local machine, specify the user name and password of a member of the Administrators group.

To skip registration:

- Click **I will register the component(s) later**.

After the installation, you can register the components on the management server or remove them from it, through the management server's interface.

2.1.6 Specifying users allowed to connect remotely

When installing Acronis Backup & Recovery 10 Agent for Windows or Acronis Backup & Recovery 10 Management Server (or both), you need to specify the list of users whom you want to allow to manage the machine remotely by using Acronis Backup & Recovery 10 Management Console.

By default, the list contains all members of the Administrators group on the machine; note that this includes the domain administrators (if the machine is in an Active Directory domain).

The setup program creates the **Acronis Remote Users** group and adds the listed users to it. By adding or removing group members, you will add or remove users who are allowed to connect to the machine remotely.

2.1.7 Update

To update one or more Acronis Backup & Recovery 10 components:

1. Run the installation package, containing the updated version of Acronis Backup & Recovery 10.
2. Click **Install Acronis Backup & Recovery 10**.
3. Specify the name or IP address of Acronis License Server.
4. Click **Update**.
5. Follow the on-screen instructions.

Updating components in the unattended mode

For information about updating a component in the unattended mode, see "Unattended installation in Windows (p. 21)".

2.2 Remote installation (Windows)

Acronis Backup & Recovery 10 components can be installed remotely.

To perform remote installation, you need administrator privileges on the target machines.

Preparation

1. Install Acronis License Server and import the licenses. You can skip this step when using a trial license key or when installing Acronis Backup & Recovery 10 for online backup only.
2. Install Acronis Backup & Recovery 10 Management Console.
3. For successful installation on a remote machine running any Windows XP version, the option **Control panel > Folder options > View > Use simple file sharing** must be disabled on that machine.

4. For successful installation on a remote machine running Windows XP with Service Pack 2 or Windows 2003 Server, the option **Control panel > Windows Firewall > Exceptions > File and Printer Sharing** must be enabled on that machine.
5. Acronis Backup & Recovery 10 uses TCP ports 445 and 25001 for remote installation. Make sure that these ports are added to exceptions in the firewall settings on the remote machines.

*Tip: If the remote machines are members of an Active Directory domain and use no firewall other than Windows Firewall, you can add TCP port 25001 to exceptions by using Group Policy. On a domain controller, create a Group Policy object, then go to **Administrative Templates -> Network -> Network Connections -> Windows Firewall -> Domain Profile -> Windows Firewall: Define port exceptions**, and then add the following port exception:*

25001:tcp:*:enabled:Acronis remote install

TCP port 445 is added to exceptions automatically by Windows Firewall when you enable File and Printer Sharing.

You can exclude both ports from exceptions after the remote installation is complete.

Installation

1. Run Acronis Backup & Recovery 10 Management Console.
2. Click **Install Acronis components**.
3. Do one of the following:
 - Specify the name or IP address of the Acronis License Server and click **Next**. If the license server has licenses for multiple Acronis Backup & Recovery 10 editions, select the edition to install.
 - Type a trial license key. You can use a single trial license key for remote installation to multiple machines.
 - Click **Install Acronis Backup & Recovery 10 for online backup only (license key is not required)**.
4. Select the location of the installation files. The default selection **Registered Components** will use installation files from the default folder: C:\Program Files\Common Files\Acronis\RemoteInstall.
5. Specify the components that you want to install and their features. Please keep in mind that the features, or add-ons, cannot be installed if the main component is not installed or selected for installation.
6. If you selected to install the agent, specify whether to register the machines on the management server after agent installation.
7. Select machines on which the components are to be installed. This can be done by:
 - browsing the network. When browsing the network, you can select individual machines, as well as entire workgroups or domains
 - typing machine names or IP addresses (click **Next** then add machines to the list)
 - importing the list of the machines from .txt or .csv files.
8. Provide the administrator's user name and password for each machine. If there is a universal administrator account on the network, enter the account credentials for one machine and set the option to apply it to all the machines that you select. Domain administrator credentials and universal credentials for workgroups can be applied in this way.

If you do not specify credentials for all machines involved, or if the credentials are not valid for some machines, you will have an option to provide credentials during installation (there is an option **Other user** in the user name and password error prompt).

Note: For a machine which is a domain controller in an Active Directory domain, you must specify the name of that domain together with the user name. For example: **MyDomain\Administrator**

9. If a trial product version is installed on some of the selected machines, a list of such machines is displayed. Select the machines where you want to upgrade the product to a full version.
10. If you selected to install the agent, specify whether to create a new account for the agent service or use an existing one. See "Specifying credentials for Acronis services (p. 17)" for details.

The summary window displays a list of machines where the components will be installed.

Once the installation starts, the program displays the operation progress and the name of the machine on which the components are being installed.

Update

To update one or more components on a remote machine, repeat the installation procedure.

Upgrade to a full version

To upgrade one or more components from a trial to a full version, import the full license keys for these components to the license server, and then repeat the installation procedure. To upgrade from a trial version to a version for online backup only, repeat the installation procedure without specifying license keys.

2.3 Unattended installation in Windows

Acronis components, such as Acronis Backup & Recovery 10 Agent for Windows, can be installed in the unattended mode, as opposed to the interactive mode.

If you are installing Acronis Backup & Recovery 10 Agent for Windows, you need the configuration script **mst_gen.vbs**, which is located in the folder where Acronis Backup & Recovery 10 Management Console is installed—by default, C:\Program Files\Acronis\BackupAndRecoveryConsole. If the management console is installed on a different machine, you can copy the script from that machine.

The following components and features can be reinstalled or updated in the unattended mode:

- Acronis Backup & Recovery 10 Agent for Windows **AcronisAgentWindows.msi**
- Acronis Backup & Recovery 10 Universal Restore: **AcronisUniversalRestore.msi**
- Acronis Backup & Recovery 10 Deduplication: **AcronisDeduplication.msi**
- Acronis Backup & Recovery 10 Bootable Media Builder:
AcronisBootableComponentsMediaBuilder.msi
- Acronis Backup & Recovery 10 Management Console for advanced editions:
AcronisManagementConsole.msi
- Acronis Backup & Recovery 10 Management Console for stand-alone editions:
AcronisStandaloneManagementConsole.msi

Before installing the agent's features (such as Universal Restore), you need to install the agent itself.

To install, reinstall, or update a component in the unattended mode

1. Run the setup program.
2. Click **Extract installation files**.
3. Extract the component's installation package.

4. If you are installing Agent for Windows, create a transform (an .mst file) for the agent's installation package by running the configuration script. Otherwise, skip this step.

For example, the following command creates a transform to install Agent for Windows with the trial license key ABCDE-54321:

```
mst_gen.vbs /msi_path C:\AcronisAgentWindows.msi /serial ABCDE-54321
```

See also the example later in this section. The complete syntax of the configuration script is described in "Configuration script parameters (p. 23)".

5. Do either of the following, depending on whether you are installing, reinstalling, or updating the component:

- If you are installing the component, run Windows Installer (the **msiexec** program) specifying the names of both the installation package and (if needed) the transform as follows:

When installing Agent for Windows:

```
msiexec /i c:\AcronisAgentWindows.msi TRANSFORMS=AcronisAgentWindows.mst /qb
```

Otherwise (in this example, when installing the Universal Restore feature):

```
msiexec /i c:\AcronisUniversalRestore.msi /qb
```

- If you are reinstalling or updating the component, run Windows Installer as follows:

When reinstalling or updating Agent for Windows:

```
msiexec /i C:\Share\AcronisAgentWindows.msi TRANSFORMS=C:\Share\AcronisAgentWindows.mst ADDLOCAL=ALL /qb
```

Otherwise (in this example, when reinstalling or updating the Universal Restore feature):

```
msiexec /i C:\Share\AcronisUniversalRestore.msi ADDLOCAL=ALL /qb /l*v C:\log.log
```

In an Active Directory domain, another way of performing unattended installation, reinstallation, or update of a supported component is through Group Policy—see "Installing the agent using Group Policy (p. 25)".

Example of creating a transform

Consider the following command, which creates a transform for the installation package of the agent for Windows:

```
mst_gen.vbs /msi_path C:\AcronisAgentWindows.msi /license_server licensesrv /product AS /account mydomain\agentuser MyPassWd /ams_address managementsrv /ams_user adminname AdminPassWd
```

After unattended installation with that transform:

- The agent will use a license for the Acronis Backup & Recovery 10 Advanced Server edition, by taking it from the license server installed on the **licensesrv** machine.
- The agent's service will run under the **agentuser** domain user account (of the **mydomain** domain) whose password is **MyPassWd**.
- The agent will be registered on Acronis Backup & Recovery 10 Management Server installed on the **managementsrv** machine; **adminname** and **AdminPassWd** are respectively the user name and password of a management server administrator.

2.4 Configuration script parameters

The configuration script **mst_gen.vbs** creates an .mst file (known as a transform, a modification, or a modification file) for the installation package of an Acronis component, such as Acronis Backup & Recovery 10 Agent for Windows.

By using the transform together with the installation package, you can install the component in the unattended mode, either by running the installation package manually or by deploying it through Group Policy.

The following is the complete syntax of the configuration script:

```
mst_gen.vbs  
  /msi_path Full_Path  
  [/current_user]  
  [/target_dir Installation_Folder]  
  [/serial License_Key [/old_serial Echo_License_Key] | /license_server License_Server  
/product Edition_Code | /online_backup | /advanced_online_backup}  
  [/account User_Name Password]  
  [/remote_users User1 User2 ... UserN]  
  [/ams_address Management_Server /ams_user Admin_Name Password]  
  [/cep_enabled]
```

The script parameters are the following.

/msi_path Full_Path

Specifies a full path to the component's installation package. Enter a local path, such as **D:\folder\AcronisAgentWindows.msi**; or a universal naming convention (UNC) path, such as **\\server\folder\AcronisAgentWindows.msi**.

/current_user

Specifies that the component will be installed for the current user only, rather than for all users on a machine.

This parameter is not effective for components that run as services: Acronis Backup & Recovery 10 Agent for Windows, Acronis Backup & Recovery 10 Management Server, and Acronis Backup & Recovery 10 Storage Node.

Avoid using this parameter when installing the component through Group Policy, because the "current user" in such installation is typically a system account.

/target_dir Installation_Folder

Specifies the folder where to install the component. Without this parameter, the component will be installed to the default folder: %ProgramFiles%\Acronis\BackupAndRecovery

The following parameters are effective only when installing Acronis Backup & Recovery 10 Agent for Windows.

/serial License_Key

Specifies the license key to use when installing the package. A license key is a sequence of letters and numerals separated by dashes. Enter the license key exactly, including the dashes.

/old_serial Echo_License_Key

When upgrading from Acronis True Image Echo, specifies the license key for that edition. Use this parameter with the **/serial** parameter.

If the license keys are stored on Acronis License Server, use the **/license_server** parameter instead.

/license_server *License_Server*

Specifies the name or IP address of the machine where Acronis License Server is installed. When using this parameter, also specify the **/product** parameter.

/product *Edition_Code*

Specifies the code of your edition of Acronis Backup & Recovery 10.

The codes are the following:

Acronis Backup & Recovery 10 Advanced Server: **AS**

Acronis Backup & Recovery 10 Advanced Server SBS Edition: **SBS**

Acronis Backup & Recovery 10 Advanced Workstation: **AW**

Acronis Backup & Recovery 10 Advanced Server Virtual Edition: **VE**

/online_backup

Specifies that the agent will be installed for online backup only, with local management capability. Neither license key nor license server is required.

/advanced_online_backup

Specifies that the agent will be installed for online backup only, with local, centralized, and remote management capability. Neither license key nor license server is required.

/account *User_Name Password*

Specifies the user name and password of the user account under which Acronis Managed Machine Service will run on the machines. The user account must have appropriate privileges, as described in *Specifying credentials for Acronis services* (p. 17). Separate the name of the domain and the account by a backslash, as in: **mydomain\User**

Without this parameter, the agent will run under the default account: **Acronis Agent User**

/remote_users *User1 User2 ... UserN*

Specifies the user names that will be added to the Acronis Remote Users group.

With this parameter, only the specified users will be added to the group. Separate the user names by spaces.

Without this parameter, all members of the Administrators group on the particular machine will be added to the group.

Members of the Acronis Remote Users group are allowed to connect to the agent remotely.

/ams_address *Management_Server*

Specifies the name or IP address of the Acronis Backup & Recovery 10 Management Server. With this parameter, the machine will be registered on the management server after the installation is complete.

/ams_user *Admin_Name Password*

Specifies the name and password of a user who is a member of the **Acronis Centralized Admins** group on the management server. Use this parameter with the **/ams_address** parameter.

/cep_enabled

Specifies whether the machine will participate in the Customer Experience Program.

With this parameter, information about the hardware configuration, the most and least used features and about any problems will be automatically collected from the machine and sent to Acronis on a regular basis. The terms of participation can be found on the Acronis Web site.

Without this parameter, the information will not be sent.

2.5 Installing the agent using Group Policy

You can centrally install, or deploy, Acronis Backup & Recovery 10 Agent for Windows onto machines that are members of an Active Directory domain, by using Group Policy, a mechanism available in Microsoft Windows 2000 Server and later Windows server operating systems.

2.5.1 Preparing the agent's deployment

In this and the following sections, you will find out how to set up a Group Policy object to deploy Acronis Backup & Recovery 10 Agent for Windows onto machines in an entire domain or in its organizational unit.

Every time a machine logs on to the domain, the resulting Group Policy object will ensure that the agent is installed and operational on the machine.

Prerequisites

Before proceeding with agent deployment, make sure that:

- You have an Active Directory domain with a domain controller running Microsoft Windows Server 2003 or later.
- You are a member of the Domain Admins group in the domain.
- You know the license key or the name or IP address of a machine where Acronis License Server is installed.
- You have a machine running Windows, with Acronis Backup & Recovery 10 Management Console installed on it.

Step 1: Extracting installation packages

You need to create a shared folder that will contain the agent's installation package (provided as an .msi file), and extract the package there.

1. On the domain controller (or any other machine in the domain), create a folder—for example: **D:\Acronis**
2. Start the Acronis Backup & Recovery 10 setup program.
3. Click **Extract installation files**.
4. Select the **Agent for Windows (AcronisAgentWindows.msi)** check box.
5. If you are installing Acronis Backup & Recovery 10 Deduplication, select the **Deduplication (AcronisDeduplication.msi)** check box.
6. If you are installing Acronis Backup & Recovery 10 Universal Restore, select the **Universal Restore (AcronisUniversalRestore.msi)** check box.

Note: In Acronis Backup & Recovery 10 Advanced Server Virtual Edition, the Universal Restore feature is already enabled, so you do not need to install it separately.

7. In **Extract to**, type the name of the folder that you just created, or click **Browse** and select the folder.
8. Click **Extract**.

9. Share the folder where you placed the installation packages. Make sure that domain users can access the shared folder—for example, by leaving the default sharing settings for **Everyone**.

Step 2: Configuring the agent's installation package

Important: Skip this step when reinstalling or updating the agent.

You need to configure the agent's installation package by running the configuration script, which is installed along with the management console. By default, the script is located in the folder %ProgramFiles%\Acronis\BackupAndRecoveryConsole. If the management console is installed on a different machine, you can simply copy the configuration script from that machine.

The configuration script creates a transform (also known as a modification, a modification file, or an .mst file) for the installation package.

1. In the **Start** menu, click **Run**, and then type: **cmd**
2. Click **OK**.
3. Change the current folder to the one where the configuration script **mst_gen.vbs** is located, by running commands such as:

```
C:  
cd "C:\Program Files\Acronis\BackupAndRecoveryConsole"
```

4. Run the configuration script.

For example, the following command creates a transform for the file **D:\Acronis\Acronis\AgentWindows.msi** and uses licenses for the Acronis Backup & Recovery 10 Advanced Server edition from the license server installed on **mylicensesrv**; the agent will run under the user account **mydomain\AgentUser**:

```
mst_gen.vbs /msi_path D:\Acronis\AgentWindows.msi /license_server mylicensesrv  
/product AS /account mydomain\AgentUser MyPassWd
```

Note: You must include a complete path to the installation package, even if the package is in the same folder as the configuration script.

For the complete syntax of the configuration script, see Configuration script parameters (p. 23).

The agent's installation package is ready for deployment. You now need to create a Group Policy object, as described in Setting up the Group Policy object (p. 26).

2.5.2 Setting up the Group Policy object

Use this procedure to set up a Group Policy object (GPO) for agent deployment in the entire domain or in its organizational unit. The agent will be installed on each machine which is a member of the domain or the organizational unit immediately after Windows starts on that machine.

Prerequisites

- You must be logged on to the domain controller as a domain administrator; if the domain has more than one domain controller, log on to any of them as a domain administrator.
- If you are planning to deploy the agent in an organizational unit, make sure that the organizational unit exists in the domain.
- Make sure that you have completed the steps described in Preparing the agent's deployment (p. 25).

Step 1: Creating a Group Policy object

1. In the **Start** menu, point to **Administrative Tools**, and then click **Active Directory Users and Computers** (in Windows Server 2003) or **Group Policy Management** (in Windows Server 2008).
2. In Windows Server 2003:
 - Right-click the name of the domain or organizational unit, and then click **Properties**. In the dialog box, click the **Group Policy** tab, and then click **New**.In Windows Server 2008:
 - Right-click the name of the domain or organizational unit, and then click **Create a GPO in this domain, and Link it here**.
3. Type the name of the new Group Policy object—for example: **Acronis Backup & Recovery 10 Agent**
4. In Windows Server 2003:
 - Click **Edit**.In Windows Server 2008:
 - Under **Group Policy Objects**, right-click the Group Policy object that you created, and then click **Edit**.

The Group Policy object editor snap-in will open.

Step 2: Configuring the Group Policy object

1. In the **Group Policy Object Editor** snap-in, expand **Computer Configuration**, and then expand **Software Settings**.
2. Right-click **Software installation**, then point to **New**, and then click **Package**.
3. Select the agent's installation package in the shared folder that you previously created, and then click **Open**.
4. In the **Deploy Software** dialog box, click **Advanced**, and then click **OK**.
5. If you are reinstalling or updating the agent, do nothing.
If you are installing the agent, do the following: on the **Modifications** tab, click **Add**, and then select the transform that you previously created; the transform file has the name **AcronisAgentWindows.mst** and is located in the same folder as the agent's installation package.
6. Click **OK** to close the **Deploy Software** dialog box.
7. If you are installing Acronis Backup & Recovery 10 Deduplication and/or Acronis Backup & Recovery 10 Universal Restore, do the following for the appropriate installation package:
 - a. Right-click **Software installation**, then point to **New**, and then click **Package**.
 - b. Select the installation package in the shared folder and then click **Open**.
 - c. In the **Deploy Software** dialog box, click **Assigned** and then click **OK**.

2.6 Installation in Linux

This section describes installation of Acronis Backup & Recovery 10 components on a machine running Linux.

By using command-line parameters, you can install the product in the unattended installation mode.

2.6.1 Preparation

Make sure that the RPM Package Manager (RPM) is installed in your system. Before installing the product on a Linux distribution that does not use RPM, such as Ubuntu, you need to install RPM manually; for example, by running the following command as the root user:

```
apt-get install rpm
```

Linux distributions where RPM is already installed include Red Hat Enterprise Linux, Fedora, and SUSE Linux Enterprise Server.

Before proceeding with installation, you need to extract the installation files and assign them necessary access permissions:

1. On a machine running Windows, run the Acronis Backup & Recovery 10 setup file.
2. Click **Extract installation files**.
3. In the list of installation files, select the following check boxes:
 - **Agent for Linux (AcronisAgentLinux.i686)**
 - **Bootable Media Builder (AcronisBootableComponentsMediaBuilderLinux.i686)**
 - **Management Console for Linux (AcronisManagementConsoleLinux.i686)**
 - **Deduplication (AcronisDeduplication.i686)**
 - **UpgradeTool (AcronisUpgradeToolLinux.i686)**

Note: You need Acronis Backup & Recovery 10 Upgrade Tool only if you are upgrading from Acronis True Image Echo.

4. Copy the installation files (.i686 files) to a directory on the machine where you want to install the components.
5. Go to the directory where you copied the installation files, and then run the following command:

```
chmod 777 Acronis*.i686
```

2.6.2 Installation in the interactive mode

To install Acronis Backup & Recovery 10 Agent for Linux or Acronis Bootable Media Builder

1. Make sure that the licenses for Acronis Backup & Recovery 10 Agent for Linux are imported to the Acronis License Server.
2. Run the installation file:
 - For Acronis Backup & Recovery 10 Agent for Linux: **AcronisAgentLinux.i686**
 - For Acronis Bootable Media Builder: **AcronisBootableComponentsMediaBuilder.i686**
3. Specify the license server—either by typing its DNS name or IP address, or by choosing to find the license server automatically. Alternatively, type your Acronis Backup & Recovery 10 license key.
4. If you are installing the Agent for Linux, specify whether you want to register the machine on the management server. You can add the machine to the management server later by using the machine's name or IP address.
5. The setup program may ask you to compile the SnapAPI module for your Linux kernel. Select **Continue** to compile the module now (recommended), or select **Skip** to compile it manually later.

Note: If the setup program could not compile the necessary module for your Linux distribution, or if you have chosen to compile the module manually later, please refer to the file:

/usr/lib/Acronis/BackupAndRecovery/HOWTO.INSTALL

To install Acronis Backup & Recovery 10 Deduplication

Note: You need to install this component only if you are using a full version of Acronis Backup & Recovery 10. When using a trial version, you can use deduplication without installing this component.

1. Make sure that the licenses for both Acronis Backup & Recovery 10 Agent for Linux and Acronis Backup & Recovery 10 Deduplication are imported to the Acronis License Server.
2. After you have installed Acronis Backup & Recovery 10 Agent for Linux, run the installation file: **AcronisDeduplication.i686**
3. Specify the license server—either by typing its DNS name or IP address, or by choosing to find the license server automatically.
4. Follow the on-screen instructions.

To install Acronis Backup & Recovery 10 Management Console or Acronis Backup & Recovery 10 Upgrade Tool

1. Run the installation file:
 - For Acronis Backup & Recovery 10 Management Console: **AcronisManagementConsoleLinux.i686**
 - For Acronis Backup & Recovery 10 Upgrade Tool: **AcronisUpgradeTool.i686**
2. Follow the on-screen instructions.

2.6.3 Installation in the unattended mode

To install a component in the unattended mode (without asking for confirmations), run the component's installation file with the **-a** command-line parameter. You may need to use other parameters (p. 30) to specify how to perform the installation.

The following are two examples of unattended installation.

Example 1: Unattended installation with a license key. This example applies to stand-alone editions of the product and to advanced editions when using a trial license key.

The following command installs Acronis Backup & Recovery 10 Agent for Linux in the unattended mode (without asking for confirmations) and uses the license key 12345-67890-ABCDE:

```
./AcronisAgentLinux.i686 -a -i BackupAndRecoveryAgent -l 12345-67890-ABCDE
```

Note: In stand-alone editions of the product, the file name is *AcronisBackupRecoveryServerLinux.i686* instead of *AcronisAgentLinux.i686*.

Example 2: Unattended installation with a license server. This example applies to advanced editions of the product when using a full license key.

The following command:

- Installs Acronis Backup & Recovery 10 Agent for Linux in the unattended mode.
- Uses Acronis License Server located on the machine **licensesrv**, and a license key for the Acronis Backup & Recovery 10 Advanced Server edition.
- Registers the machine on Acronis Backup & Recovery 10 Management Server located on the machine **managementsrv** once the installation is complete.

```
./AcronisAgentLinux.i686 -a -i BackupAndRecoveryAgent -L licensesrv -P AS -C managementsrv -g srvadmin -w PassWd123
```

2.6.4 Command-line parameters

When running any of the installation files:

- **AcronisAgentLinux.i686** (Acronis Backup & Recovery 10 Agent for Linux)
- **AcronisBootableComponentsMediaBuilderLinux.i686** (Acronis Backup & Recovery 10 Bootable Components and Media Builder)
- **AcronisManagementConsoleLinux.i686** (Acronis Backup & Recovery 10 Management Console)
- **AcronisDeduplication.i686** (Acronis Backup & Recovery 10 Deduplication)
- **AcronisUpgradeTool.i686** (Acronis Backup & Recovery 10 Upgrade Tool)

you can specify one or more of command-line parameters.

Parameters

Unless stated otherwise, the parameters are present in all installation files.

-a or --auto

Performs installation in the so-called unattended setup mode, as opposed to the default interactive mode.

The setup program will proceed without asking for interaction, such as typing the license key or clicking the **Next** buttons.

When using this parameter, you need to specify the component to install, by using the **-i** parameter.

When running the installation files **AcronisAgentLinux.i686** or **AcronisBootableComponentsMediaBuilderLinux.i686** and using this parameter, you need to specify the license server or the license key by using the **-L** or **-I** parameter, respectively.

If the SnapAPI module needs to be compiled and the compilation is possible, the setup program will automatically compile the module; otherwise, it will skip the compilation.

-n or --nodeps

Ignores dependencies during an unattended setup. This option is effective only in the unattended setup mode (see the **-a** parameter described previously).

-u or --uninstall

Uninstalls the component. You do not need to specify a license key or the license server.

-d or --debug

Puts verbose information to the installation log.

-i *ComponentName* or --id=*ComponentName*

Specifies the name of the component being installed:

For the installation file **AcronisAgentLinux.i686**: **BackupAndRecoveryAgent**

For the installation file **AcronisBootableComponentsMediaBuilderLinux.i686**:
BackupAndRecoveryBootableComponents

For the installation file **AcronisManagementConsoleLinux.i686**: **ManagementConsole**

For the installation file **AcronisDeduplication.i686**: **Deduplication**

For the installation file **AcronisUpgradeTool.i686**: **AcronisUpgradeTool**

-e {0|1} or --ssl={0|1}

Applies only to the installation file AcronisAgentLinux.i686.

Specifies whether to enable authentication for connection to other components. Authentication is performed by using Secure Socket Layer (SSL) certificates.

The possible values are:

0: Do not use authentication

1: Use authentication

-C *ManagementServer* or **--ams=***ManagementServer*

Applies only to the installation file AcronisAgentLinux.i686.

Specifies the name or IP address of the Acronis Backup & Recovery 10 Management Server.

When using this parameter, you need to specify the user name and password of a management server administrator by using the **-g** and **-w** parameters, respectively.

The machine will be registered on the management server after the installation is complete.

-g *UserName* or **--login=***UserName*

Applies only to the installation file AcronisAgentLinux.i686.

Specifies the user name of a member of the **Acronis Centralized Admins** group on the management server whose name is given by *ManagementServer*.

-w *Password* or **--password=***Password*

Applies only to the installation file AcronisAgentLinux.i686.

Specifies the password for the user whose name is given by *UserName*.

-p *PortNumber* or **--port=***PortNumber*

Applies only to the installation file AcronisAgentLinux.i686.

Specifies the number of the TCP port to use to connect to other Acronis Backup & Recovery 10 components. The default port number is 9876.

-l *LicenseKey* or **--serial=***LicenseKey*

Applies only to the following installation files: AcronisAgentLinux.i686 and AcronisBootableComponentsMediaBuilderLinux.i686.

Specifies the license key for the component. Use either this parameter or the **-L** parameter.

-L *LicenseServer* or **--license-server=***LicenseServer*

Applies only to the following installation files: AcronisAgentLinux.i686, AcronisDeduplication.i686, and AcronisBootableComponentsMediaBuilderLinux.i686.

Specifies the name or IP address of the Acronis License Server. Use either this parameter or the **-l** parameter.

When using this parameter, you need to specify the code of your edition of Acronis Backup & Recovery 10, by using the **-P** parameter.

-P *ProductAlias*

Applies only to the following installation files: AcronisAgentLinux.i686, AcronisDeduplication.i686, and AcronisBootableComponentsMediaBuilderLinux.i686.

Specifies the code of your edition of Acronis Backup & Recovery 10—also called the product alias. The codes are the following:

For AcronisAgentLinux.i686 and AcronisBootableComponentsMediaBuilderLinux.i686:

Acronis Backup & Recovery 10 Advanced Server: **AS**

Acronis Backup & Recovery 10 Advanced Server Virtual Edition: **VE**

For *AcronisDeduplication.i686*:

Acronis Backup & Recovery 10 Advanced Server: **DUPAS**

Acronis Backup & Recovery 10 Advanced Server Virtual Edition: **DUPVE**

-v or --version

Displays the product version and then exits.

-? or --help

Displays help and then exits.

--usage

Displays a brief usage message and then exits.

2.7 Installation of Agent for ESX/ESXi

Acronis Backup & Recovery 10 Agent for ESX/ESXi is delivered as a virtual appliance. This component enables you to back up and recover virtual machines hosted on a VMware ESX Server without installing agents on the virtual machines.

Acronis Backup & Recovery 10 Management Server provides an easy way to deploy Agent for ESX/ESXi to multiple ESX or ESXi servers. You might generally prefer that method to the procedure described later in this section.

*Connect the console to the management server. In the **Navigation** tree, right click **Virtual machines**, then click **Deploy ESX agent**. Refer to the context help for further instructions.*

2.7.1 Installing ESX/ESXi Virtual Appliance

Step 1: Extracting the virtual appliance's files

1. On a machine running Windows, start the Acronis Backup & Recovery 10 setup program.
2. Click **Extract installation files**. Then, in the list of installation packages, select the **Agent for ESX/ESXi Virtual Appliance (AcronisVirtualAppliance.msi)** check box.

*Tip: Alternatively, you can click **Install Acronis Backup & Recovery 10**, and then select the **Agent for ESX/ESXi Virtual Appliance** check box in the list of components.*

3. In **Extract to**, specify the folder to which you want to extract the virtual appliance's installation package, and then click **Extract**.
4. Run the installation package.

After the installation is complete, the virtual appliance's files will be located in the folder %ProgramFiles%\Acronis\ESXAppliance.

Step 2: Importing the virtual appliance

Importing the agent is similar in VMware Infrastructure 3.5 and VMware vSphere. This section describes both procedures because GUI controls are named differently in those products.

Importing the agent virtual appliance into VMware Infrastructure 3.5

1. Start the VMware Infrastructure client and log on to the VMware ESX server.
2. On the **File** menu, point to **Virtual Appliance**, and then click **Import**. Follow the **Import Virtual Appliance** wizard.

3. In **Import Location**, select **Import from file**, and then specify the path to the virtual appliance's OVF package—normally: %ProgramFiles%\Acronis\ESXAppliance.
4. Review the **Virtual Appliance Details** and click **Next**.
5. In **Name and Location**, type the name for the appliance or leave the default name **AcronisESXAppliance**.
6. In **Datastore**, leave the default datastore unless it does not have enough space for the virtual appliance. In this case, select another datastore. Skip this step if there is only one datastore on the server.
7. Review the summary and then click **Finish**. After the successful import is reported, close the progress window.

Importing the agent OVF template into VMware vSphere 4

1. Start the VMware vSphere client and log on to the VMware ESX server.
2. On the **File** menu, point to **Deploy OVF Template**. Follow the **Deploy OVF Template** wizard.
3. In **Source**, select **Deploy from File**, and then specify the path to the virtual appliance's OVF package—normally: %ProgramFiles%\Acronis\ESXAppliance.
4. Review the **OVF Template Details** and click **Next**.
5. In **Name and Location**, type the name for the appliance or leave the default name **AcronisESXAppliance**.
6. In **Datastore**, leave the default datastore unless it does not have enough space for the virtual appliance. In this case, select another datastore. Skip this step if there is only one datastore on the server.
7. Review the summary and then click **Finish**. After the successful deployment is reported, close the progress window.

Step 3: Configuring the virtual appliance

1. Starting the virtual appliance

In the VMware Infrastructure client, display the **Inventory**, right-click the virtual appliance's name, and then click **Power On**.

Select the **Console** tab. The virtual appliance welcome screen tells you what to do next. Click **Close**. You will be able to access this screen at any time by clicking the help button in the virtual appliance GUI.

You are taken to the **Acronis Backup & Recovery 10 Agent for ESX/ESXi** screen where you continue the agent configuration.

2. Time zone

Under **Virtual machine**, in **Time zone**, click **Change** and select the time zone for the location where the management console is installed.

An ESX server always works in the GMT time zone. When being imported, a virtual appliance inherits the GMT time zone from the server. If the console works in another time zone, you need to synchronize the virtual appliance with the console to ensure that the tasks scheduled using the console run in the appropriate time.

3. ESX(i)/vCenter

Under **Agent options**, in **ESX(i)/vCenter**, click **Change** and specify the name or IP address of a VMware ESX/ESXi server whose virtual machines you want to back up and recover, and the user name and password for logging on to that server. You can click **Check connection** to ensure the access credentials are correct.

If the ESX/ESXi server is managed by a vCenter Server, specify the vCenter Server name or IP address. The virtual appliance will back up and recover virtual machines hosted on its own host through the vCenter Server.

Make sure that another Agent for ESX/ESXi is not already managing the same host. A conflict of snapshots may occur if two agents try to back up a virtual machine simultaneously. As a result, you will lose the ability to back up this machine.

License server

Under **Licensing**, click **Provide license**.

When installing the trial product version, select **Use the following trial license key** and enter the trial license key. Deduplication is always enabled in the trial version.

When installing the purchased product, select **Use a license from the following Acronis License Server** and specify the name or IP address of the machine with the license server. To be able to deduplicate backups, the agent needs a separately sold license for deduplication. If you have imported this license into the license server, you can select the **Enable deduplication...** check box to let the agent acquire this license. After you click **OK**, the agent will connect to the license server to acquire the licenses.

When installing the product for online backup *only*, select **Online backup only (license key is not required)**. This option presumes that you have got or will obtain a subscription to the Acronis Backup & Recovery Online service by the time of the first backup.

The virtual appliance is ready to work. In addition, you can change network settings:

Network settings

The agent's network connection is configured automatically by using Dynamic Host Configuration Protocol (DHCP). To change the default configuration, under **Agent options**, in **eth0**, click **Change** and specify the desired network settings.

[Optional] Step 4: Adding the virtual appliance to the management server

The minimum configuration that enables backing up virtual machines from a host includes the management console, the license server and the agent. With this configuration, you can back up and recover virtual machines using the direct console-agent connection. If you are planning to use the management server, register the virtual appliance on the server.

To add the virtual appliance to the management server

1. Start Acronis Backup & Recovery 10 Management Console.
2. Connect the management console to the virtual appliance using the IP address displayed in the virtual appliance console.
3. Select **Options > Machine options > Machine management** from the top menu.
4. Select **Centralized management** and specify the management server IP/name. Click **OK**.
5. Specify the user name and password for the management server administrator's account. Click **OK**.

Alternatively, you can add the appliance to the management server on the server's side.

After the virtual appliance is registered, a corresponding group of virtual machines appears on the management server.

2.7.2 Updating ESX/ESXi Virtual Appliance

Update from the management server

This update method applies only to those virtual appliances that are registered on the management server. This method is preferable to the manual procedure described later in this section, because all configuration settings (backup plans, applied policies and group membership) related to the virtual machines managed by the agent, will be preserved in this case.

To update the virtual appliances from the management server:

1. Update the management console and the management server.
2. Connect the console to the management server.
3. In the **Navigation** tree, right click the group that has the same name as the vCenter Server. If VMware vCenter integration is not enabled, right click **Virtual machines**.
4. Click **Deploy ESX agents**.
5. Select the vCenter's hosts and clusters where to update Agent for ESX/ESXi. If VMware vCenter integration is not enabled, add hosts by specifying their IP addresses or names. For every host or cluster where the agent is already installed, the right panel of the **ESX Agent Deployment** window displays: **Update ESX agent on this host**.
6. Click **Deploy ESX Agents**.

The virtual appliances will be updated; the agents' configuration settings will be preserved.

Manual update

Manual update of the virtual appliance involves deleting the old appliance and installing a new one.

After manually updating the virtual appliance, you will have to recreate local backup plans that existed on the appliance and re-apply the backup policies that were applied to virtual machines managed by the appliance (that is, the machines hosted on the ESX/ESXi server the VA is managing).

To update the virtual appliance (VA) manually

1. **Remove the VA** from Acronis Backup & Recovery 10 Management Server. Skip this step if the appliance is not registered on the management server.
To remove the VA, connect to the management server, right-click the VA in the **All physical machines** list, and then click **Delete machine from AMS**. The policies applied to the virtual machines the appliance was managing are revoked.
2. **Revoke the license** used by the VA, as described in "Using Acronis License Server (p. 14)", under "Revoking licenses".
3. **Delete (p. 48) the virtual appliance** from the ESX/ESXi server.
4. **Install and configure the new VA**, as described in "Installing ESX/ESXi Virtual Appliance (p. 32)".
5. [Optional] **Re-create local backup plans** that previously existed on the VA if you want to continue using them.
6. [Optional] **Re-apply backup policies** that were previously applied *directly* to the virtual machines managed by the virtual appliance. You also have to re-apply policies to the dynamic group of these machines (the group that has the same name as the VA registration address), because this group is automatically deleted and recreated during the VA update.
Policies applied to the **All virtual machines** group will be re-deployed to the virtual machines automatically.
7. [Optional] Re-add the machines managed by the VA to the **custom static groups**.

The machines' membership in static groups is lost because the machines are removed from the management server and then added again during the VA update.

8. [Optional] Check if membership of the machines managed by the VA in **custom dynamic groups** is re-established.

The machines' membership in the dynamic groups that use the **Host/VA** criterion will be lost because the VA is removed from the management server during update. To re-establish the machines' membership in such group, specify the updated VA as a criterion for the group.

You do not need to re-apply policies to either static or dynamic custom groups. As soon as the machines' membership in the groups is re-established, the appropriate policies will be re-deployed to the virtual machines automatically.

3 Upgrading from trial to full product version

Installation of Acronis Backup & Recovery 10 trial version does not require a license server. The trial key required at installation can be obtained on the Acronis Web site.

The Acronis Backup & Recovery 10 trial version has the following limitation:

- Universal Restore functionality is disabled.

Additional limitations for bootable media:

- The disk management functionality is available, but there is no option to commit the changes
- Besides disk management, only the recovery functionality is available.

To upgrade from the trial version to the standard product you do not need to re-download the software. When the trial period is over, the product GUI displays a notification requesting you to specify a standard license key.

To specify the standard license key, use the **Change License** window in the management console, or run the setup program and follow its instructions.

3.1 Changing a license

By changing the license, you switch to a different version or edition of the product. The following table summarizes the available options.

| Switching a license | Why you may need it |
|---------------------------------|--|
| trial > full | Upgrade from trial to full product version |
| trial > trial different edition | Define the edition that better fits your needs |
| trial > full different edition | The edition you bought differs from the edition of the trial version |

You can also enable Acronis Deduplication and Acronis Universal Restore by using additional licenses, if these are available for the version and edition you are switching to.

Switching between advanced and standalone editions is not possible.

Before switching to a full version of an advanced edition

First of all, make sure that full license keys are added (imported) to Acronis License Server.

Acronis Deduplication is always enabled in trial product versions. If you want to continue using this functionality, please do not forget to:

1. Purchase Acronis Deduplication licenses
2. Import the Acronis Deduplication license keys to the license server
3. Use one Acronis Deduplication license for every machine where Acronis Backup & Recovery 10 is upgraded to the full version.

You can do this later at any time, however, until that time backup to deduplicating vaults will fail.

To change a license in advanced editions:

1. Do either of the following:
 - Connect the console to the machine and click **Help > Change license**.
 - Connect the console to the management server, navigate to **All physical machines** or to another group that displays the machine whose license you want to change, right-click the machine, and then click **Change license**.
2. Do either of the following:
 - Specify the license server and then select the edition to switch to. If the Acronis Deduplication or Acronis Universal Restore licenses for this edition are available on the license server, specify whether to use each of these licenses.
 - Enter the trial license key.

To change licenses on multiple machines, we recommend using the remote installation functionality. For more information, see Remote installation (Windows) (p. 19).

3.2 Upgrading components for Windows

Before upgrading to the full product version, you need to import the license keys for Acronis Backup & Recovery 10 Advanced Server Virtual Edition to Acronis License Server. If you are planning to use Acronis Backup & Recovery 10 Deduplication, import the license key for this feature too.

To upgrade to the full product version

1. Make sure that the license keys are imported to the license server.
2. Start the setup program.
3. Click **Use licenses from the following Acronis License Server**, and then specify the name or IP address of the license server.
4. Select one of the following options:
 - To upgrade to the full product version and to add or remove components (for example, to install Acronis Backup & Recovery 10 Deduplication), click **Proceed with the installation**.

Note: *The deduplication functionality is enabled in the trial product version. To continue using it in the full version, you need to install Acronis Backup & Recovery 10 Deduplication. This requires a separate license key.*

- To upgrade to the full product version without adding or removing components, click **Apply the new license key and quit the Setup**.

The installed components are now upgraded to the full version.

5. If you selected the first option, proceed with adding or removing components. If you selected the second option, click **Close** to exit the setup program.

3.3 Upgrading components for Linux

Before upgrading to the full product version, you need to import the product license keys to Acronis License Server. If you are planning to use Acronis Backup & Recovery 10 Deduplication, import the license keys for this feature too.

The license keys for the full product version must be of the same product edition as the trial license key.

To upgrade to the full product version

1. Make sure that the product license keys are imported to the license server.
2. Run the installation file:
 - For Acronis Backup & Recovery 10 Agent for Linux: **AcronisAgentLinux.i686**
 - For Acronis Bootable Media Builder: **AcronisBootableComponentsMediaBuilder.i686**
3. Specify the name or IP address of the license server.
4. Proceed with the upgrade.

Installing Acronis Backup & Recovery 10 Deduplication

The deduplication functionality is enabled in the trial product version. To continue using it in the full version, you need to install Acronis Backup & Recovery 10 Deduplication after you have upgraded the agent for Linux. This requires a separate license key.

To install Acronis Backup & Recovery 10 Deduplication

1. Make sure that the license keys for Acronis Backup & Recovery 10 Deduplication are imported to the license server.
2. Run the installation file: **AcronisDeduplication.i686**
3. Specify the name or IP address of the license server.
4. Proceed with the installation.

3.4 Upgrading the agent for ESX/ESXi

Before upgrading to the full product version, you need to import the license keys for Acronis Backup & Recovery 10 Advanced Server Virtual Edition to Acronis License Server. If you are planning to use Acronis Backup & Recovery 10 Deduplication, import the license key for this feature too.

To upgrade to the full product version

1. Make sure that the license keys are imported to the license server.
2. In the ESX/ESXi Virtual Appliance, under **Licensing**, click **Provide license**.
3. Click **Use licenses from the following Acronis License Server**, and then specify the name or IP address of the license server.
4. To enable the deduplication functionality, select the **Enable deduplication** check box.

4 Upgrading to advanced editions of Acronis Backup & Recovery 10

This section describes how to upgrade the following editions of Acronis True Image Echo:

- **Acronis True Image Echo Enterprise Server to Acronis Backup & Recovery 10 Advanced Server**

- **Acronis True Image Echo Workstation to Acronis Backup & Recovery 10 Advanced Workstation**
- **Acronis True Image Echo Virtual Edition to Acronis Backup & Recovery 10 Advanced Server Virtual Edition**
- **Acronis True Image for Microsoft Windows Small Business Server to Acronis Backup & Recovery 10 Advanced Server SBS Edition.**

The advanced editions of Acronis Backup & Recovery 10 include Acronis License Server that has to be installed prior to the Echo agents and local versions upgrade.

The advanced editions of Acronis Backup & Recovery 10 do not have local versions. Local versions of Acronis True Image Echo are upgraded to Acronis Backup & Recovery 10 agents. Then you can install Acronis Backup & Recovery 10 Management Console on the machines, where local administration is required.

4.1 Before the upgrade

Preparation

Before proceeding with the upgrade on one or more machines, make sure that:

- The Acronis License Server contains the appropriate number of license keys for the corresponding Acronis True Image Echo editions.
- You have upgrade license keys for Acronis Backup & Recovery 10 for each machine. You will import these keys after installing or upgrading the license server.

Upgrade sequence

We recommend performing the upgrade in the following order:

1. Install or upgrade Acronis License Server. See "Installing or upgrading the Acronis License Server (p. 39)".
2. Install Acronis Backup & Recovery 10 Management Console. See "Installing Acronis Backup & Recovery 10 Management Console (p. 40)".
3. Install Acronis Backup & Recovery 10 Management Server and convert the Acronis Group Server's group tasks to the management server's backup policies. See "Upgrading Acronis Group Server to Acronis Backup & Recovery 10 Management Server (p. 40)".
4. Install Acronis Backup & Recovery 10 Storage Node and convert the Acronis Backup Server's backup locations to the storage node's centralized vaults. See "Upgrading Acronis Backup Server to Acronis Backup & Recovery 10 Storage Node (p. 41)".
5. Upgrade Acronis True Image Echo agents and local versions, and import the local tasks and backup locations. See "Upgrading Acronis True Image Echo agents and local versions (p. 43)".

4.2 Installing or upgrading the Acronis License Server

If an earlier version of the license server is already installed, upgrade it by installing the new license server on the same machine. In this case, the old license keys will be present on the upgraded license server. If you have not used a license server before, import both old license keys and upgrade license keys to the newly installed license server.

To install or upgrade the license server

1. Run the Acronis Backup & Recovery 10 setup file.
2. Click **Install Acronis License Server** and follow the on-screen instructions.

3. Import the upgrade license keys for Acronis Backup & Recovery 10.
4. If you have not used a license server before, import the old license keys.

Result:

- The license server contains the old license keys and the newly imported upgrade license keys.

4.3 Installing Acronis Backup & Recovery 10 Management Console

You can install Acronis Backup & Recovery 10 Management Console on the same machine as Acronis True Image Echo Management Console, or on a different machine. In either case, you can continue using Acronis True Image Echo Management Console with Acronis True Image Echo components if these still exist in your infrastructure.

To install Acronis Backup & Recovery 10 Management Console

1. Run the Acronis Backup & Recovery 10 setup file.
2. In the list of components, select the **Management Console** check box.
3. Follow the on-screen instructions.

Result:

- Acronis Backup & Recovery 10 Management Console is installed.
- You can continue using Acronis True Image Echo Management Console with Acronis True Image Echo components.

4.4 Upgrading Acronis Group Server to Acronis Backup & Recovery 10 Management Server

You can install Acronis Backup & Recovery 10 Management Server on the same machine as the Acronis Group Server, or on a different machine.

The management server and the group server are independent of each other: if you are not planning to use the group server, you can uninstall it at any time, including before the management server's installation. Otherwise, you can continue using the group server with Acronis True Image Echo components if these still exist in your infrastructure.

You can convert the group server's group tasks to the management server's backup policies during installation, or after the management server is installed. You will still be able to convert group tasks even after you uninstall the group server.

Note: *The tasks that back up data to Acronis Backup Server or validate archives stored on it will not be imported to the management server.*

To install the management server

1. Run the Acronis Backup & Recovery 10 setup file.
2. In the list of components to install, select the **Management Server** check box. If conversion of group tasks is required, select to install **Upgrade Tool**.
3. Select the **Convert group tasks to backup policies** check box if you want to convert group tasks during installation. Otherwise, you can convert the tasks later at any time. For details, see "Converting group tasks with the upgrade tool" later in this section.

4. Follow the on-screen instructions.

Converting group tasks with the upgrade tool

To convert the group server's group tasks

1. On the machine where the management server is installed, log on as a member of the Administrators group.
2. Change the current folder to the folder where the upgrade tool is installed—by default:
C:\Program Files\Acronis\UpgradeTool
If Acronis Backup & Recovery 10 is installed in a folder other than the default folder, change the path accordingly.
3. If the group server and the management server are installed on the same machine, run the following command (note capitalization):

```
cscript UpgradeTool.vbs GS [-r]
```

(the optional parameter `-r` is described below). Otherwise, run the following command:

```
cscript UpgradeTool.vbs GS MachineName -u UserName [-p Password] [-r]
```

Description of parameters:

MachineName

Specifies the name or IP address of the machine where the group server is installed.

-u *UserName*

Specifies the user name of a member of the Administrators group on the *MachineName* machine.

-p *Password*

Specifies the password for the *UserName* user. If you skip this parameter, the upgrade tool will prompt you for a password.

-r

Effective only if you are planning to upgrade the machines' tasks—see "Upgrading Acronis True Image Echo agents and local versions (p. 43)".

This parameter prohibits the conversion of local backup plans, resulting from the upgrade of group tasks on a machine, to centralized backup plans. When this parameter is specified, local backup plans resulting from upgrade of group tasks on a machine, will remain local after the machine is registered on the management server. Otherwise, the management server will convert them to centralized backup plans and establish correspondence between these centralized plans and the policy resulting from the group task upgrade.

Result:

- The imported group tasks become the management server's backup policies and appear in the **Backup policies** view.
- (After you upgraded tasks on a machine and if you did not specify the `-r` parameter.) When a machine to which a group task was originally applied registers on the management server, the corresponding backup policy will become applied to that machine.

4.5 Upgrading Acronis Backup Server to Acronis Backup & Recovery 10 Storage Node

You can install Acronis Backup & Recovery 10 Storage Node on the same machine as the Acronis Backup Server, or on a different machine.

If you want to import the backup server's locations as the storage node's centralized vaults, you must install the storage node on the same machine as the backup server.

Importing the backup server's locations as centralized vaults facilitates access to the Acronis True Image Echo archives stored in them. No Acronis Backup & Recovery 10 archives can be created in these vaults.

To install Acronis Backup & Recovery 10 Storage Node

1. Run the Acronis Backup & Recovery 10 setup file.
2. In the list of components to install, select the **Storage Node** check box.
3. To be able to import the backup server's locations, select the **Upgrade Tool** check box.
4. Follow the on-screen instructions.

To import the backup server's locations

1. On the machine where the storage node is installed, log on as a member of the Administrators group.
2. Change the current folder to the folder where the upgrade tool is installed—by default:
C:\Program Files\Acronis\UpgradeTool
If Acronis Backup & Recovery 10 is installed in a folder other than the default folder, change the path accordingly.
3. Run the following command:

```
cscript UpgradeTool.vbs BS
```

Result:

- The backup server's backup locations are the storage node's centralized vaults.
- If the storage node is registered on the management server, these centralized vaults will appear on the management server in the **Vaults** view.
- Each centralized vault is named according to the backup location's folder.
- Each centralized vault displays all archives currently present in the corresponding backup location.

Coexistence of the backup server and the storage node

Suppose that both the backup server and the storage node are installed and operational on the same machine, and that you imported the backup server's locations as the storage node's centralized vaults. In this case:

- The backup server continues working as before: Acronis True Image Echo components can back up data to and recover data from the locations; the backup server cleans up the location according to quotas and time limits.
- The storage node accesses the corresponding centralized vaults in the read-only mode: you can view the vaults' contents and recover data from their archives, but no archives can be deleted from the vaults.

When restarting the machine or manually restarting services, make sure that the backup server service starts before the storage node service. Otherwise, the backup server may not work.

To ensure the correct order of starting the services, you can make the storage node service dependent on the backup server service, as described in the corresponding Microsoft Help and Support article <http://support.microsoft.com/kb/193888>.

4.6 Upgrading Acronis True Image Echo agents and local versions

Installing agents

To upgrade Acronis True Image Echo agents and local versions, install Acronis Backup & Recovery 10 agents on the machines where the old agents and local versions are installed.

In Windows:

1. Run the Acronis Backup & Recovery 10 setup file.
2. Specify the name or IP address of the Acronis License Server.
3. In the list of components, select the components that you want to install. Select to install Acronis Backup & Recovery 10 Management Console, along with the agent, if local administration is required on the machine. To be able to upgrade the old tasks, select the **Upgrade Tool** check box.
4. Confirm the deletion of the currently installed agent or local version. To upgrade the old tasks at the time of installation, select the **Import existing tasks** check box. Or you can upgrade the tasks later at any time. For details, see "Upgrading tasks" later in this section.
5. Follow the on-screen instructions. For details, see "Local installation (Windows) (p. 16)".

Instead of local installation, you can install Acronis Backup & Recovery 10 agents remotely or by using Group Policy. For details, see "Remote installation (Windows) (p. 19)" and "Installing components using Group Policy (p. 25)".

Note: To upgrade an Acronis True Image Echo agent using the console's remote installation functionality, you need either Acronis True Image Echo or Acronis Backup & Recovery 10 agent on the machine you operate from. Otherwise, at least one full (not upgrade) license must be available (i.e. free) on the license server. This may be a license for any edition of Acronis True Image Echo or Acronis Backup & Recovery 10. The license will remain available after the upgrade.

In Linux:

1. Install Acronis Backup & Recovery 10 Agent for Linux and the Upgrade Tool as described in "Installation procedure (p. 28)".
2. Install Acronis Backup & Recovery 10 Management Console, if local administration is required on the machine.

Result:

- The Acronis True Image Echo agents and local versions are replaced with Acronis Backup & Recovery 10 components.

Upgrading tasks

You might want to import the old backup tasks and validation tasks to Acronis Backup & Recovery 10. If you do not import them, these tasks will no longer run.

Note: The tasks that back up data to Acronis Backup Server or validate archives stored on it will not be imported to Acronis Backup & Recovery 10.

You can import the old tasks at the time of agent installation (see the installation instructions earlier in this section), or later by using Acronis Backup & Recovery 10 Upgrade Tool. This command-line utility is located in the Acronis Backup & Recovery 10 installation directory, in the UpgradeTool subdirectory.

In Windows:

1. Change the current folder to the folder where the upgrade tool is installed—by default:
C:\Program Files\Acronis\UpgradeTool
If Acronis Backup & Recovery 10 is installed in a folder other than the default folder, change the path accordingly.

2. Run the following command (note capitalization):

```
cscript UpgradeTool.vbs Agent
```

In Linux:

1. Change the current directory to: **/usr/lib/Acronis/UpgradeTool**
2. Run the following command:

```
UpgradeTool.sh Agent
```

Result:

- Tasks that were present in Acronis True Image Echo, are converted to Acronis Backup & Recovery 10 tasks and appear in the **Backup plans and tasks** view.
- Each backup task's schedule, items to back up, and backup destination are the same as before, but the task will create a new archive to perform further backups.
- Each backup task is part of a backup plan. You can edit the backup plan to change the task's schedule or other parameters.
- The tasks' log entries are not imported.

Importing old options

The upgrade tool enables you to import the default backup options, default restoration options, notification options, and event tracing options of Acronis True Image Echo to the default backup and recovery options of Acronis Backup & Recovery 10.

To import the old options (both in Windows and Linux):

1. Change the current folder (directory) to the one where the upgrade tool is installed.
2. In Windows, run the following command:

```
cscript UpgradeTool.vbs Options
```

In Linux, run the following command:

```
./UpgradeTool.sh Options
```

The old options are imported as follows:

- **Notifications** is imported as **Notifications** in both Default backup options and Default recovery options.
- **Event tracing** is imported as **Event tracing** in both Default backup options and Default recovery options.
- **Archive splitting** is imported as **Backup splitting**.
- In **Media components**, if **Place Acronis One-Click Restore on media** is the only check box selected, it is imported as **Acronis Bootable Agent and One-Click Restore**.
- **Validate backup archive upon its creation completion** is *not* imported from **Additional settings** in Default backup options or Default recovery options.
- In Default recovery options, **Files to exclude from restoration**, **Files overwriting mode**, and **Restore files and folders without restoring full path** (in **Additional settings**) are *not* imported.

- Other options are imported as the corresponding options in Default backup options and Default recovery options.

Using backup archives created with Acronis True Image Echo

After the upgrade to Acronis Backup & Recovery 10, you have the ability to recover data from backups created with Acronis True Image Echo.

To facilitate access to these backups, you may want to create a personal vault where the backups are located. For instructions on how to create a personal vault, see the "Actions on personal vaults" section in the User's Guide.

A personal vault can store both Acronis True Image Echo archives and Acronis Backup & Recovery 10 archives. You can specify this vault as a destination for new backup plans.

4.6.1 Importing a task

Instead of importing the tasks from Acronis True Image Echo as a whole, you can use the upgrade tool to import a particular backup or validation task.

Note: The tasks that back up data to Acronis Backup Server or validate archives stored on it cannot be imported.

Acronis True Image Echo stores each task as a .tis file. By default, these files are located in the folder **C:\Documents and Settings\All Users\Application Data\Acronis\TrueImage\Scripts** (in Windows) or in the directory **/etc/Acronis/TrueImage/Scripts** (in Linux).

The names of the .tis files are Universally Unique Identifiers (UUIDs), such as 6AED5F49-7EED-4E3E-939E-19360A44137F.tib.tis. Each file has the XML format. The **<display>** tag in the file specifies the task name as it appears in the list of tasks.

To import a task

1. Determine the file name of the task that you want to import—for example, by examining the content of the **<display>** tag.
2. Change the current folder to the one where the upgrade tool is installed.
3. Run the following command, specifying the file name of the task:

- In Windows:

```
cscript UpgradeTool.vbs Script -f "C:\Documents and Settings\All Users\Application Data\Acronis\TrueImage\Scripts\6AED5F49-7EED-4E3E-939E-19360A44137F.tib.tis"
```

- In Linux:

```
./UpgradeTool.sh Script -f /etc/Acronis/TrueImage/Scripts/6AED5F49-7EED-4E3E-939E-19360A44137F.tib.tis"
```

As a result, the task is imported as an Acronis Backup & Recovery 10 task and becomes part of a backup plan.

5 Uninstalling advanced editions of Acronis Backup & Recovery 10

When you uninstall a component that uses a license, Acronis License Server revokes the license from the machine. You can revoke the license manually (p. 14) later, if the license server was unavailable during uninstallation.

5.1 Local uninstallation in Windows

Uninstalling components of Acronis Backup & Recovery 10

Important: Avoid using the **Add or Remove Programs** tool of Windows to uninstall Acronis Backup & Recovery 10 components.

To uninstall all components of Acronis Backup & Recovery 10

1. Click **Start -> All Programs -> Acronis -> Uninstall Acronis Backup & Recovery 10**.
2. To delete associated information (see later in this topic), select the **Remove the product's log, tasks, vaults and configuration settings** check box.
3. Click **Remove**.

To uninstall individual components or features of Acronis Backup & Recovery 10

1. Start the Acronis Backup & Recovery 10 setup program.
2. Click **Install Acronis Backup & Recovery 10**.
3. Acronis License Server must be available, otherwise you cannot proceed. When you uninstall a component that uses a license, Acronis License Server revokes the license from the machine.
4. Click **Modify**.
5. Clear the check boxes next to the names of the components or features that you want to uninstall.
6. To delete associated information (see later in this section), select the **Remove the product's log, tasks, vaults and configuration settings** check box.

Deleting associated information

If you are planning to reinstall a component at a later time, you may want to keep its associated information.

If instead you want to delete this information, select the **Remove the product's log, tasks, vaults and configuration settings** check box. As a result, the following information will be deleted:

- When uninstalling Acronis Backup & Recovery 10 Agent for Windows: the log and tasks of the agent
- When uninstalling Acronis Backup & Recovery 10 Management Server: the management server databases, which store the policies configuration, the operation log, and statistics
- When uninstalling Acronis Backup & Recovery 10 Storage Node: the log and tasks of the storage node

Uninstalling Acronis License Server

Because Acronis License Server may be used by other Acronis products, you need to uninstall it separately from Acronis Backup & Recovery 10.

To uninstall Acronis License Server

1. Start the Acronis Backup & Recovery 10 setup program.
2. Click **Repair/remove Acronis License Server**.
3. Click **Remove**.

5.2 Unattended uninstallation in Windows

To uninstall a component or feature of Acronis Backup & Recovery 10 in the unattended mode, you need to run the **msiexec** utility. This utility uses the corresponding installation package (an .msi file).

When you uninstall a component that uses a license, Acronis License Server will revoke the license, provided that the license server is available.

To uninstall a component or feature

1. Extract the corresponding installation package to a folder or a network share.
2. Run the following command (here, the installation package is assumed to be AcronisAgentWindows.msi, saved in the \\myserver\share network share):

```
msiexec /uninstall \\myserver\share\AcronisAgentWindows.msi /qb
```

Uninstalling an agent

When you uninstall Acronis Backup & Recovery 10 Agent for Windows, we recommend first uninstalling its features and then the agent itself.

For example, if the agent is installed with the **Tray Monitor** and **Universal Restore** features, run uninstallation commands in the following order:

```
msiexec /uninstall \\myserver\share\AcronisTrayMonitor.msi /qb  
msiexec /uninstall \\myserver\share\AcronisUniversalRestore.msi /qb  
msiexec /uninstall \\myserver\share\AcronisAgentWindows.msi /qb
```

Uninstalling the license server

If you need to uninstall the Acronis License Server, you should do so after uninstalling all agents that use it. Also keep in mind that the license server may be used by other Acronis products.

To uninstall the license server, run the following command (change the path if needed):

```
msiexec /uninstall \\myserver\share\AcronisLicenseServer.msi /qb
```

5.3 Uninstallation in Linux

To uninstall all components of Acronis Backup & Recovery 10

Do the following as the root user:

1. If Acronis Backup & Recovery 10 Deduplication is installed, run the following commands:

```
# cd /usr/lib/Acronis/BackupAndRecoveryDeduplication/uninstall  
# ./uninstall
```

2. Run the following commands to uninstall other Acronis Backup & Recovery 10 components:

```
# cd /usr/lib/Acronis/BackupAndRecovery/uninstall
# ./uninstall
# cd /usr/lib/Acronis/BootableComponents/uninstall
# ./uninstall
# cd /usr/lib/Acronis/BackupAndRecoveryConsole/uninstall
# ./uninstall
# cd /usr/lib/Acronis/UpgradeTool/uninstall
# ./uninstall
```

3. Run the following command to delete the source files of the SnapAPI module:

```
# rm -rf /usr/src/snapapi*
```

To uninstall all components in the unattended mode, run each of the **./uninstall** commands with the **-a** option.

5.4 Deleting Acronis Secure Zone

Uninstallation of Acronis Backup & Recovery 10 does not affect Acronis Secure Zone and its contents. You will still be able to recover data from Acronis Secure Zone on booting from bootable media.

If you need to delete Acronis Secure Zone, perform the following steps in the operating system (before the agent uninstallation) or under bootable media.

To delete Acronis Secure Zone:

1. In the **Acronis Secure Zone Actions** bar (on the **Actions and tools** pane), select **Delete**.
2. In the **Delete Acronis Secure Zone** window, select volumes to which you want to add the space freed from the zone and then click **OK**.

If you select several volumes, the space will be distributed proportionally to each partition. If you do not select any volume, the freed space becomes unallocated.

After you click **OK**, Acronis Backup & Recovery 10 will start deleting the zone.

5.5 Deleting ESX/ESXi Virtual Appliance

*Acronis Backup & Recovery 10 Management Server provides an easy way to remove Agent for ESX/ESXi from ESX or ESXi servers. You might generally prefer that method to the procedure described later in this section. Connect the console to the management server. In the **Navigation tree**, right click **Virtual machines**, then click **Remove ESX agent**. Refer to the context help for further instructions.*

You may need to manually delete the Agent for ESX/ESXi Virtual Appliance in the following cases:

- The VA is not registered on the management server
- You are not using vCenter Server or integration with vCenter Server is not enabled
- The VA is corrupted.

To remove Agent for ESX/ESXi Virtual Appliance (VA) manually:

1. Start VMware Infrastructure/vSphere Client and log on to the ESX/ESXi host or to vCenter Server.
2. Power off the VA.
3. Right click the VA and select **Edit settings**.
4. Make sure the VA has only 4 hard disks.

If there are more than 4 hard disks, this means that some of the guest system volumes are not unmounted from the VA. Native disks of the VA have numbers from 1 to 4 and either 5 GB or 1 MB size. Unmount the non-native disks as follows:

- a. Select this disk and click **Remove**
- b. Make sure the **Remove from virtual machine** option is selected

*Be sure not to choose the second option - **Remove from virtual machine and delete files from disk**. If you do, the disk will be removed not only from the VA but from the source virtual machine as well.*

- c. Repeat steps "a" and "b" for all non-native disks
 - d. Click **OK** to confirm the deletion.
5. Right-click the VA and select **Delete from disk**.
 6. Remove the VA from the management server. Skip this step if the appliance is not registered on the management server or has been already removed.

To remove the VA, connect to the management server, right-click the VA in the **All physical machines** list, and then click **Delete machine from AMS**.

The Virtual Edition license on the license server will not be freed up automatically. Revoke it manually from this host using the **Manage licenses** tool if you need to free up the license.