Acronis

Acronis Backup

Version 11.5 Update 6

INSTALLATION GUIDE

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Technologies, used in this product, are covered and protected by one or more U.S. Patent Numbers: 7,047,380; 7,275,139; 7,281,104; 7,318,135; 7,353,355; 7,366,859; 7,475,282; 7,603,533; 7,636,824; 7,650,473; 7,721,138; 7,779,221; 7,831,789; 7,886,120; 7,895,403; 7,934,064; 7,937,612; 7,949,635; 7,953,948; 7,979,690; 8,005,797; 8,051,044; 8,069,320; 8,073,815; 8,074,035; 8,145,607; 8,180,984; 8,225,133; 8,261,035; 8,296,264; 8,312,259; 8,347,137; 8,484,427; 8,645,748; 8,732,121 and patent pending applications.

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1   Before installation

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

1.1   About using the product in the trial mode

Before buying an Acronis Backup license, you may want to try the software. This can be done without a license key.

To install the product in the trial mode, run the setup program locally or use the remote installation functionality. Unattended installation and other ways of installation are not supported.

Limitations of the trial mode

When working under bootable media:

- The disk management functionality is not available. You can try the user interface, but there is no option to commit the changes.
- The recovery functionality is available, but the backup functionality is not. To try the backup functionality, install the software in the operating system.

Upgrading to the full mode

After the trial period expires, the product GUI displays a notification requesting you to specify or obtain a license key.

To specify a license key, click **Help** > **Change License**. Specifying the key by running the setup program is not possible.

If you have activated a trial or purchased a subscription for the cloud backup service, cloud backup will be available until the subscription period expires, regardless of whether you specify a license key.

1.2   Licenses for Acronis Backup and Acronis Backup Advanced

Licensing of the Acronis Backup product family and the Acronis Backup Advanced suite is based on the number of machines backed up by the products. A license is required for every physical machine that you want to back up.

The following table lists the products and their main features.

Product	Disk and file backup	Centralized management	Deduplication	Backup to tape	Application backup
Acronis Backup for Windows Server	+	-	-	-	-
Acronis Backup for Linux Server	+	-	-	-	-
Acronis Backup for PC	+	-	-	-	-
Acronis Backup for Windows Server Essentials	+	+	+	+	All supported*

Product	Disk and file backup	Centralized management	Deduplication	Backup to tape	Application backup
Acronis Backup Advanced for Windows Server	+	+	+	+	-
Acronis Backup Advanced for Linux Server	+	+	+	+	-
Acronis Backup Advanced for PC	+	+	+	+	-
Acronis Backup Advanced for Exchange	+	+	+	+	Exchange
Acronis Backup Advanced for SQL	+	+	+	+	SQL
Acronis Backup Advanced for SharePoint	+	+	+	+	SQL, SharePoint
Acronis Backup Advanced for Active Directory	+	+	+	+	Active Directory
Acronis Backup Advanced for VMware / Hyper-V / RHEV / Citrix XenServer / Oracle VM	+	+	+	+	All supported*

* The supported applications are: Microsoft Exchange Server, Microsoft SQL Server, Microsoft SharePoint, and Microsoft Active Directory.

The products without centralized management are designed for backing up the data of a single machine. All components of each product are installed on the same machine. You will be asked for the license key during the installation.

The Acronis Backup Advanced suite is designed for backing up multiple machines. In addition to components that need to be installed on a backed-up machine, these products include a management server that enables centralized management and storage nodes for storing backed up data. Usage of these additional components is not licensed. For example, you can install as many storage nodes as you wish - up to 50.

During installation of a licensed component (agent), you can either specify a license server or enter a license key manually. Use a license for a specific product or Acronis Backup Advanced Universal License. This license enables installation of all Acronis Backup Advanced products on a physical machine and on any number of virtual machines running on this physical machine.

Acronis Backup for Windows Server Essentials is a natural choice for a network with a single server and multiple workstations. By using this product on the server and using Acronis Backup Advanced for PC on the workstations, you can centrally manage all of the machines. Most descriptions of the Acronis Backup Advanced functionality in the documentation also apply to Acronis Backup for Windows Server Essentials.

Components of other Acronis Backup products do not interact with the components of Acronis Backup Advanced.

1.3   Acronis Backup components

This section contains a list of Acronis Backup components with a brief description of their functionality.

Components for a managed machine (agents)

These are applications that perform data backup, recovery and other operations on the machines managed with Acronis Backup. Agents require a license to perform operations on each managed machine.

Console

The console provides Graphical User Interface to the agents. Usage of the console is not licensed. The console is installed together with the agent and cannot be disconnected from it.

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. Bootable Media Builder is installed together with the agent.

1.3.1   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.

Conversion to a virtual machine

Agent for Linux performs the conversion by recovering a disk backup to a new virtual machine of any of the following types: VMware Workstation, Microsoft Virtual PC, Citrix XenServer Open Virtual Appliance (OVA) or Red Hat Kernel-based Virtual Machine (KVM). Files of the fully configured and operational machine will be placed in the directory you select. You can start the machine using the respective virtualization software or prepare the machine files for further usage.

1.3.2   Management Console

Acronis Backup Management Console is an administrative tool for local access to Acronis Backup agent. Remote connection to the agent is not possible.

1.3.3   Bootable Media Builder

Acronis Bootable Media Builder is a dedicated tool for creating bootable media. The media builder that installs on Linux creates bootable media based on Linux kernel.

1.4   Supported operating systems

Acronis Backup Management Console, Acronis Backup Agent for Linux

Linux with kernel from 2.4.20 to 4.1 and glibc 2.3.2 or later

Various x86 and x86_64 Linux distributions, including:

Red Hat Enterprise Linux 4.x, 5.x, 6.x, and 7.x

Ubuntu 9.10, 10.04, 10.10, 11.04, 11.10, 12.04, 12.10, 13.04, 13.10, 14.04, 14.10, and 15.04

Fedora 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, and 22

SUSE Linux Enterprise Server 10 and 11

SUSE Linux Enterprise Server 12 – supported on file systems, except for Btrfs

Debian 4, 5, 6, 7.0, 7.2, 7.4, 7.5, 7.6, 7.7, 8.0, and 8.1

CentOS 5.x, 6.x, and 7.0

Oracle Linux 5.x, 6.x, 7.0, and 7.1 – both Unbreakable Enterprise Kernel and Red Hat Compatible Kernel

CloudLinux 6.x

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`

1.5   System requirements

Acronis Backup for Linux Server

To calculate the total required disk space, add up the values specified in the third and fourth columns of the table for the components you are planning to install.

Component	Memory (above the OS and running applications)	Disk space required during installation or update	Disk space occupied by the component(s)	Additional
Acronis Backup for Linux Server (complete installation)	500 MB	420 MB	700 MB	Screen resolution 800*600 pixels or higher
Bootable Media Builder (Linux)	130 MB	300 MB	330 MB	

Bootable media

Media type	Memory	ISO image size	Additional
Linux-based	512 MB	490 MB	

2   Installing Acronis Backup

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

2.1   Preparation

This section describes preparatory steps for installation in Linux.

2.1.1   RPM Package Manager

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:

```
sudo apt-get install rpm
```

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

2.1.2   Linux packages

To add the necessary modules to the Linux kernel, the setup program needs the following Linux packages:

- The package with kernel headers or sources. The package version must match the kernel version.
- The GNU Compiler Collection (GCC) compiler system. The GCC version must be the one with which the kernel was compiled.
- The Make tool.
- The Perl interpreter.

The names of these packages vary depending on your Linux distribution.

In Red Hat Enterprise Linux, CentOS, and Fedora, the packages normally will be installed by the setup program. In other distributions, you need to install the packages if they are not installed or do not have the required versions.

Are the required packages already installed?

To check whether the packages are already installed, perform these steps:

1. Run the following command to find out the kernel version and the required GCC version:
   ```
   cat /proc/version
   ```
   This command returns lines similar to the following: **Linux version 2.6.35.6** and **gcc version 4.5.1**

2. Run the following command to check whether the Make tool and the GCC compiler are installed:
   ```
   make -v
   gcc -v
   ```
   For **gcc**, ensure that the version returned by the command is the same as in the **gcc version** in step 1. For **make**, just ensure that the command runs.

3. Check whether the appropriate version of the packages for building kernel modules is installed:
   - In Red Hat Enterprise Linux, CentOS, and Fedora, run the following command:
     ```
     yum list installed | grep kernel-devel
     ```
   - In Ubuntu, run the following commands:
     ```
     dpkg --get-selections | grep linux-headers
     dpkg --get-selections | grep linux-image
     ```

In either case, ensure that the package versions are the same as in **Linux version** in step 1.

4. Run the following command to check whether the Perl interpreter is installed:

```
perl --version
```

If you see the information about the Perl version, the interpreter is installed.

Installing the packages from the repository

The following table lists how to install the required packages in various Linux distributions.

Linux distribution	Package names	How to install
Red Hat Enterprise Linux	**kernel-devel** **gcc** **make**	The setup program will download and install the packages automatically by using your Red Hat subscription.
	perl	Run the following command: `yum install perl`
CentOS Fedora	**kernel-devel** **gcc** **make**	The setup program will download and install the packages automatically.
	perl	Run the following command: `yum install perl`
Ubuntu	**linux-headers** **linux-image** **gcc** **make** **perl**	Run the following commands: `sudo apt-get update` `sudo apt-get install linux-headers-`uname -r`` `sudo apt-get install linux-image-`uname -r`` `sudo apt-get install gcc-<package version>` `sudo apt-get install make` `sudo apt-get install perl`

The packages will be downloaded from the distribution's repository and installed.

For other Linux distributions, please refer to the distribution's documentation regarding the exact names of the required packages and the ways to install them.

Installing the packages manually

You may need to install the packages **manually** if:

- The machine does not have an active Red Hat subscription or Internet connection.

- The setup program cannot find the **kernel-devel** or **gcc** version corresponding to the kernel version. If the available **kernel-devel** is more recent than your kernel, you need to either update the kernel or install the matching **kernel-devel** version manually.

- You have the required packages on the local network and do not want to spend time for automatic search and downloading.

Obtain the packages from your local network or a trusted third-party website, and install them as follows:

- In Red Hat Enterprise Linux, CentOS, or Fedora, run the following command as the root user:

```
rpm -ivh PACKAGE_FILE1 PACKAGE_FILE2 PACKAGE_FILE3
```

- In Ubuntu, run the following command:

```
sudo dpkg -i PACKAGE_FILE1 PACKAGE_FILE2 PACKAGE_FILE3
```

Example: Installing the packages manually in Fedora 14

Follow these steps to install the required packages in Fedora 14 on a 32-bit machine:

1. Run the following command to determine the kernel version and the required GCC version:

   ```
   cat /proc/version
   ```

   The output of this command includes the following:

   ```
   Linux version 2.6.35.6-45.fc14.i686
   gcc version 4.5.1
   ```

2. Obtain the **kernel-devel** and **gcc** packages that correspond to this kernel version:

   ```
   kernel-devel-2.6.35.6-45.fc14.i686.rpm
   gcc-4.5.1-4.fc14.i686.rpm
   ```

3. Obtain the **make** package for Fedora 14:

   ```
   make-3.82-3.fc14.i686
   ```

4. Install the packages by running the following commands as the root user:

   ```
   rpm -ivh kernel-devel-2.6.35.6-45.fc14.i686.rpm
   rpm -ivh gcc-4.5.1.fc14.i686.rpm
   rpm -ivh make-3.82-3.fc14.i686
   ```

   You can specify all these packages in a single **rpm** command. Installing any of these packages may require installing additional packages to resolve dependencies.

2.1.3   Installation file

Depending on the machine platform (x86 or x86_64), you need the .i686 or the .x86_64 installation file. Make sure that the file is assigned the necessary access permissions to execute it; for example, by running the following command:

```
chmod 755 AcronisBackup*
```

2.2   Installation in the interactive mode

1. Run the appropriate installation file (an .i686 or an .x86_64 file) as the root user.
2. Accept the terms of the license agreement.
3. Do either of the following:
   - To install the product in the trial mode (p. 4), select **Install in trial mode**.
   - To install the product for cloud backup only, select **Install for cloud backup only**.
   - To install the product in the full mode, select **Enter the license key**, and then type your Acronis Backup license key.
4. Select the components that you want to install.
5. If you install the software in Red Hat Enterprise Linux or CentOS, the setup program may notify you about the absence of some of the required Linux packages. Select **Continue** to try to install these packages automatically (recommended), or select **Skip** to skip the package installation. For more detailed information about the required packages, see the "Linux packages" (p. 8) section.
6. The setup program tries to automatically compile the SnapAPI module for your Linux kernel. If it fails to do so, please refer to the file: **/usr/lib/Acronis/BackupAndRecovery/HOWTO.INSTALL**.

2.3   Installation in the unattended mode

To install the product in the unattended mode (without asking for confirmations), run the installation file with the **-a** command-line parameter. You may need to use other parameters (p. 11) to specify how to perform the installation.

The following example assumes that the name of the installation file is AcronisBackupL.i686.

The following command installs Acronis Backup in the unattended mode and uses the license key 12345-7890-ABCDE:

```
./AcronisBackupL.i686 -a -l 12345-67890-ABCDE
```

2.4   Command-line parameters

When running the installation file of Acronis Backup, you can specify one or more of command-line parameters.

Common parameters

-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. Specify the license key by using the **-l** parameter. Specify the component to install by using the **-i** parameter.

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 (see the **-a** parameter described previously).

With this parameter, the setup will proceed even if the packages necessary for the software to work are not installed. If any dependencies are missing, software functionality will be limited.

-u or **--uninstall**

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

-s or **--disable-native-shared**

Forces using the setup program's own redistributable libraries during installation, instead of those present in the system.

Redistributable libraries are standard sets of internal tools. Programs use these libraries for purposes such as displaying the user interface.

The setup program contains copies of all the libraries it needs. By default, it uses a copy of a library only when no such library is present in the system. With this parameter, the setup program always uses the copy.

You may want to use this parameter when experiencing problems with installation; for example, when the user interface of the setup program is not displayed correctly.

-d or **--debug**

Puts verbose information to the installation log.

-i <Component name> or **--id=**<Component name>

Specifies the name of the component being installed:

For Acronis Backup Agent for Linux: **BackupAndRecoveryAgent**

For Acronis Backup Bootable Components and Media Builder: **BackupAndRecoveryBootableComponents**

For Acronis Backup Management Console: **ManagementConsole**

The names are case-sensitive.

Without this parameter, all components will be installed.

-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.

Parameters that determine the installation mode

- To install the product in the trial mode, use the **-T** parameter.
- To install the product in the full mode, use the **-l** parameter.
- To install the product for cloud backup only, do not specify any of these parameters.

-T or **--trial**

Installs the product in the trial mode.

-l <License key> or **--serial=**<License key>

Specifies the license key for Acronis Backup.

3 Upgrading from Acronis Backup to Acronis Backup Advanced

Purchasing licenses

Prior to upgrade, purchase the Acronis Backup Advanced licenses for each machine where you are planning to upgrade Acronis Backup. Names of the licenses depend on the product currently installed on the machine.

Installed product	Licenses suitable for upgrade
Acronis Backup for Windows Server	Acronis Backup Advanced for Windows Server
Acronis Backup for Linux Server	Acronis Backup Advanced for Linux Server
Acronis Backup for PC	Acronis Backup Advanced for PC

After the purchase, you will receive an e-mail with the license keys.

Upgrading the product

To upgrade Acronis Backup to Acronis Backup Advanced, do the following:

Step 1. Changing licenses

On each machine where you want to upgrade Acronis Backup, change a license as follows:

1. Run Acronis Backup.
2. On the **Help** menu, click **Change license**.
3. Click **Change** to the right of **License for backup of disks/files**, click **Change**, and then click **Use the following license keys**.
4. Enter the new license keys for this machine.
5. Click **OK** to apply the new licenses, click **Yes** in the warning message, and then click **OK**.

The licenses previously assigned to the machine will be revoked and the management console will restart. Now, you can connect the console to a remote machine and connect to this machine from a remote location.

Step 2. Downloading the setup program

Download the setup program of Acronis Backup Advanced from the Acronis website as described at http://kb.acronis.com/content/1642.

Step 3. Installing the management server

Install Acronis Backup Management Server on a machine running Windows. The machine must have at least 8 GB of RAM and 4.5 GB of free space on a system disk.

It is acceptable to install the management server on one of the machines where you have upgraded the product. To do this:

1. Run the setup program, and then click **Install Acronis Backup**.
2. After accepting the terms of the license agreement, click **Modify**.
3. In the components tree, select **Management Server**.
4. Follow the on-screen instructions. In most cases, you can leave the default settings.

In large environments, we recommend setting up a dedicated physical or virtual server. For detailed information, refer to the installation documentation for Acronis Backup Advanced.

Step 4. Adding the upgraded machines to the management server

1. On any machine where the product was upgraded, run Acronis Backup.
2. Click **Connect to a management server** and type the server name or IP address. If prompted for credentials, specify the user name and password of a user who is a member of the **Acronis Centralized Admins** and **Acronis Remote Users** groups on the management server.
3. In the **Navigation** tree, select 🖥 **Machines with agents**.
4. Click 📂 **Add multiple machines** on the toolbar.
5. Add the upgraded machines in any of the following ways:
   - By specifying their names or IP addresses.
   - By browsing the network.
   - By browsing an Active Directory domain.
   - By importing a list of machines from a .txt or .csv file.

   For detailed information, refer to the "Specifying the list of machines" section of the installation documentation for Acronis Backup Advanced.

Tips for further usage

The added machines will appear in the **Machines with agents** view of the management server.

The backup plans on the machines will remain intact. To view them on the management server, right-click the machine name > **View details** > **Backup plans and tasks**. The product continues doing backups and you can recover from the backups created before the upgrade.

You can now create centralized backup plans that will simultaneously back up several machines to a single location.

4   Checking for software updates

Each time you start the management console, Acronis Backup checks whether a new version of the software is available on the Acronis website. If so, the software provides a link for downloading a setup program of the new version.

To check for updates manually, start the management console and then click **Help > Check for updates**. In that window, you also can disable the automatic checks for updates.

5   Uninstalling Acronis Backup

To uninstall Acronis Backup

Do the following as the root user:

1. Run the following command:

    ```
    # /usr/lib/Acronis/BackupAndRecovery/uninstall/uninstall
    ```

    To uninstall the product in the unattended mode, run the command with the **-a** parameter.
2. Run the following command to delete the source files of the SnapAPI module:

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

6   Deleting Acronis Secure Zone

Uninstallation of Acronis Backup 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. On the **Actions** menu, click **Manage Acronis Secure Zone**.
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 will start deleting the zone.