



Acronis Backup & Recovery 11.5

Update 2

Command-Line Reference

Applies to the following editions:

- | | |
|--|--|
| ☒ Advanced Server | ☒ Server for Windows |
| ☒ Virtual Edition | ☒ Server for Linux |
| ☒ Advanced Server SBS Edition | ☒ Workstation |
| ☒ Advanced Workstation | |
| ☒ For Microsoft Exchange Server | |
| ☒ For Microsoft SQL Server (single-pass) | |
| ☒ For Microsoft Active Directory (single-pass) | |

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1 Command-line utility overview

Acronis Backup & Recovery 11.5 supports the command-line interface with the **acrocmbd** utility.

Unlike the **trueimagecmd** utility used in the older Acronis products, **acrocmbd** does not contain any tools that physically execute the commands. It merely provides the command-line interface to Acronis Backup & Recovery 11.5 components—agents, storage nodes and the management server.

Once installed on a Windows or Linux machine, the **acrocmbd** utility can be run from any folder or directory. This utility is also available when operating in both Linux-based and PE-based bootable media.

1.1 Installation

Stand-alone editions of Acronis Backup & Recovery 11.5

If you have installed a stand-alone edition of Acronis Backup & Recovery 11.5, the command-line utility is already on your machine. Only local management of this machine is available. This means that any command or script for this machine can be run only locally.

Editions with centralized management

Advanced editions of Acronis Backup & Recovery 11.5 enable you to perform local, remote and centralized management (p. 10) of any machine where an Acronis Backup & Recovery 11.5 agent is installed.

As with Management Console, you install the command-line utility on the machine from which you prefer to operate (run commands or scripts). The machine may run Windows or Linux. Using the command-line utility, you can manage a Windows machine from a machine running Linux or vice versa.

Installation steps

In Linux, the command-line utility is installed by default with Management Console or Agent for Linux.

In Windows, you install the utility from the setup file as a separate component. To access this component in the installer, select the **I want to manually select the Acronis components and customize the installation process** check box. Or, you can extract and run the corresponding .msi file.

To install the command-line utility from the .msi file:

1. Run the Acronis Backup & Recovery 11.5 setup file.
2. Click **Extract installation files**.
3. Select the check box corresponding to the **AcronisCommandLineTool.msi** file.
4. Specify the folder where to extract the file.
5. Click **Extract**.
6. After the file is successfully extracted, click **Finish**.
7. Go to the folder where the **AcronisCommandLineTool.msi** file is extracted, and launch the file.
8. Follow the Install Wizard instructions on the screen.

Installation paths

The default installation paths are:

- `%ProgramFiles%\Acronis\CommandLineTool` (in 32-bit Windows)
- `%ProgramFiles(x86)%\Acronis\CommandLineTool` (in 64-bit Windows)
- `/usr/lib/Acronis/CommandLineTool` (in Linux)

1.2 Backward compatibility and upgrade

Upgrading the command-line utility from Acronis Backup & Recovery 10

When you upgrade a stand-alone edition of Acronis Backup & Recovery 10 to Acronis Backup & Recovery 11.5, no additional actions are needed to upgrade the command-line utility.

When you upgrade an edition with centralized management, the software installs the command-line utility on every machine where an agent is installed. No additional actions are needed.

Backward compatibility

The Acronis Backup & Recovery 11.5 command-line utility is backward compatible with the Acronis Backup & Recovery 10 command-line utility. You can continue using the old syntax. Just type **acrocmd** instead of **trueimagecmd**.

To continue using your existing scripts, edit the scripts so that **trueimagecmd** is replaced with **acrocmd**. If your scripts contain the path to the **trueimagecmd** utility, replace it with the path to the **acrocmd** utility. Retain all other parameters and values.

*Before switching to **acrocmd**, make sure that all the product components are upgraded. Acronis Backup & Recovery 10 does not support **acrocmd**.*

Combination of the old and new syntaxes is acceptable within a script, but is not acceptable within a command string. When you create new scripts, we recommend that you use the new syntax.

Even when using the old syntax, logs and commands' output will appear in the new format.

Extensions of backup file names

The behavior of the **/filename** parameter with the backup commands is slightly different in Acronis Backup & Recovery 10 and Acronis Backup & Recovery 11.5. Unlike Acronis Backup & Recovery 10, where the extension of a backup file is exactly the same as you specify in the parameter value, Acronis Backup & Recovery 11.5 adds the ***.tib** extension to this value.

For example:

- In Acronis Backup & Recovery 10, if you specify **/filename:<path>my_backup.bak**, the backup file name will be **my_backup.bak**
- In Acronis Backup & Recovery 11.5, if you specify **/filename:<path>my_backup.bak**, the backup file name will be **my_backup.bak.tib**. However, if you specify **/filename:<path>my_backup.tib**, the backup file name will also be **my_backup.tib**.

1.3 Syntax

acrocmd has the following format:

```
acrocmd <command> --<parameter 1>=<value list 1> ... --<parameter N>=<value list N>
```

Typographic conventions

Descriptions of commands and parameters use the following specific typographic conventions.

- Between angle brackets (<>) – information that the user must supply. Example: <IP address or hostname>
- Between braces ({}); choices separated by pipe (|) – a set of choices from which the user must choose only one. Example: {on|off}.

Parameter values

For some parameters, you should specify only one value. The description of such value is written in the singular. For example, if you see **--arc=<archive name>**, specify only one archive name in this parameter.

For some parameters, you can enter one or more values. The description of such values is written in the plural. For example, if you see **--volume=<volume numbers>**, you can specify a list of volume numbers in this parameter.

Separators

A parameter name and a value list can be separated by either an equals sign or a space character. Values in a value list can be separated by either a comma or a space character.

Examples:

```
acrocmd backup disk --disk=1,2
acrocmd backup disk --disk=1 2
acrocmd backup disk --disk 1,2
acrocmd backup disk --disk 1 2
```

Enclosing parameter values that contain commas and space characters

General view	Example
"<value with space character>"	--include="C:\my documents"
\ "<value with comma>"	--include="\E:\Employees(A,B)\"
"\"<value with space character and comma>\""	--include="\"D:\my photos\my wife, my kids and me\""

Files with input parameters

acrocmd supports files with input parameters. The contents of an input parameter file are concatenated with the parameters in the command line.

For example, the command

```
acrocmd backup disk -f params.txt
```

where the content of the file **params.txt** is

```
--disk=1 --loc=e:\my_backups --arc=archive123
```

equals to

```
acrocmd backup disk --disk=1 --loc=e:\my_backups --arc=archive123
```

1.4 Local, remote and centralized management

Advanced editions of Acronis Backup & Recovery 11.5 enable you to perform local, remote and centralized management of any machine where an Acronis Backup & Recovery 11.5 agent is installed.

Local management

For local management, you install the command-line utility on the same machine where the Acronis Backup & Recovery 11.5 agent is installed. The operations are performed under the user account you are logged on with.

Example

To view all disks of the local machine, run the following command:

```
acrocmd list disks
```

Remote management

For remote management, you install the command-line utility on the machine from which you prefer to operate (run commands or scripts).

Along with the command, you specify:

- the IP address or host name of the remote machine that has an Acronis Backup & Recovery 11.5 agent (**--host**)
- credentials (a pair of user name and password) for access to that machine

The user whose credentials you specify must be a member of the Acronis Remote Users security group on that machine. The operations are performed under this user account.

Example

To view all disks of a remote machine, run the following command:

```
acrocmd list disks --host=<IP address or hostname> --credentials=<user name>,<password>
```

Centralized management

Commands on a machine

Through Acronis Backup & Recovery 11.5 Management Server, you can manage any registered machine using the credentials of the management server's administrator. Credentials for each remote machine are not required.

For a number of commands, you can specify comma-separated addresses of multiple machines. The operation will be executed on all the specified machines one after another.

Along with the command, you specify:

- the IP address or host name of the machine that has an Acronis Backup & Recovery 11.5 agent (**--address**)
- the IP address or host name of the management server (**--host**)
- the name of the management server service (**--service=ams**)
- credentials for access to the management server

The user whose credentials you specify must be a member of the Acronis Centralized Admins security group on the management server. If you are running the command-line utility on a different machine, the user must also be a member of the Acronis Remote Users security group on the management server.

The operations on the machine are performed under the account of the agent service running on that machine (Acronis Agent User account).

Example

To view all disks of a machine through the management server, run the following command:

```
acrocmd list disks --host=<ams hostname> --credentials=<user name>,<password>  
--service=ams --address=<IP address or hostname>
```

Commands on the management server

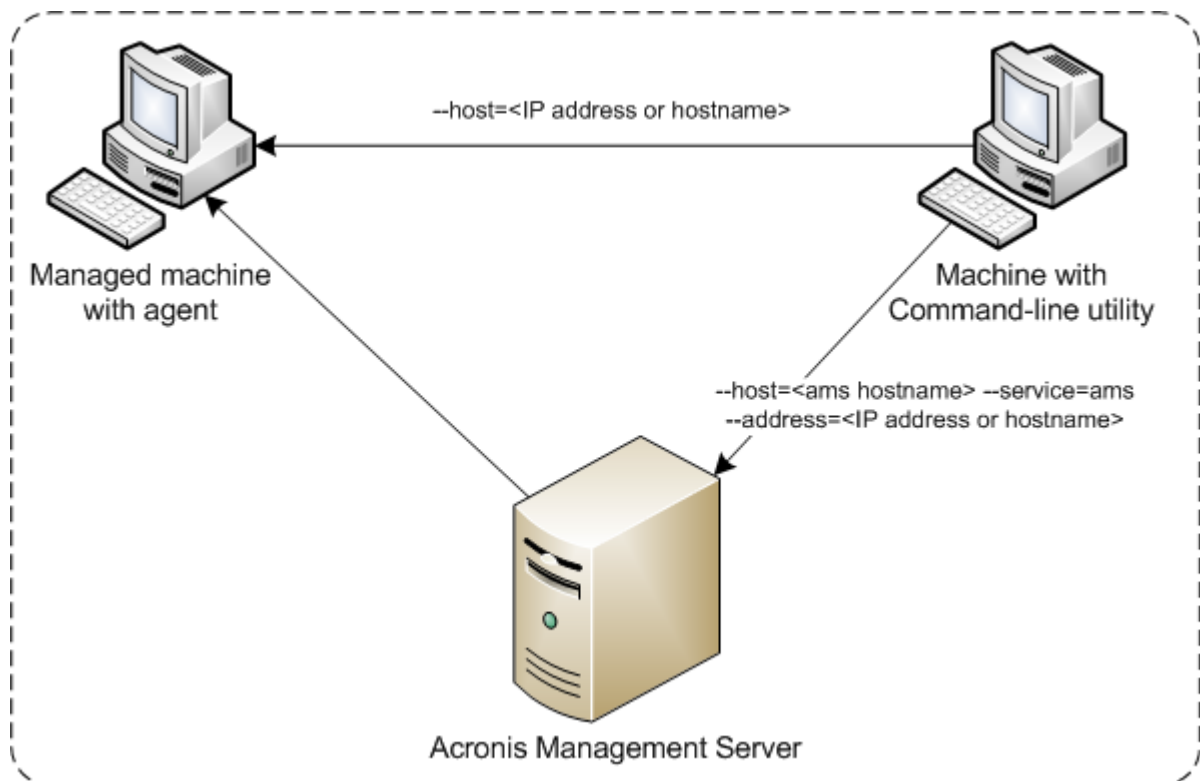
There are commands that can be executed by the management server itself.

Example

To view the current activities of the management server, run the following command:

```
acrocmd list activities --host=<ams hostname> --credentials=<user name>,<password>  
--service=ams
```

The below diagram shows options of access to a managed machine directly or via Acronis Backup & Recovery 11.5 Management Server.



Options of access to a managed machine

1.5 Uninstallation

Uninstallation in Linux

In Linux, run the following commands to uninstall the command-line utility:

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

To uninstall the command-line utility in the unattended mode, run the **./uninstall** commands with the **-a** parameter.

Uninstallation in Windows

When you uninstall Acronis Backup & Recovery 11.5 by clicking **Start -> All Programs -> Acronis -> Uninstall Acronis Backup & Recovery 11.5**, the command-line utility is uninstalled along with all product components.

To uninstall the command-line utility separately from the product

1. Run the Acronis Backup & Recovery 11.5 setup file.
2. Click **Extract installation files**.
3. Select the check box corresponding to the **AcronisCommandLineTool.msi** file.
4. Specify the folder where to extract the file.
5. Click **Extract**.
6. After the file is successfully extracted, click **Close**.
7. Run the following command:

```
msiexec /uninstall <path>\AcronisCommandLineTool.msi /qb
```

where <path> is the folder where the file is extracted.

If you have an edition with centralized management, you can also uninstall the command-line utility from the setup file. To do so, run the Acronis Backup & Recovery 11.5 setup file, click **Install Acronis Backup & Recovery 11.5**, then click **Modify**, and then clear the check box next to the name of the command-line utility.

1.6 List of abbreviated names

This document uses the following abbreviated names.

AMS – Acronis Backup & Recovery 11.5 Management Server and this component's service.

MMS – Acronis Managed Machine Service, the service running on a machine where an Acronis agent is installed.

ASN – Acronis Backup & Recovery 11.5 Storage Node and this component's service.

Agent for ESX(i) – Acronis Backup & Recovery 11.5 Agent for VMware vSphere ESX(i).

2 Commands

This section lists the supported commands and compatible parameters.

When using the command-line utility, you can view the information about the supported commands by means of the **help** (p. 17) command.

2.1 Commands by services

2.1.1 Disk, file, virtual machine backup

The following table summarizes the commands that can be executed by the Acronis services. For questions on how to connect to an Acronis service, please see the **--service** (p. 72) command description.

Command	AMS	MMS				ASN
		Agent for Windows	Agent for Linux	Agent for ESX(i) or Hyper-V	Bootable media	
Backup and recovery						
list disks (p. 18)		+	+	+	+	
backup disk (p. 19)		+	+	+	+	
recover disk (p. 20)		+	+	+	+	
recover mbr (p. 22)		+	+	+	+	
recover lvm_structure (p. 23)					Linux-based d	
backup file (p. 24)		+	+		+	
recover file (p. 25)		+	+	+	+	
list vmserver s (p. 27)	+			+		
list vms (p. 27)	+			+		
backup vm (p. 28)	+			+		
recover vm (p. 29)	+	+ (create vm files)	+ (create vm files)	+ (create vm on a server)		
Operations with archives and backups						
list archives (p. 40)	+	+	+	+	+	+
export archive (p. 41)	+	+	+	+	+	+
validate archive (p. 42)	+	+	+	+	+	+
catalog archive (p. 42)	+	+	+	+ except Agent for ESX(i) (VA)		+
delete archive (p. 43)	+	+	+	+	+	+
list backups (p. 44)	+	+	+	+	+	+
list content (p. 45)	+	+	+	+	+	+

Command	AMS	MMS				ASN
		Agent for Windows	Agent for Linux	Agent for ESX(i) or Hyper-V	Bootable media	
validate backup (p. 45)	+	+	+	+	+	+
catalog backup (p. 46)	+	+	+	+ except Agent for ESX(i) (VA)		+
export backup (p. 47)	+	+	+	+	+	+
replicate backup (p. 48)	+	+	+	+	+	+
convert full (p. 49)	+	+	+	+	+	+
consolidate backup (p. 49)	+	+	+	+	+	
delete backup (p. 50)	+	+	+	+	+	+
list mounts (p. 51)		+	+		+	
mount (p. 51)		+	+		+	
umount (p. 52)		+	+		+	
Operations with Acronis Secure Zone						
create asz (p. 55)		+	+		+	
resize asz (p. 55)		+	+		+	
cleanup asz (p. 56)		+	+		+	
delete asz_files (p. 57)		+	+		+	
delete asz (p. 57)		+	+		+	
Operations with Acronis Startup Recovery Manager						
activate asrm (p. 58)		+	+		+	
deactivate asrm (p. 58)		+	+		+	
Operations with tapes						
list tape_libraries (p. 59)		+	+			+
list tape_slots (p. 59)		+	+			+
inventory tape (p. 60)		+	+			+
Operations with vaults						
validate vault (p. 60)	+	+	+	+	+	+
catalog vault (p. 61)	+	+	+	+ except Agent for ESX(i) (VA)		+
Operations with disks						
clone disk (p. 62)		+	+		+	
Administration operations						
get log (p. 63)	+	+	+	+	+	+
list activities (p. 63)	+	+	+	+		+
sysinfo (p. 64)	+	+	+	+	+	+

Command	AMS	MMS				ASN
		Agent for Windows	Agent for Linux	Agent for ESX(i) or Hyper-V	Bootable media	
list plans (p. 65)	+	+	+	+		
delete plan (p. 65)	+	+	+	+		
export plan (p. 66)	+	+	+	+		
import plan (p. 66)	+	+	+	+		
disable plan (p. 67)	+	+	+	+		
enable plan (p. 68)	+	+	+	+		
list tasks (p. 68)	+	+	+	+		
run task (p. 69)	+	+	+	+		
stop task (p. 69)	+	+	+	+		
delete task (p. 70)	+	+	+	+		
list licenses (p. 70)		+	+	+	+	

* The AMS service does not execute these commands by itself. It only defines which Agent for ESX(i) or Agent for Hyper-V can execute the command and transmits the command to the corresponding MMS.

2.1.2 Application backup

The following table summarizes the commands that can be executed by the Acronis services. For questions on how to connect to an Acronis service, please see the **--service** (p. 72) command description.

Command	AMS	MMS				ASN
		Agent for Exchange	Agent for SQL (single-pass)*	Agent for Active Directory (single- pass)*	Reserved	
Backup and recovery						
list exchange_databases (p. 31)		+				
list exchange_mailboxes (p. 32)		+				
backup exchange_database (p. 32)		+				
backup exchange_mailbox (p. 33)		+				

Command	AMS	MMS				ASN
		Agent for Exchange	Agent for SQL (single-pass)*	Agent for Active Directory (single-pass)*	Reserved	
recover exchange_database (p. 35)		+				
recover exchange_mailbox (p. 36)		+				
list mssql_instances (p. 37)			+			
list mssql_databases (p. 37)			+			
backup disk (p. 19)			+	+		
recover mssql_database (p. 38)			+			
recover ad_database (p. 39)				+		
Operations with archives and backups						
list archives (p. 40)	+	+	+	+		+
export archive (p. 41)	+	+	+	+		+
validate archive (p. 42)	+	+	+	+		+
catalog archive (p. 42)	+	+	+	+		+
delete archive (p. 43)	+	+	+	+		+
list backups (p. 44)	+	+	+	+		+
list content (p. 45)	+	+	+	+		+
validate backup (p. 45)	+	+	+	+		+
catalog backup (p. 46)	+	+	+	+		+
export backup (p. 47)	+	***	+	+		+
replicate backup (p. 48)	+	+	+	+		+
delete backup (p. 50)	+	***	+	+		+
list mssql_mounts (p. 53)			+			
mount mssql_database (p. 53)			+			
umount mssql_database (p. 54)			+			
Operations with tapes						
list tape_libraries (p. 59)		+	+	+		+

Command	AMS	MMS				ASN
		Agent for Exchange	Agent for SQL (single-pass)*	Agent for Active Directory (single-pass)*	Reserved	
list tape_slots (p. 59)		+	+	+		+
inventory tape (p. 60)		+	+	+		+
Operations with vaults						
validate vault (p. 60)	+	+	+	+		+
catalog vault (p. 61)	+	+	+	+		+
Administration operations						
get log (p. 63)	+	+	+	+		+
list activities (p. 63)	+	+	+	+		+
sysinfo (p. 64)	+	+	+	+		+
list plans (p. 65)	+	+	+	+		
delete plan (p. 65)	+	+	+	+		
export plan (p. 66)	+	+	+	+		
import plan (p. 66)	+	+	+	+		
disable plan (p. 67)	+	+	+	+		
enable plan (p. 68)	+	+	+	+		
list tasks (p. 68)	+	+	+	+		
run task (p. 69)	+	+	+	+		
stop task (p. 69)	+	+	+	+		
delete task (p. 70)	+	+	+	+		
list licenses (p. 70)		+	+	+		

* This agent can also execute all of the commands that can be executed by Agent for Windows (p. 13).

** When exporting a transaction log backup, the data from the entire backup chain (the full database backup plus the set of subsequent transaction log backups including the selected one) is copied to a single backup. Transaction log files will be applied to the database during recovery.

When exporting an incremental mailbox backup, the data from the backup chain (the full backup plus the set of the subsequent incremental mailbox backups including the selected one) is consolidated into a single backup.

*** Backups that have no dependencies are deleted without any limitations. A backup that has dependencies cannot be deleted separately from its dependent backups.

2.2 help

The command provides the information about the supported commands.

- Type **acrocnd help** to get the list of all available commands.
- Type **acrocnd help <text fragment>** to get the list of all commands that begin with the fragment you specified.

For example, **acrocnd help ba** lists the following commands: **backup disk**, **backup file**, etc.

- Type **acrocmd help** <complete command name> to view the information about this command.
For example, **acrocmd help backup disk** displays the information about the **backup disk** command.

2.3 Backup and recovery

2.3.1 Disks and volumes

The commands listed in this section can be executed on a machine where Agent for Windows or Agent for Linux is installed.

2.3.1.1 list disks

Lists available disk groups, disks, volumes and unallocated space.

Examples (p. 121)

Parameters

--oss_numbers={true|false} (p. 118)

Units of measurement

--size_measure={s|kb|mb|gb}

Measure of the size of disks and volumes. If not specified, the value is **mb**.

--start_measure={s|kb|mb|gb}

Measure of the offset of volumes. If not specified, the value is **mb**.

General parameters

--log=<full path> (p. 117)

--log_format={structured|unstructured} (p. 117)

--output={formatted|raw} (p. 118)

{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)

--credentials=<user name>,<password>,<encrypted> (p. 115)

--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service={mms|ams} (p. 72)

Access to a virtual machine (Virtual edition only)

{--vmid=<virtual machine ID>|--vmname=<virtual machine name>|--vmconfig=<path>} (p. 73)

2.3.1.2 backup disk

Creates a backup of the specified disks or volumes. If neither the **--disk** parameter nor the **--volume** parameter is specified, the command backs up the entire machine.

Backing up the entire machine is highly recommended when you perform a single-pass disk and application backup (i.e. specify the **--application_aware** parameter). Otherwise, application data may be backed up incompletely.

Examples (p. 121)

Parameters

What to back up

- disk**=<disk numbers> (p. 83)
- volume**=<volume numbers> (p. 84)
- oss_numbers**=**{true|false}** (p. 118)
- exclude_hidden** (p. 88)
- exclude_mask**=<masks> (p. 88)
- exclude_names**=<names> (p. 88)
- exclude_system** (p. 88)

Where to save the backup

- loc**=<path> (p. 78)
- credentials**=<user name>,<password>,**encrypted** (p. 115)
- arc**=<archive name> (p. 79)
- password**=<password>,**encrypted** (p. 119)

How to back up

- archive_comment**=<comments> (p. 87)
- backup_comment**=<comments> (p. 87)
- backuptype**=**{full|incremental|differential}** (p. 87)
- cleanup** (p. 87)
- fixed_drive** (p. 90)
- plain_archive** (p. 91)
- raw** (p. 92)

Single-pass backup

- application_aware** (p. 86)
- ignore_app_errors** (p. 90)
- mssql_truncate_logs** (p. 91)

Backup options

- cataloging**=**{full|fast}** (p. 92)
- compression**=**{none|normal|high|max}** (p. 94)
- encryption**=**{none|aes128|aes192|aes256}** (p. 94)
- fast** (p. 94)
- force_yes** (p. 116)
- hdd_speed**=<speed>**{kb|p}** (p. 94)
- ignore_bad_sectors** (p. 95)

- multi_volume_snapshot={true|false}** (p. 96)
- network_speed=<speed>{kb|p}** (p. 117)
- post_cmd=<command>** (p. 96)
- pre_cmd=<command>** (p. 96)
- process_priority={low|normal|high}** (p. 119)
- reboot_after** (p. 120)
- retry_count=<number of attempts>** (p. 116)
- retry_delay=<delay>** (p. 116)
- silent_mode={on|off}** (p. 120)
- split=<size>** (p. 97)
- use_registry_defaults** (p. 120)
- use_vss={none|auto|software_auto|software|hardware|acronis|native}** (p. 98)
- vss_full_backup** (p. 98)

Tape management options

- tape_eject_successful** (p. 97)
- tape_full_empty** (p. 97)
- tape_overwrite** (p. 97)

General parameters

- log=<full path>** (p. 117)
- log_format={structured|unstructured}** (p. 117)
- output={formatted|raw}** (p. 118)
- progress** (p. 119)
- {-f|--file_params}=<full local path>** (p. 116)

Access to a remote machine (advanced editions only)

- host=<IP address or hostname>** (p. 72)
- credentials=<user name>,<password>,**encrypted**** (p. 115)
- address=<IP addresses or hostnames>** (p. 72)

Access to a specific service within a machine (advanced editions only)

- service={mms|ams}** (p. 72)

2.3.1.3 recover disk

Recovers the specified disks or volumes.

A disk is always recovered along with its MBR. When you recover a volume, the MBR is not recovered unless you use the **--mbr_disk** and **--target_mbr_disk** parameters.

Examples (p. 121)

Parameters

What to recover

- loc=<path>** (p. 78)
- credentials=<user name>,<password>,**encrypted**** (p. 115)
- arc=<archive name>** (p. 79)
- password=<password>,**encrypted**** (p. 119)

--backup=<backup ID> (p. 80)
--disk=<disk numbers> (p. 83)
--nt_signature=**{auto|new|backup|existing}** (p. 83)
--volume=<volume numbers> (p. 84)
--oss_numbers=**{true|false}** (p. 118)
--mbr_disk=<disk number> (p. 86)

Where to recover

--target_disk=<disk numbers> (p. 106)
--target_volume=<volume numbers> (p. 107)

Recovering disks

If the **--target_disk** parameter is specified, the software will recover each disk specified in the **--disk** parameter to the respective disk specified in the **--target_disk** parameter. For example, if you type **--disk=1,2 --target_disk=3,4**, the software will recover disk 1 to disk 3 and disk 2 to disk 4. If the number of values of the **--disk** and **--target_disk** parameters differ, the command will fail.

If the **--target_disk** parameter is not specified, the software will automatically map the disks specified in the **--disk** parameter to the target machine's disks. If the automatic mapping is not successful, the command will fail.

Recovering volumes

If the **--target_volume** parameter is specified, the software will recover each volume specified in the **--volume** parameter to the respective volume specified in the **--target_volume** parameter. For example, if you type **--volume=3-1,3-2 --target_volume=1-1,1-2**, the software will recover volume 3-1 to volume 1-1 and volume 3-2 to volume 1-2. If the number of values of the **--volume** and **--target_volume** parameters differ, the command will fail.

If the **--target_volume** parameter is not specified, and the **--target_disk** parameter is specified, the software will try to recover all of the volumes specified in the **--volume** parameter to the first unallocated space of a suitable size on the specified disk. If no unallocated space of a suitable size is found, the command will fail. You can specify only one target disk, even when recovering several volumes.

If neither the **--target_volume** parameter nor the **--target_disk** parameter is specified, the software will automatically map the volumes specified in the **--volume** parameter to the target machine's disks. If the automatic mapping is not successful, the command will fail.

--start=<offset>**{s|kb|mb|gb}** (p. 86)
--size=<volume size>**{s|kb|mb|gb}** (p. 86)
--target_mbr_disk=<disk number> (p. 86)

How to recover

--fat16_32 (p. 102)
--ext2_3 (p. 102)
--preserve_mbr (p. 105)
--type=**{active|primary|logical}** (p. 107)
--use_all_space (p. 108)
--active_restore

If the parameter is specified, the Acronis Active Restore technology is enabled.

Recovery options

--force_yes (p. 116)
--reboot (p. 120)
--reboot_after (p. 120)
--retry_count=<number of attempts> (p. 116)
--retry_delay=<delay> (p. 116)
--silent_mode=**{on|off}** (p. 120)
--use_registry_defaults (p. 120)

Acronis Universal Restore parameters

--ur_driver=<INF file name>
Specifies using Acronis Universal Restore and the mass storage driver to be installed.

--ur_path=<search folder>
Specifies using Acronis Universal Restore and the path to the driver storage.

General parameters

--log=<full path> (p. 117)
--log_format=**{structured|unstructured}** (p. 117)
--output=**{formatted|raw}** (p. 118)
--progress (p. 119)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP addresses or hostnames> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms|ams}** (p. 72)

2.3.1.4 recover mbr

Recovers the MBR from a disk or volume backup.

Use this command to repair an MBR on the same machine that was backed up. When migrating to different hardware, use the **recover disk** (p. 20) command with either the **--disk** parameter (the MBR will be recovered automatically) or the **--volume**, **--mbr_disk**, and **--target_mbr_disk** parameters.

Examples (p. 121)

Parameters

What to recover

--loc=<path> (p. 78)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--arc=<archive name> (p. 79)
--password=<password>,**encrypted** (p. 119)
--backup=<backup ID> (p. 80)
--disk=<disk number> (p. 83)

Where to recover

--target_disk=<disk number> (p. 106)

Recovery options

--force_yes (p. 116)
--reboot (p. 120)
--reboot_after (p. 120)
--retry_count=<number of attempts> (p. 116)
--retry_delay=<delay> (p. 116)
--silent_mode=**{on|off}** (p. 120)

General parameters

--log=<full path> (p. 117)
--log_format=**{structured|unstructured}** (p. 117)
--output=**{formatted|raw}** (p. 118)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP addresses or hostnames> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms|ams}** (p. 72)

2.3.1.5 recover lvm_structure

Creates the same logical volume structure on the specified machine as in the backed-up system. Use this command if you need to recover a Linux system, along with its software RAID or LVM structure, to a machine with different logical volume structure or without logical volumes.

The specified machine must be booted with Linux-based bootable media. Before executing the command, make sure that the machine has enough disks that are as big or bigger than the original disks. Execute the command prior to the **recover disk** (p. 20) command. Then, recover each volume to the corresponding volume of the target machine.

Caution: As a result of this command execution, the current volume structure on the machine will be replaced with the one stored in the backup. This will destroy the data that is currently stored on some or all of the machine's hard disks.

Examples (p. 121)

Parameters

What to recover

--loc=<path> (p. 78)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--arc=<archive name> (p. 79)
--password=<password>,**encrypted** (p. 119)
--backup=<backup ID> (p. 80)

Recovery options

--force_yes (p. 116)

General parameters

--log=<full path> (p. 117)

--log_format=**{structured|unstructured}** (p. 117)

--output=**{formatted|raw}** (p. 118)

--progress (p. 119)

{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)

--credentials=<user name>,<password>,**encrypted** (p. 115)

2.3.2 Files

The commands listed in this section can be executed on a machine where Agent for Windows or Agent for Linux is installed.

2.3.2.1 backup file

Creates a backup of specified files and folders.

Examples (p. 124)

Parameters

What to back up

--include=<paths> (p. 91)

--exclude_hidden (p. 88)

--exclude_mask=<masks> (p. 88)

--exclude_names=<names> (p. 88)

--exclude_system (p. 88)

Where to save the backup

--loc=<path> (p. 78)

--credentials=<user name>,<password>,**encrypted** (p. 115)

--arc=<archive name> (p. 79)

--password=<password>,**encrypted** (p. 119)

How to back up

--archive_comment=<comments> (p. 87)

--backup_comment=<comments> (p. 87)

--backuptype=**{full|incremental|differential}** (p. 87)

--cleanup (p. 87)

--fixed_drive (p. 90)

--plain_archive (p. 91)

Backup options

- cataloging={full|fast} (p. 92)
- compression={none|normal|high|max} (p. 94)
- encryption={none|aes128|aes192|aes256} (p. 94)
- force_yes (p. 116)
- hdd_speed=<speed>{kb|p} (p. 94)
- ignore_bad_sectors (p. 95)
- multi_volume_snapshot={true|false} (p. 96)
- network_speed=<speed>{kb|p} (p. 117)
- post_cmd=<command> (p. 96)
- pre_cmd=<command> (p. 96)
- process_priority={low|normal|high} (p. 119)
- reboot_after (p. 120)
- retry_count=<number of attempts> (p. 116)
- retry_delay=<delay> (p. 116)
- silent_mode={on|off} (p. 120)
- snapshot={always|possible|none} (p. 97)
- split=<size> (p. 97)
- use_registry_defaults (p. 120)
- use_vss={none|auto|software_auto|software|hardware|acronis|native} (p. 98)

Tape management options

- tape_eject_successful (p. 97)
- tape_full_empty (p. 97)
- tape_overwrite (p. 97)

General parameters

- log=<full path> (p. 117)
- log_format={structured|unstructured} (p. 117)
- output={formatted|raw} (p. 118)
- progress (p. 119)
- {-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

- host=<IP address or hostname> (p. 72)
- credentials=<user name>,<password>,encrypted (p. 115)
- address=<IP addresses or hostnames> (p. 72)

Access to a specific service within a machine (advanced editions only)

- service={mms|ams} (p. 72)

2.3.2.2 recover file

Recovers files and folders from a file-level or disk-level backup.

Examples (p. 124)

Parameters

What to recover

--loc=<path> (p. 78)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--arc=<archive name> (p. 79)
--password=<password>,**encrypted** (p. 119)
--backup=<backup ID> (p. 80)
--file=<paths> (p. 103)
--exclude=<files, folders and masks> (p. 102)

Where to recover

--target=<path> (p. 80)
--credentials=<user name>,<password>,**encrypted** (p. 115)

How to recover

--overwrite=**{always|older|never}** (p. 104)
--recover_absolute_path (p. 105)
--recover_security=**{true|false}**

This parameter is effective only when recovering from a file-level backup of Windows files. If the value is **true** or if the parameter is not specified, recover NTFS permissions for files along with the files themselves. Otherwise, the files will inherit the NTFS permissions from the folder to which they will be recovered.

--original_date (p. 103)

Recovery options

--force_yes (p. 116)
--reboot (p. 120)
--reboot_after (p. 120)
--retry_count=<number of attempts> (p. 116)
--retry_delay=<delay> (p. 116)
--silent_mode=**{on|off}** (p. 120)
--use_registry_defaults (p. 120)

General parameters

--log=<full path> (p. 117)
--log_format=**{structured|unstructured}** (p. 117)
--output=**{formatted|raw}** (p. 118)
--progress (p. 119)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostnames> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms|ams}** (p. 72)

2.3.3 Virtual machines

The commands listed in this section are available in the Acronis Backup & Recovery 11.5 Virtual Edition only if Agent for ESX(i) or Agent for Hyper-V is installed. (This does not apply to the **recover vm** (p. 29) command.)

2.3.3.1 list vmservers

Lists virtualization servers and server clusters that are present on the specified management server or that are accessible to Agent for ESX(i).

Examples (p. 125)

Parameters

--filter_guid=<GUIDs> (p. 112)
--filter_name=<names> (p. 112)
--filter_machines=<quantities of machines> (p. 112)
--filter_type=<server types> (p. 113)

General parameters

--log=<full path> (p. 117)
--log_format=**{structured|unstructured}** (p. 117)
--output=**{formatted|raw}** (p. 118)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP addresses or hostnames> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms|ams}** (p. 72)

2.3.3.2 list vms

Lists virtual machines that are present on the specified management server or that are managed by Agent for ESX(i) or Agent for Hyper-V, depending on the service that will execute the command.

Examples (p. 125)

Parameters

--filter_available_for_backup=**{true|false}** (p. 111)
--filter_guid=<GUIDs> (p. 112)
--filter_host=<hostnames> (p. 112)
--filter_name=<names> (p. 112)
--filter_state=<states> (p. 113)
--filter_status=<statuses> (p. 113)

General parameters

--log=<full path> (p. 117)
--log_format=**{structured|unstructured}** (p. 117)
--output=**{formatted|raw}** (p. 118)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)

Access to a specific service within a machine (advanced editions only)

--service=**{mms|ams}** (p. 72)

2.3.3.3 backup vm

Creates a backup of specified disks and volumes of the specified virtual machines. If neither **--disk** nor **--volume** parameter is specified, the command backs up the entire machine.

Examples (p. 125)

Parameters

Access to a virtual machine

{--vmid=<virtual machine IDs>**|--vmname**=<virtual machine names>**|--vmconfig**=<paths>} (p. 73)

You can specify one or more virtual machines to be backed up. The **--vmname** parameter is case-sensitive.

--simultaneous_backup=<number>

Number of virtual machines to be backed up simultaneously by Agent for ESX(i) or Agent for Hyper-V. If not specified, each agent will back up virtual machines two at a time simultaneously. To back up machines one at a time, set the parameter value to 1.

What to back up

--disk=<disk numbers> (p. 83)
--volume=<volume numbers> (p. 84)
--exclude_hidden (p. 88)
--exclude_mask=<masks> (p. 88)
--exclude_names=<names> (p. 88)
--exclude_system (p. 88)

Where to save the backup

--loc=<path> (p. 78)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--arc=<archive name> (p. 79)
--password=<password>,**encrypted** (p. 119)

How to back up

--archive_comment=<comments> (p. 87)
--backup_comment=<comments> (p. 87)

--**backuptype**={full|incremental|differential} (p. 87)
--**cleanup** (p. 87)
--**raw** (p. 92)

Backup options

--**cataloging**={full|fast} (p. 92)
--**cbt_mode**={on_if_enabled|on|off} (p. 93)
--**compression**={none|normal|high|max} (p. 94)
--**encryption**={none|aes128|aes192|aes256} (p. 94)
--**fast** (p. 94)
--**force_yes** (p. 116)
--**hdd_speed**=<speed>{kb|p} (p. 94)
--**network_speed**=<speed>{kb|p} (p. 117)
--**process_priority**={low|normal|high} (p. 119)
--**retry_count**=<number of attempts> (p. 116)
--**retry_delay**=<delay> (p. 116)
--**silent_mode**={on|off} (p. 120)
--**split**=<size> (p. 97)
--**use_registry_defaults** (p. 120)

Tape management options

--**tape_eject_successful** (p. 97)
--**tape_full_empty** (p. 97)
--**tape_overwrite** (p. 97)

General parameters

--**log**=<full path> (p. 117)
--**log_format**={structured|unstructured} (p. 117)
--**output**={formatted|raw} (p. 118)
--**progress** (p. 119)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote physical machine

--**host**=<IP address or hostname> (p. 72)
--**credentials**=<user name>,<password>,**encrypted** (p. 115)

Access to a specific service within a machine (advanced editions only)

--**service**={mms|ams} (p. 72)

2.3.3.4 recover vm

Recovers a disk or volume backup onto a new or existing virtual machine. The **recover vm** command replaces and enhances the **convert** command which was available in earlier versions of the Acronis software.

The **recover vm** command can be executed by the following agents:

- **Agent for ESX(i)** recovers a disk (volume) backup to a new or existing ESX(i) virtual machine.
- **Agent for Hyper-V** recovers a disk (volume) backup to a new or existing Hyper-V virtual machine.

- **Agent for Windows** and **Agent for Linux** recover a disk (volume) backup to a new virtual machine of any of the following types: VMware Workstation, Microsoft Virtual PC, Red Hat Enterprise Virtualization, or Citrix XenServer Open Virtual Appliance (OVA).

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. The OVA virtual appliance can be imported to XenServer. Disks of a Virtual PC can be attached to a Hyper-V virtual machine.

A virtual machine must be powered off during the recovery to this machine. The target machine located on an ESX(i) or Hyper-V host will be powered off without a prompt. Please be sure to specify the correct machine.

Examples (p. 125)

Parameters

What to recover

```
--loc=<path> (p. 78)
--credentials=<user name>,<password>,<encrypted> (p. 115)
--arc=<archive name> (p. 79)
--password=<password>,<encrypted> (p. 119)
--backup=<backup ID> (p. 80)
--disk=<disk number> (p. 83)
--volume=<volume number> (p. 84)
```

Where to recover

- If you want to recover to an existing virtual machine:

```
{--vmid=<virtual machine ID>|--vmname=<virtual machine name>|--vmconfig=<path>}
```

 (p. 73)
- If you want to recover to a new virtual machine:

```
--vmname=<virtual machine name> (p. 74)
--vmtype={vmware|virtualpc|redhat|xen} (p. 74)
{--vmserver_name=<server name>|--vmserver_id=<server GUID>}
```

 (p. 74)

```
--vmstorage=<path> (p. 74)
--credentials=<user name>,<password>,<encrypted> (p. 115)
```

Credentials for a network folder where a **vmware**, **virtualpc**, **redhat**, or **xen** virtual machine is to be created.

```
--target_disk=<disk number> (p. 106)
--target_volume=<volume number> (p. 107)
--start=<offset>{s|kb|mb|gb} (p. 86)
--size=<volume size>{s|kb|mb|gb} (p. 86)
```

How to recover

```
--ext2_3 (p. 102)
--fat16_32 (p. 102)
--preserve_mbr (p. 105)
--type={active|primary|logical} (p. 107)
--use_all_space (p. 108)
```

Recovery options

--force_yes (p. 116)
--power_on (p. 105)
--retry_count=<number of attempts> (p. 116)
--retry_delay=<delay> (p. 116)
--silent_mode=**{on|off}** (p. 120)
--use_registry_defaults (p. 120)

General parameters

--log=<full path> (p. 117)
--log_format=**{structured|unstructured}** (p. 117)
--output=**{formatted|raw}** (p. 118)
--progress (p. 119)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)

Access to a specific service within a machine (advanced editions only)

--service=**{mms|ams}** (p. 72)

2.3.4 Microsoft Exchange

The commands listed in this section can be executed on a machine where Agent for Microsoft Exchange Server is installed.

2.3.4.1 list exchange_databases

Lists storage groups (for Exchange 2003/2007) and databases.

Examples (p. 126)

Parameters

General parameters

--log=<full path> (p. 117)
--log_format=**{structured|unstructured}** (p. 117)
--output=**{formatted|raw}** (p. 118)
{-f|--file_params}=<full local path> (p. 116)
--exchange_credentials=<domain user name>,<password>,**encrypted** (p. 75)

Access to a remote machine

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine

--service=**{mms|ams}** (p. 72)

2.3.4.2 list exchange_mailboxes

Lists mailboxes and public folders in the specified Exchange database.

Examples (p. 126)

Parameters

--mailbox_location=<path> (p. 82)

--filter_name=<names> (p. 112)

General parameters

--log=<full path> (p. 117)

--log_format=**{structured|unstructured}** (p. 117)

--output=**{formatted|raw}** (p. 118)

{-f|--file_params}=<full local path> (p. 116)

--exchange_credentials=<domain user name>,<password>,**encrypted** (p. 75)

Access to a remote machine

--host=<IP address or hostname> (p. 72)

--credentials=<user name>,<password>,**encrypted** (p. 115)

--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine

--service=**{mms|ams}** (p. 72)

2.3.4.3 backup exchange_database

Creates a backup of the specified storage groups (for Exchange 2003/2007) or databases (for Exchange 2010 or later).

Examples (p. 126)

Parameters

What to back up

--items=<items> (p. 75)

Where to save the backup

--loc=<path> (p. 78)

--credentials=<user name>,<password>,**encrypted** (p. 115)

--arc=<archive name> (p. 79)

--password=<password>,**encrypted** (p. 119)

How to back up

--archive_comment=<comments> (p. 87)

--backup_comment=<comments> (p. 87)

--backuptype=**{full|transaction_log}** (p. 87)

--cleanup (p. 87)

--copy_only (p. 88)

--express (p. 89)

Backup options

`--cataloging={full|fast}` (p. 92)
`--compression={none|normal|high|max}` (p. 94)
`--encryption={none|aes128|aes192|aes256}` (p. 94)
`--force_yes` (p. 116)
`--metadata_level={{mailboxes_only|1}|{folders_and_mailboxes|2}|{all|3}}` (p. 95)
`--post_cmd=<command>` (p. 96)
`--pre_cmd=<command>` (p. 96)
`--retry_count=<number of attempts>` (p. 116)
`--retry_delay=<delay>` (p. 116)
`--silent_mode={on|off}` (p. 120)
`--split=<size>` (p. 97)
`--use_registry_defaults` (p. 120)

Tape management options

`--tape_eject_successful` (p. 97)
`--tape_full_empty` (p. 97)
`--tape_overwrite` (p. 97)

General parameters

`--log=<full path>` (p. 117)
`--log_format={structured|unstructured}` (p. 117)
`--output={formatted|raw}` (p. 118)
`--progress` (p. 119)
`{-f|--file_params}=<full local path>` (p. 116)
`--exchange_credentials=<domain user name>,<password>,<encrypted>` (p. 75)

Access to a remote machine

`--host=<IP address or hostname>` (p. 72)
`--credentials=<user name>,<password>,<encrypted>` (p. 115)
`--address=<IP address or hostname>` (p. 72)

Access to a specific service within a machine

`--service={mms|ams}` (p. 72)

2.3.4.4 backup exchange_mailbox

Creates a backup of the specified mailboxes and public folders.

Examples (p. 126)

Parameters

What to back up

`--items=<items>` (p. 75)
`--exclude_age=<date>` (p. 88)
`--exclude_attach=<files and masks>` (p. 88)

--exclude_size=<size>{kb|mb|gb} (p. 88)
--exclude_types=<types> (p. 88)

Where to save the backup

--loc=<path> (p. 78)
--credentials=<user name>,<password>,encrypted (p. 115)
--arc=<archive name> (p. 79)
--password=<password>,encrypted (p. 119)

How to back up

--archive_comment=<comments> (p. 87)
--backup_comment=<comments> (p. 87)
--backuptype={full|incremental} (p. 87)
--cleanup (p. 87)

Backup options

--cataloging={full|fast} (p. 92)
--compression={none|normal|high|max} (p. 94)
--encryption={none|aes128|aes192|aes256} (p. 94)
--force_yes (p. 116)
--post_cmd=<command> (p. 96)
--pre_cmd=<command> (p. 96)
--retry_count=<number of attempts> (p. 116)
--retry_delay=<delay> (p. 116)
--silent_mode={on|off} (p. 120)
--split=<size> (p. 97)
--use_registry_defaults (p. 120)

Tape management options

--tape_eject_successful (p. 97)
--tape_full_empty (p. 97)
--tape_overwrite (p. 97)

General parameters

--log=<full path> (p. 117)
--log_format={structured|unstructured} (p. 117)
--output={formatted|raw} (p. 118)
--progress (p. 119)
{-f|--file_params}=<full local path> (p. 116)
--exchange_credentials=<domain user name>,<password>,encrypted (p. 75)

Access to a remote machine

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,encrypted (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine

--service={mms|ams} (p. 72)

2.3.4.5 recover exchange_database

Recovers the specified storage groups (for Exchange 2003/2007) or databases (for Exchange 2010 or later).

Examples (p. 126)

Parameters

What to recover

--loc=<path> (p. 78)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--arc=<archive name> (p. 79)
--password=<password>,**encrypted** (p. 119)
--recovery_point={point_of_failure|latest_backup|point_in_time|selected_backup} (p. 105)
--pit=<date and time> (p. 104)
--backup=<backup ID> (p. 80)
--items=<items> (p. 75)

Where to recover

--target={original|disk|another_database|recovery_database} (p. 80)
--disk_location=<path> (p. 101)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--destination_database=<db> (p. 101)
--database=<db_name> (p. 99)
--database_location=<local path> (p. 100)
--log_location=<local path> (p. 103)

How to recover

--overwrite (p. 104)
--active_restore

If the parameter is specified, the Acronis Active Restore technology is enabled.

Recovery options

--force_yes (p. 116)
--retry_count=<number of attempts> (p. 116)
--retry_delay=<delay> (p. 116)
--silent_mode={on|off} (p. 120)
--use_registry_defaults (p. 120)

General parameters

--log=<full path> (p. 117)
--log_format={structured|unstructured} (p. 117)
--output={formatted|raw} (p. 118)
--progress (p. 119)
{-f|--file_params}=<full local path> (p. 116)
--exchange_credentials=<domain user name>,<password>,**encrypted** (p. 75)

Access to a remote machine

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine

--service=**{mms|ams}** (p. 72)

2.3.4.6 recover exchange_mailbox

Recovers the specified mailboxes and public folders from a database-level or mailbox-level backup.

Examples (p. 126)

Parameters

What to recover

--loc=<path> (p. 78)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--arc=<archive name> (p. 79)
--password=<password>,**encrypted** (p. 119)
--recovery_point=**{latest_backup|point_in_time|selected_backup}** (p. 105)
--pit=<date and time> (p. 104)
--backup=<backup ID> (p. 80)
--items=<items> (p. 75)

Where to recover

--target=**{original|pst}** (p. 80)
--disk_location=<local path> (p. 101)
--outlookmachine=<IP address or hostname> (p. 103)
--credentials=<user name>,<password>,**encrypted** (p. 115)

How to recover

--overwrite (p. 104)

Recovery options

--force_yes (p. 116)
--retry_count=<number of attempts> (p. 116)
--retry_delay=<delay> (p. 116)
--silent_mode=**{on|off}** (p. 120)
--use_registry_defaults (p. 120)

General parameters

--log=<full path> (p. 117)
--log_format=**{structured|unstructured}** (p. 117)
--output=**{formatted|raw}** (p. 118)
--progress (p. 119)
{-f|--file_params}=<full local path> (p. 116)
--exchange_credentials=<domain user name>,<password>,**encrypted** (p. 75)

Access to a remote machine

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine

--service=**{mms | ams}** (p. 72)

2.3.5 Microsoft SQL

The commands listed in this section can be executed on a machine where Agent for SQL (single-pass) is installed.

2.3.5.1 list mssql_instances

Lists Microsoft SQL Server instances.

Examples (p. 128)

Parameters

--filter_edition=<editions> (p. 111)
--filter_name=<names> (p. 112)
--filter_version=<versions> (p. 114)

General parameters

--log=<full path> (p. 117)
--log_format=**{structured | unstructured}** (p. 117)
--output=**{formatted | raw}** (p. 118)
{-f | --file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms | ams}** (p. 72)

2.3.5.2 list mssql_databases

Lists Microsoft SQL databases of the specified instance. Only the databases whose files are stored in local folders of the SQL server are displayed.

Examples (p. 128)

Parameters

--filter_name=<names> (p. 112)
--instance=<instance name> (p. 75)
--credentials=<user name>,<password>,**encrypted**

For information about specifying access credentials for Microsoft SQL Server, see "Access to SQL Server instance" (p. 78).

General parameters

--log=<full path> (p. 117)
--log_format=**{structured|unstructured}** (p. 117)
--output=**{formatted|raw}** (p. 118)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms|ams}** (p. 72)

2.3.5.3 recover mssql_database

Recovers the specified Microsoft SQL databases.

Examples (p. 128)

Parameters

What to recover

--loc=<path> (p. 78)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--arc=<archive name> (p. 79)
--password=<password>,**encrypted** (p. 119)
--backup=<backup ID> (p. 80)
--items=<items> (p. 75)

Where to recover

--target=**{original|disk|another_instance}** (p. 80)
--disk_location=<path> (p. 101)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--destination_instance=<instance name> (p. 101)
--credentials=<user name>,<password>,**encrypted**

For information about specifying access credentials for Microsoft SQL Server, see "Access to SQL Server instance" (p. 78).

--database_location=<local path> (p. 100)

How to recover

--overwrite (p. 104)
--autorename (p. 99)
--database_state=**{recovery|norecovery|standby}** (p. 100)
--active_restore

If the parameter is specified, the Acronis Active Restore technology is enabled.

Recovery options

--retry_count=<number of attempts> (p. 116)
--retry_delay=<delay> (p. 116)
--silent_mode=**{on|off}** (p. 120)
--use_registry_defaults (p. 120)

General parameters

--log=<full path> (p. 117)
--log_format=**{structured|unstructured}** (p. 117)
--output=**{formatted|raw}** (p. 118)
--progress (p. 119)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine

--service=**{mms|ams}** (p. 72)

2.3.6 Microsoft Active Directory

2.3.6.1 recover ad_database

Extracts Microsoft Active Directory database files and the SYSVOL folder from a single-pass backup to a local or network folder. Full paths of the files are recreated.

For information about what to do with the extracted files, refer to the "Recovering the Active Directory data from a single-pass backup" section of the product Help or the User Guide.

Examples (p. 130)

Parameters

What to recover

--loc=<path> (p. 78)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--arc=<archive name> (p. 79)
--password=<password>,**encrypted** (p. 119)
--backup=<backup ID> (p. 80)

Where to recover

--target= (p. 80)<path>
(p. 101)**--credentials**=<user name>,<password>,**encrypted**
(p. 115)**How to recover**

--overwrite={always|older|never} (p. 104)
--original_date (p. 103)

Recovery options

--force_yes (p. 116)
--retry_count=<number of attempts> (p. 116)
--retry_delay=<delay> (p. 116)
--silent_mode={on|off} (p. 120)
--use_registry_defaults (p. 120)

General parameters

--log=<full path> (p. 117)
--log_format={structured|unstructured} (p. 117)
--output={formatted|raw} (p. 118)
--progress (p. 119)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine

--service={mms|ams} (p. 72)

2.4 Operations with archives and backups

2.4.1 Archives

2.4.1.1 list archives

Lists the information about archives in the specific location. The displayed records are sorted by date in descending order.

Examples (p. 130)

Parameters

--loc=<path> (p. 78)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--filter_type=<types> (p. 113)
{-a|--all}

If the parameter is specified, the following properties will be displayed for each archive: name; type; creation date; machine whose data is contained in the archive; owner (the user who saved the archive to the destination); occupied space in bytes; and comments on the archive. If not specified, only name, type and creation date will be displayed for each archive.

General parameters

--log=<full path> (p. 117)
--log_format=**{structured|unstructured}** (p. 117)
--output=**{formatted|raw}** (p. 118)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms|ams|asn}** (p. 72)

In a managed vault (**--loc=bsp://<storage node>/<vault name>**), the operation is always executed by the storage node service. If you specify a different service, it will transmit the command to **asn**.

2.4.1.2 export archive

Copies the archive specified by the **--arc** parameter from the location specified by the **--loc** parameter to the location specified by the **--target** parameter.

*To export individual backups, use the **export backup** (p. 47) command.*

If the **--arc** parameter is not specified, the command will export all the archives stored in the source location.

The command always creates a new archive in the target location. You cannot specify an existing archive in the **--target_arc** parameter.

Using this command, you can, for example, import an archive to a centralized managed vault or export the entire vault to a different location. See the examples for more details.

Examples (p. 130)

Parameters

--loc=<path> (p. 78)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--arc=<archive name> (p. 79)
--password=<password>,**encrypted** (p. 119)
--target=<path> (p. 80)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--target_arc=<archive name> (p. 82)
--cataloging=**{full|fast}** (p. 92)

General parameters

--log=<full path> (p. 117)
--log_format=**{structured|unstructured}** (p. 117)
--output=**{formatted|raw}** (p. 118)
--progress (p. 119)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms|ams|asn}** (p. 72)

Exporting archives from a managed vault (**--loc=bsp://<storage node>/<vault name>**) is always executed by the storage node service. If you specify a different service, it will transmit the command to **asn**.

2.4.1.3 validate archive

Validates the archive data integrity.

Examples (p. 130)

Parameters

--loc=<path> (p. 78)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--arc=<archive name> (p. 79)
--password=<password>,**encrypted** (p. 119)
--network_speed=<speed>**{kb|p}** (p. 117)
--process_priority=**{low|normal|high}** (p. 119)

General parameters

--log=<full path> (p. 117)
--log_format=**{structured|unstructured}** (p. 117)
--output=**{formatted|raw}** (p. 118)
--progress (p. 119)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms|ams|asn}** (p. 72)

In a managed vault (**--loc=bsp://<storage node>/<vault name>**), the operation is always executed by the storage node service. If you specify a different service, it will transmit the command to **asn**.

2.4.1.4 catalog archive

Performs a full cataloging of all the backups in the specified archive.

Usage tip. To speed up backups, you can prohibit full cataloging by adding the **--cataloging=fast** parameter to the backup command. Use the **catalog backup** (p. 46), **catalog archive** (p. 42), or **catalog vault** (p. 61) command to perform the full cataloging at a later time.

Examples (p. 130)

Parameters

--loc=<path> (p. 78)

The command does not support the following locations: Acronis Online Backup Storage, encrypted managed vaults, and removable media such as CD, DVD, BD, Iomega REV, RDX or USB devices.

--credentials=<user name>,<password>,<encrypted> (p. 115)

--arc=<archive name> (p. 79)

The command does not support encrypted and password-protected archives, archives created by using Acronis True Image Echo or earlier product versions, and archives that use the simplified backup naming (p. 91).

General parameters

--log=<full path> (p. 117)

--log_format={structured|unstructured} (p. 117)

--output={formatted|raw} (p. 118)

--progress (p. 119)

{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)

--credentials=<user name>,<password>,<encrypted> (p. 115)

--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service={mms|ams|asn} (p. 72)

In a managed vault (**--loc=bsp://<storage node>/<vault name>**), the operation is always executed by the storage node service. If you specify a different service, it will transmit the command to **asn**.

2.4.1.5 delete archive

Deletes an archive.

Examples (p. 130)

Parameters

--loc=<path> (p. 78)

--credentials=<user name>,<password>,<encrypted> (p. 115)

--arc=<archive name> (p. 79)

General parameters

--log=<full path> (p. 117)
--log_format=**{structured|unstructured}** (p. 117)
--output=**{formatted|raw}** (p. 118)
--progress (p. 119)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms|ams|asn}** (p. 72)

In a managed vault (**--loc=bsp://<storage node>/<vault name>**), the operation is always executed by the storage node service. If you specify a different service, it will transmit the command to **asn**.

2.4.2 Backups

2.4.2.1 list backups

Lists backups in the specified archive. The displayed records are sorted by date in descending order.

Examples (p. 131)

Parameters

--loc=<path> (p. 78)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--arc=<archive name> (p. 79)
--password=<password>,**encrypted** (p. 119)
--filter_date=<dates and times> (p. 111)
--filter_type=<types> (p. 113)

General parameters

--log=<full path> (p. 117)
--log_format=**{structured|unstructured}** (p. 117)
--output=**{formatted|raw}** (p. 118)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms|ams|asn}** (p. 72)

In a managed vault (**--loc=bsp://<storage node>/<vault name>**), the operation is always executed by the storage node service. If you specify a different service, it will transmit the command to **asn**.

2.4.2.2 list content

Lists the contents of a backup (backed-up disks, volumes, files, virtual machines, databases, etc.).

Examples (p. 131)

Parameters

--loc=<path> (p. 78)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--arc=<archive name> (p. 79)
--password=<password>,**encrypted** (p. 119)
--backup=<backup ID> (p. 80)
--content_type=**{volume|file|exchange_database|exchange_mailbox|mssql_database|ad_database}** (p. 110)
--content_path=<path> (p. 110)
--oss_numbers=**{true|false}** (p. 118)

General parameters

--log=<full path> (p. 117)
--log_format=**{structured|unstructured}** (p. 117)
--output=**{formatted|raw}** (p. 118)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms|ams|asn}** (p. 72)

In a managed vault (**--loc=bsp://<storage node>/<vault name>**), the operation is always executed by the storage node service. If you specify a different service, it will transmit the command to **asn**.

2.4.2.3 validate backup

Validates the backup data integrity.

Examples (p. 131)

Parameters

--loc=<path> (p. 78)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--arc=<archive name> (p. 79)
--password=<password>,**encrypted** (p. 119)
--backup=<backup ID> (p. 80)

--network_speed=<speed>{kb|p} (p. 117)
--process_priority={low|normal|high} (p. 119)

General parameters

--log=<full path> (p. 117)
--log_format={structured|unstructured} (p. 117)
--output={formatted|raw} (p. 118)
--progress (p. 119)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service={mms|ams|asn} (p. 72)

In a managed vault (**--loc=bsp://<storage node>/<vault name>**), the operation is always executed by the storage node service. If you specify a different service, it will transmit the command to **asn**.

2.4.2.4 catalog backup

Performs a full cataloging of the specified backup.

Usage tip. To speed up backups, you can prohibit full cataloging by adding the **--cataloging=fast** parameter to the backup command. Use the **catalog backup** (p. 46), **catalog archive** (p. 42), or **catalog vault** (p. 61) command to perform the full cataloging at a later time.

Examples (p. 131)

Parameters

--loc=<path> (p. 78)

The command does not support the following locations: Acronis Online Backup Storage, encrypted managed vaults, and removable media such as CD, DVD, BD, Iomega REV, RDX or USB devices.

--credentials=<user name>,<password>,**encrypted** (p. 115)
--arc=<archive name> (p. 79)

The command does not support encrypted and password-protected archives, archives created by using Acronis True Image Echo or earlier product versions, and archives that use the simplified backup naming (p. 91).

--backup=<backup ID> (p. 80)

General parameters

--log=<full path> (p. 117)
--log_format={structured|unstructured} (p. 117)
--output={formatted|raw} (p. 118)

--progress (p. 119)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms|ams|asn}** (p. 72)

In a managed vault (**--loc=bsp://<storage node>/<vault name>**), the operation is always executed by the storage node service. If you specify a different service, it will transmit the command to **asn**.

2.4.2.5 export backup

Copies the archive specified by the **--arc** parameter from the location specified by the **--loc** parameter to the location specified by the **--target** parameter. The copy will contain only the backups specified by the **--backup** parameter.

*To export an entire archive or all the archives stored in a location, use the **export archive** (p. 41) command.*

The command always creates a new archive in the target location. You cannot specify an existing archive in the **--target_arc** parameter. Both the **--target** and the **--target_arc** parameters are mandatory.

If the **--backup** parameter is not specified, the command will export only the latest backup.

Examples (p. 131)

Parameters

--loc=<path> (p. 78)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--arc=<archive name> (p. 79)
--password=<password>,**encrypted** (p. 119)
--backup=<backup IDs> (p. 80)
--target=<path> (p. 80)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--target_arc=<archive name> (p. 82)
--cataloging=**{full|fast}** (p. 92)

General parameters

--log=<full path> (p. 117)
--log_format=**{structured|unstructured}** (p. 117)
--output=**{formatted|raw}** (p. 118)
--progress (p. 119)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms | ams | asn}** (p. 72)

Exporting backups from a managed vault (**--loc=bsp://<storage node>/<vault name>**) is always executed by the storage node service. If you specify a different service, it will transmit the command to **asn**.

2.4.2.6 replicate backup

Replicates the latest backup of the specified archive to a different location. If the **--backup** parameter is specified, the specified backups will be replicated. If the target location is the same as the source one, the command will fail.

If the target archive exists, the command will append the specified backups to it. This means that a backup will not be replicated if the target archive already contains a backup with the same GUID.

Using this command, you can replicate each backup of your archive to a second location immediately after backing up or on a schedule. This helps you make your archive more reliable by maintaining its copy in a different location.

Examples (p. 131)

Parameters

--loc=<path> (p. 78)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--arc=<archive name> (p. 79)
--password=<password>,**encrypted** (p. 119)
--target=<path> (p. 80)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--target_arc=<archive name> (p. 82)
--backup=**{<backup IDs> | all}** (p. 80)

If the value is **all**, all backups of the specified archive will be selected for replication.

General parameters

--log=<full path> (p. 117)
--log_format=**{structured | unstructured}** (p. 117)
--output=**{formatted | raw}** (p. 118)
--progress (p. 119)
{-f | --file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms | ams | asn}** (p. 72)

Replicating backups from a managed vault (**--loc=bsp://<storage node>/<vault name>**) is always executed by the storage node service. If you specify a different service, it will transmit the command to **asn**.

2.4.2.7 convert full

Converts an incremental or differential backup into a full one. The backup time stamp remains unchanged. The dependent incremental and differential backups are also updated. However, the old backup versions are deleted only after the new ones have been created. Therefore, the location must have enough space to temporarily store both the old and the new versions.

Examples (p. 131)

Parameters

--loc=<path> (p. 78)

The command does not support the following locations: Acronis Online Backup Storage, tape and CD/DVD.

--credentials=<user name>,<password>,encrypted (p. 115)

--arc=<archive name> (p. 79)

The command does not support archives that use the simplified backup naming (p. 91) and archives of Microsoft Exchange Server data (p. 31).

--password=<password>,encrypted (p. 119)

--backup=<backup ID> (p. 80)

General parameters

--log=<full path> (p. 117)

--log_format={structured|unstructured} (p. 117)

--output={formatted|raw} (p. 118)

--progress (p. 119)

{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)

--credentials=<user name>,<password>,encrypted (p. 115)

--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service={mms|ams|asn} (p. 72)

In a managed vault (**--loc=bsp://<storage node>/<vault name>**), the operation is always executed by the storage node service. If you specify a different service, it will transmit the command to **asn**.

2.4.2.8 consolidate backup

Modifies an archive so that only the backups specified in the **--backup** parameter are kept. All other backups of the archive are deleted.

If the **--backup** parameter is not specified, only the latest backup of the archive is kept. As a result, the archive will contain only one backup.

Examples (p. 131)

Parameters

--loc=<path> (p. 78)

The command does not support the following location: Acronis Backup & Recovery 11.5 Storage Node.

--credentials=<user name>,<password>,**encrypted** (p. 115)

--arc=<archive name> (p. 79)

--password=<password>,**encrypted** (p. 119)

--backup=<backup IDs> (p. 80)

General parameters

--log=<full path> (p. 117)

--log_format=**{structured|unstructured}** (p. 117)

--output=**{formatted|raw}** (p. 118)

--progress (p. 119)

{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)

--credentials=<user name>,<password>,**encrypted** (p. 115)

--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms|ams}** (p. 72)

2.4.2.9 delete backup

Deletes the selected backup from an archive. If incremental or differential backups depend on the backup being deleted, the consolidation will be performed. This consolidation may be time and resource consuming.

Examples (p. 131)

Parameters

--loc=<path> (p. 78)

--credentials=<user name>,<password>,**encrypted** (p. 115)

--arc=<archive name> (p. 79)

--password=<password>,**encrypted** (p. 119)

--backup=<backup ID> (p. 80)

General parameters

--log=<full path> (p. 117)

--log_format=**{structured|unstructured}** (p. 117)

--output=**{formatted|raw}** (p. 118)

--progress (p. 119)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms|ams|asn}** (p. 72)

In a managed vault (**--loc=bsp://<storage node>/<vault name>**), the operation is always executed by the storage node service. If you specify a different service, it will transmit the command to **asn**.

2.4.3 Mounting volumes

Mounting volumes from a disk-level backup lets you access the volumes as though they were physical disks.

2.4.3.1 list mounts

Lists the volumes mounted from backups.

Examples (p. 133)

Parameters

General parameters

--log=<full path> (p. 117)
--log_format=**{structured|unstructured}** (p. 117)
--output=**{formatted|raw}** (p. 118)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms|ams}** (p. 72)

2.4.3.2 mount

Mounts the specified volumes from the backup to the system where Agent for Windows or Agent for Linux is installed.

Limitation: You can only mount backups stored in a local or shared folder or in Acronis Secure Zone.

Examples (p. 133)

Parameters

What to mount

--loc=<path> (p. 78)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--arc=<archive name> (p. 79)
--password=<password>,**encrypted** (p. 119)
--backup=<backup ID> (p. 80)
--volume=<volume numbers> (p. 84)

How to mount (Agent for Windows only)

--rw (p. 108)
--letter=<letters> (p. 108)

How to mount (Agent for Linux only)

--rw (p. 108)
--mount_point=<mount points> (p. 109)

General parameters

--log=<full path> (p. 117)
--log_format={structured|unstructured} (p. 117)
--output={formatted|raw} (p. 118)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service={mms|ams} (p. 72)

2.4.3.3 umount

Unmounts the volume with the specified letter (Agent for Windows only).

Unmounts the device mounted at the mount point, destroys the kernel space block device and stops the user space daemon (Agent for Linux only).

Examples (p. 133)

Parameters

--letter={<letter>|all} (p. 108) (Agent for Windows only)
--mount_point=<mount point> (p. 109) (Agent for Linux only)

General parameters

--log=<full path> (p. 117)
--log_format={structured|unstructured} (p. 117)

--output={formatted|raw} (p. 118)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,encrypted**** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service={mms|ams} (p. 72)

2.4.4 Mounting SQL databases

The commands listed in this section can be executed on a machine where Agent for SQL (single-pass) is installed.

2.4.4.1 list mssql_mounts

Lists the Microsoft SQL databases mounted from single-pass backups.

Examples (p. 133)

Parameters

General parameters

--log=<full path> (p. 117)
--log_format={structured|unstructured} (p. 117)
--output={formatted|raw} (p. 118)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,encrypted**** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service={mms|ams} (p. 72)

2.4.4.2 mount mssql_database

Mounts the specified Microsoft SQL databases from the backup to the specified Microsoft SQL Server instance.

Limitation: You can only mount backups stored in a local or shared folder or in Acronis Secure Zone.

Examples (p. 133)

Parameters

What to mount

--loc=<path> (p. 78)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--arc=<archive name> (p. 79)
--password=<password>,**encrypted** (p. 119)
--backup=<backup ID> (p. 80)
--items=<items> (p. 75)

Where to mount

--destination_instance=<instance name> (p. 101)
--credentials=<user name>,<password>,**encrypted**

For information about specifying access credentials for Microsoft SQL Server, see "Access to SQL Server instance" (p. 78).

General parameters

--log=<full path> (p. 117)
--log_format=**{structured|unstructured}** (p. 117)
--output=**{formatted|raw}** (p. 118)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms|ams}** (p. 72)

2.4.4.3 **umount mssql_database**

Unmounts the specified Microsoft SQL databases.

Examples (p. 133)

Parameters

--items=<items> (p. 75)

General parameters

--log=<full path> (p. 117)
--log_format=**{structured|unstructured}** (p. 117)
--output=**{formatted|raw}** (p. 118)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service={mms|ams} (p. 72)

2.5 Operations with Acronis Secure Zone

Acronis Secure Zone is a secure volume for storing backup archives within a managed machine.

2.5.1 create asz

Creates Acronis Secure Zone on the selected disk. The command first uses the unallocated space on that disk and then, if the unallocated space is insufficient, takes free space from the selected volumes.

Examples (p. 134)

Parameters

--disk=<disk number> (p. 83)
--volume={<volume numbers>|all} (p. 84)
--oss_numbers={true|false} (p. 118)
--asz_size={<size>{s|kb|mb|gb}|unallocated} (p. 109)
--password=<password>,encrypted (p. 119)
--reboot (p. 120)
--later (p. 120)
--silent_mode={on|off} (p. 120)
--force_yes (p. 116)

General parameters

--log=<full path> (p. 117)
--log_format={structured|unstructured} (p. 117)
--output={formatted|raw} (p. 118)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,encrypted (p. 115)
--address=<IP addresses or hostnames> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service={mms|ams} (p. 72)

2.5.2 resize asz

Changes the Acronis Secure Zone size and displays the resulting size and free space. Without the **--asz_size** parameter, displays the current Acronis Secure Zone size and free space.

Examples (p. 134)

Parameters

--asz_size={<size>{s|kb|mb|gb}|unallocated} (p. 109)
--volume={<volume numbers>|all} (p. 84)

--oss_numbers={true|false} (p. 118)
--size_measure={s|kb|mb|gb}

Measure of the Acronis Secure Zone size and free space in the command output. If not specified, the value is **mb**.

--reboot (p. 120)
--later (p. 120)
--silent_mode={on|off} (p. 120)
--force_yes (p. 116)

General parameters

--log=<full path> (p. 117)
--log_format={structured|unstructured} (p. 117)
--output={formatted|raw} (p. 118)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,<encrypted> (p. 115)
--address=<IP addresses or hostnames> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service={mms|ams} (p. 72)

2.5.3 cleanup asz

Deletes the backups corrupted due to a power loss or another reason, from Acronis Secure Zone.

Examples (p. 134)

Parameters

General parameters

--log=<full path> (p. 117)
--log_format={structured|unstructured} (p. 117)
--output={formatted|raw} (p. 118)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,<encrypted> (p. 115)
--address=<IP addresses or hostnames> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service={mms|ams} (p. 72)

2.5.4 delete asz_files

Deletes the latest backup of an archive located in Acronis Secure Zone. If the specified archive contains only one backup, such backup will not be deleted.

Examples (p. 134)

Parameters

--credentials=<password>,encrypted (p. 115)

Password for Acronis Secure Zone.

--arc=<archive name> (p. 79)

--password=<password>,encrypted (p. 119)

Password for the archive.

--force_yes (p. 116)

General parameters

--log=<full path> (p. 117)

--log_format={structured|unstructured} (p. 117)

--output={formatted|raw} (p. 118)

--progress (p. 119)

{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)

--credentials=<user name>,<password>,encrypted (p. 115)

--address=<IP addresses or hostnames> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service={mms|ams} (p. 72)

2.5.5 delete asz

Deletes Acronis Secure Zone.

Examples (p. 134)

Parameters

--volume=<volume numbers> (p. 84)

--oss_numbers={true|false} (p. 118)

--silent_mode={on|off} (p. 120)

--force_yes (p. 116)

General parameters

--log=<full path> (p. 117)

--log_format={structured|unstructured} (p. 117)

--output={formatted|raw} (p. 118)

{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP addresses or hostnames> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms | ams}** (p. 72)

2.6 Operations with Acronis Startup Recovery Manager

Acronis Startup Recovery Manager is the bootable rescue utility that can be started at boot time by pressing F11.

2.6.1 activate asrm

Activates the Acronis Startup Recovery Manager.

Examples (p. 135)

Parameters

General parameters

--log=<full path> (p. 117)
--log_format=**{structured | unstructured}** (p. 117)
--output=**{formatted | raw}** (p. 118)
{-f | --file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP addresses or hostnames> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms | ams}** (p. 72)

2.6.2 deactivate asrm

Deactivates the Acronis Startup Recovery Manager.

Examples (p. 135)

Parameters

General parameters

--log=<full path> (p. 117)
--log_format=**{structured | unstructured}** (p. 117)
--output=**{formatted | raw}** (p. 118)
{-f | --file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP addresses or hostnames> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service={mms|ams} (p. 72)

2.7 Operations with tapes

2.7.1 list tape_libraries

Lists tape libraries and/or stand-alone tape drives attached to a machine where an Acronis Backup & Recovery 11.5 agent or Acronis Backup & Recovery 11.5 Storage Node is running.

Examples (p. 135)

Parameters

--filter_guid=<GUIDs> (p. 112)
--filter_name=<names> (p. 112)

General parameters

--log=<full path> (p. 117)
--log_format={structured|unstructured} (p. 117)
--output={formatted|raw} (p. 118)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service={mms|ams|asn} (p. 72)

2.7.2 list tape_slots

Lists slots of the tape libraries attached to a machine where an Acronis Backup & Recovery 11.5 agent or Acronis Backup & Recovery 11.5 Storage Node is running. The following information will be displayed for each slot: name; GUID; type (**mail** for mail slots, **drive** for drives, **storage** for other slots); barcode and label of the tape that occupies the slot (if any); GUID of the tape library.

Examples (p. 135)

Parameters

--filter_library=<GUID> (p. 112)

General parameters

```
--log=<full path> (p. 117)
--log_format={structured|unstructured} (p. 117)
--output={formatted|raw} (p. 118)
{-f|--file_params}=<full local path> (p. 116)
```

Access to a remote machine (advanced editions only)

```
--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,encrypted (p. 115)
--address=<IP address or hostname> (p. 72)
```

Access to a specific service within a machine (advanced editions only)

```
--service={mms|ams|asn} (p. 72)
```

2.7.3 inventory tape

Detects tapes loaded into a tape device and assigns names to those that have none. Run this command every time you load tapes into the tape device slots.

Examples (p. 135)

Parameters

```
--mode={full|fast} (p. 114)
--libraries=<GUIDs> (p. 114)
--slots=<GUIDs> (p. 115)
--assign2free (p. 114)
```

General parameters

```
--log=<full path> (p. 117)
--log_format={structured|unstructured} (p. 117)
--output={formatted|raw} (p. 118)
{-f|--file_params}=<full local path> (p. 116)
```

Access to a remote machine (advanced editions only)

```
--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,encrypted (p. 115)
--address=<IP address or hostname> (p. 72)
```

Access to a specific service within a machine (advanced editions only)

```
--service={mms|ams|asn} (p. 72)
```

2.8 Operations with vaults

2.8.1 validate vault

Validates data integrity of all archives in the specified location except for password-protected ones. To validate a password-protected archive, use the **validate archive** (p. 42) command.

Examples (p. 136)

Parameters

--loc=<path> (p. 78)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--network_speed=<speed>{**kb**|**p**} (p. 117)
--process_priority={**low**|**normal**|**high**} (p. 119)

General parameters

--log=<full path> (p. 117)
--log_format={**structured**|**unstructured**} (p. 117)
--output={**formatted**|**raw**} (p. 118)
--progress (p. 119)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service={**mms**|**ams**|**asn**} (p. 72)

In a managed vault (**--loc=bsp://<storage node>/<vault name>**), the operation is always executed by the storage node service. If you specify a different service, it will transmit the command to **asn**.

2.8.2 catalog vault

Performs a full cataloging of the backups stored in the specified location.

The following backups will be skipped because they are not supported by the data catalog:

- Backups contained in encrypted and password-protected archives.
- Backups created by using Acronis True Image Echo or earlier product versions.
- Backups that have simplified names (p. 91).

Usage tip. To speed up backups, you can prohibit full cataloging by adding the **--cataloging=fast** parameter to the backup command. Use the **catalog backup** (p. 46), **catalog archive** (p. 42), or **catalog vault** (p. 61) command to perform the full cataloging at a later time.

Examples (p. 136)

Parameters

--loc=<path> (p. 78)

The command does not support the following locations: Acronis Online Backup Storage, encrypted managed vaults, and removable media such as CD, DVD, BD, Iomega REV, RDX or USB devices.

--credentials=<user name>,<password>,**encrypted** (p. 115)

General parameters

--log=<full path> (p. 117)
--log_format=**{structured|unstructured}** (p. 117)
--output=**{formatted|raw}** (p. 118)
--progress (p. 119)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms|ams|asn}** (p. 72)

In a managed vault (**--loc=bsp://<storage node>/<vault name>**), the operation is always executed by the storage node service. If you specify a different service, it will transmit the command to **asn**.

2.9 Operations with disks

2.9.1 clone disk

Clones a hard disk. Use this operation if you need to transfer all the source disk data to a target disk.

The software does not resize the volumes of the source disk. Therefore, the target disk should have a greater capacity than the source disk. Otherwise, the command will fail.

Examples (p. 137)

Parameters

--source=<source disk number>

The number of the source disk.

--target=<target disk number>

The number of the target disk.

--reboot (p. 120)

--reboot_after (p. 120)

General parameters

--log=<full path> (p. 117)
--log_format=**{structured|unstructured}** (p. 117)
--output=**{formatted|raw}** (p. 118)
--progress (p. 119)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service={mms|ams} (p. 72)

2.10 Administration operations

2.10.1 Collecting information

2.10.1.1 get log

Exports the log of the activity with the specified GUID in the Acronis xml format. To learn GUIDs of activities, use the **list activities** (p. 63) command.

Examples (p. 137)

Parameters

--id=<GUID> (p. 117)

--loc=<full path> (p. 78)

The file to export the log to. The following locations are supported: local path, SMB, NFS, FTP and SFTP. The software exports logs in the Acronis xml format regardless of the extension of the file.

--credentials=<user name>,<password>,encrypted**** (p. 115)

General parameters

--log=<full path> (p. 117)

--log_format={structured|unstructured} (p. 117)

--output={formatted|raw} (p. 118)

{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)

--credentials=<user name>,<password>,encrypted**** (p. 115)

--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service={mms|ams|asn} (p. 72)

When getting the log of a storage node activity, you can specify only **ams** or **asn** as a parameter value.

2.10.1.2 list activities

Lists the current and past activities of the specified service (Acronis Managed Machine Service, Acronis Backup & Recovery 11.5 Management Server, Acronis Backup & Recovery 11.5 Storage Node).

The command displays no more than the latest 5000 records. The displayed records are sorted by date in descending order.

If the **--service** (p. 72) parameter is not specified, the activities of Acronis Managed Machine Service are listed.

For Acronis Backup & Recovery 11.5 Management Server, only its own activities are listed. The activities of the Managed Machine Services that run on the registered machines are not included in the list.

If a machine performs too slowly, you might want to use the command to find out the activity that has been running for an unexpectedly long time. Thus, you will be able to detect and end hung-up processes.

Examples (p. 137)

Parameters

--filter_guid=<GUIDs> (p. 112)
--filter_state=<states> (p. 113)

General parameters

--log=<full path> (p. 117)
--log_format=**{structured|unstructured}** (p. 117)
--output=**{formatted|raw}** (p. 118)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms|ams|asn}** (p. 72)

When listing activities of a storage node, you can specify only **ams** or **asn** as a parameter value.

2.10.1.3 sysinfo

Collects the system information of a machine and saves the information in the .zip file format.

Examples (p. 137)

Parameters

--loc=<full path> (p. 78)

Full path to the file where the system information will be saved. The following locations are supported: local path, SMB, and NFS.

--credentials=<user name>,<password>,**encrypted** (p. 115)

General parameters

--log=<full path> (p. 117)
--log_format=**{structured|unstructured}** (p. 117)
--output=**{formatted|raw}** (p. 118)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms|ams|asn}** (p. 72)

When getting the system information of a machine with several services, you can select any of these services.

2.10.2 Plans

2.10.2.1 list plans

Lists the backup plans existing on a managed machine or on the management server. The displayed records are sorted by date in descending order.

Examples (p. 138)

Parameters

--filter_state=<states> (p. 113)
--filter_status=<statuses> (p. 113)
--filter_user=<user names> (p. 114)

General parameters

--log=<full path> (p. 117)
--log_format=**{structured|unstructured}** (p. 117)
--output=**{formatted|raw}** (p. 118)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms|ams}** (p. 72)

2.10.2.2 delete plan

Deletes the specified backup plan.

Examples (p. 138)

Parameters

--id=<GUID> (p. 117)

General parameters

--log=<full path> (p. 117)
--log_format=**{structured|unstructured}** (p. 117)

--output={formatted|raw} (p. 118)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,encrypted (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service={mms|ams} (p. 72)

2.10.2.3 export plan

Exports the specified backup plan to an .xml file. The operation creates a file with complete configuration of the backup plan. You can import the file (p. 66) to reuse the exported backup plan on another machine.

The export files of backup plans can be edited with text editors. Passwords are encrypted in the export files.

Centralized backup plans can be exported from a management server and imported to a management server only.

Examples (p. 138)

Parameters

--id=<GUID> (p. 117)
--loc=<full path>

Full path to the file to which the backup plan will be exported.

--credentials=<user name>,<password>,encrypted (p. 115)

General parameters

--log=<full path> (p. 117)
--log_format={structured|unstructured} (p. 117)
--output={formatted|raw} (p. 118)
{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,encrypted (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service={mms|ams} (p. 72)

2.10.2.4 import plan

Imports a backup plan from an *.xml file. An XML file with complete configuration of a backup plan can be created by means of the **export plan** (p. 66) command.

Centralized backup plans can be exported from a management server and imported to a management server only.

Examples (p. 138)

Parameters

--loc=<full path>

Full path to the file from which the backup plan will be imported.

--credentials=<user name>,<password>,**encrypted** (p. 115)

General parameters

--log=<full path> (p. 117)

--log_format=**{structured|unstructured}** (p. 117)

--output=**{formatted|raw}** (p. 118)

{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)

--credentials=<user name>,<password>,**encrypted** (p. 115)

--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms|ams}** (p. 72)

2.10.2.5 disable plan

Disables the specified backup plan. As a result, the backup plan will not run according to its schedule.

Examples (p. 138)

Parameters

--id=<GUID> (p. 117)

General parameters

--log=<full path> (p. 117)

--log_format=**{structured|unstructured}** (p. 117)

--output=**{formatted|raw}** (p. 118)

{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)

--credentials=<user name>,<password>,**encrypted** (p. 115)

--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms|ams}** (p. 72)

2.10.2.6 enable plan

Enables a previously disabled (p. 67) backup plan. As a result, the specified backup plan will run again according to its schedule.

Examples (p. 138)

Parameters

--id=<GUID> (p. 117)

General parameters

--log=<full path> (p. 117)

--log_format=**{structured|unstructured}** (p. 117)

--output=**{formatted|raw}** (p. 118)

{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)

--credentials=<user name>,<password>,**encrypted** (p. 115)

--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms|ams}** (p. 72)

2.10.3 Tasks

2.10.3.1 list tasks

Lists the tasks existing on a managed machine or on the management server. The displayed records are sorted by date in descending order.

Examples (p. 138)

Parameters

--filter_state=<states> (p. 113)

--filter_user=<user names> (p. 114)

--filter_last_result=<last_results>

To display only tasks with specific last execution results, specify one or more of the following values: **not_run_yet**, **succeeded**, **succeeded_with_warnings**, **failed**, or **stopped**.

--filter_plan_guid=<GUIDs>

GUIDs of backup plans whose tasks are to be output. If not specified, tasks belonging to any backup plan will be listed.

General parameters

--log=<full path> (p. 117)

--log_format=**{structured|unstructured}** (p. 117)

--output=**{formatted|raw}** (p. 118)

{-f|--file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms | ams}** (p. 72)

2.10.3.2 run task

Starts execution of the specified task.

Examples (p. 138)

Parameters

--id=<GUID> (p. 117)

General parameters

--log=<full path> (p. 117)
--log_format=**{structured | unstructured}** (p. 117)
--output=**{formatted | raw}** (p. 118)
{-f | --file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms | ams}** (p. 72)

2.10.3.3 stop task

Stops execution of the specified task.

Examples (p. 138)

Parameters

--id=<GUID> (p. 117)

General parameters

--log=<full path> (p. 117)
--log_format=**{structured | unstructured}** (p. 117)
--output=**{formatted | raw}** (p. 118)
{-f | --file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms | ams}** (p. 72)

2.10.3.4 delete task

Deletes the specified task.

A task belonging to a backup plan cannot be deleted separately from the plan.

Examples (p. 138)

Parameters

--id=<GUID> (p. 117)

General parameters

--log=<full path> (p. 117)
--log_format=**{structured | unstructured}** (p. 117)
--output=**{formatted | raw}** (p. 118)
{-f | --file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms | ams}** (p. 72)

2.10.4 Licenses

2.10.4.1 list licenses

Lists Acronis Backup & Recovery 11.5 licenses assigned to a machine. If the licenses are registered on the license server, the agent also checks the status of the licenses on the license server.

Examples (p. 139)

Parameters

General parameters

--log=<full path> (p. 117)
--log_format=**{structured | unstructured}** (p. 117)
--output=**{formatted | raw}** (p. 118)
{-f | --file_params}=<full local path> (p. 116)

Access to a remote machine (advanced editions only)

--host=<IP address or hostname> (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 115)
--address=<IP address or hostname> (p. 72)

Access to a specific service within a machine (advanced editions only)

--service=**{mms | ams}** (p. 72)

3 Parameters

3.1 Access to a physical machine

3.1.1 host

```
--host=<IP address or hostname>
```

Specifies the machine running an Acronis service to connect to. If not specified, the command-line utility connects to the local host.

Examples:

```
--host=server1  
--host=192.168.1.2
```

3.1.2 service

```
--service={mms|ams|asn}
```

Specifies the Acronis service to connect to.

If not specified, the command-line utility connects to the agent service (Acronis Managed Machine Service, MMS). To connect to a storage node or the management server, you must explicitly specify the **asn** or the **ams** service using the **--service** parameter. This parameter is required even if an agent is not installed on that server or is unable to execute the command by design.

Example

```
acrocmd validate archive --loc=bsp://<storage node>/<vault name> --arc=<archive name>
```

- You can run this command on a machine where an agent and the command-line utility are installed. The command-line utility connects to the local agent. The agent addresses a storage node.

```
acrocmd validate archive --loc=bsp://<storage node>/<vault name> --arc=<archive name>  
--host=<storage node> --credentials=<user name>,<password> --service=asn
```

- You can run this command on a machine where only the command-line utility is installed. In this case, the command-line utility connects directly to a storage node.

In both cases validation will be performed by a storage node, using that node's CPU resource.

3.1.3 address

```
--address=<IP address or hostname>
```

Specifies a machine registered on the management server.

Some commands can be applied to multiple machines. This is done by separating the machine addresses with commas. Such commands include **backup disk** (p. 19), **backup file** (p. 24), **recover disk** (p. 20), **recover mbr** (p. 22), **recover file** (p. 25), **create asz** (p. 55), **delete asz** (p. 57), **activate asrm** (p. 58), and **deactivate asrm** (p. 58). The operation will be executed

on the specified machines one after another. The parameter for the above commands has been specified in the following way: **--address=<IP addresses or hostnames>**.

The management server must also be specified when using this parameter. Credentials for the machine are not required. Only the management server credentials are needed.

Example

To view all machine disks through the management server, run the following command:

```
acrocmd list disks --host=<ams hostname> --credentials=<user name>,<password>
--service=ams --address=<IP address or hostname>
```

3.2 Virtual machines

3.2.1 Access to a virtual machine

```
{--vmid=<virtual machine ID>|--vmname=<virtual machine name>|--vmconfig=<path>}
```

The methods of access to a virtual machine

If Agent for ESX(i) or Agent for Hyper-V is registered on the management server, you can access a virtual machine directly from the management server without specifying the virtualization host:

```
--host=<ams hostname> --credentials=<user name>,<password> --service=ams
--vmname=<virtual machine name>
```

If Agent for ESX(i) or Agent for Hyper-V is not registered on the management server, specify the virtual appliance or the Windows host running the agent:

```
--host=<agent hostname> --credentials=<user name>,<password> --vmname=<virtual
machine name>
```

When operating within the virtual appliance or the Windows host running the agent, you do not need to specify access parameters other than **--vmname** or **--vmid**.

vmid

```
--vmid=<virtual machine ID>
```

Virtual machine unique identifier, assigned by the virtualization software. Use the **list vms** (p. 27) command to obtain identifiers of virtual machines.

With the **backup vm** (p. 28) command, you can specify several values of this parameter.

vmname

```
--vmname=<virtual machine name>
```

Virtual machine name. This parameter is case-sensitive. If the Acronis agent finds more than one virtual machine with the same name, an error occurs (this does not apply to clustered Hyper-V virtual machines). In this case, use the **--vmid** or **--vmconfig** parameter.

With the **backup vm** (p. 28) command, you can specify several values of this parameter.

vmconfig

```
--vmconfig=<path>
```

Path to the virtual machine configuration file on the ESX(i) server (to the .vmx file). The parameter cannot be used for Hyper-V servers. The format is as follows:

```
[<storage>] <folder>/.../<folder N>/<VMX file name>
```

Example

```
--vmconfig="[Local_storage_2] Windows 2008 R2 Dev/Windows 2008 R2 Dev.vmx"
```

With the **backup vm** (p. 28) command, you can specify several values of this parameter.

3.2.2 New virtual machine

vmname

```
--vmname=<virtual machine name>
```

Name of a new virtual machine.

vmtype

```
--vmtype={vmware|virtualpc|redhat|xen}
```

Type of a new virtual machine. The parameter is not needed when the machine is recovered to an ESX(i) or Hyper-V server or cluster.

vmserver_name

```
--vmserver_name=<server name>
```

Name of the ESX(i) or Hyper-V server or cluster where a virtual machine will be created. To learn names of virtualization servers or clusters, use the **list vmservers** (p. 27) command. The **--vmserver_name** and **--vmserver_id** parameters are mutually exclusive.

vmserver_id

```
--vmserver_id=<server GUID>
```

Identifier of the ESX(i) or Hyper-V server or cluster where a virtual machine will be created. To learn identifiers of virtualization servers or clusters, use the **list vmservers** (p. 27) command. The **--vmserver_id** and **--vmserver_name** parameters are mutually exclusive.

vmstorage

```
--vmstorage=<path>
```

Location of the new virtual machine.

- When creating a **vmware**, **virtualpc**, **redhat**, or **xen** machine in a local or network folder, specify the path to the folder.

Examples:

```
--vmstorage=c:\vms  
--vmstorage=\\srv1\folder1
```

- When creating a virtual machine on an ESX(i) server, specify the name of the datastore.

Example:

```
Storage_1
```

- When creating a virtual machine on a Hyper-V server, specify the path to the server's local folder.

Example:

```
C:\ProgramData\Microsoft\Windows\Hyper-V\Virtual Machines
```

3.3 Access to applications

3.3.1 exchange_credentials

```
--exchange_credentials=<domain user name>,<password>,encrypted
```

Credentials to access an Exchange server. In this parameter, you must specify credentials of a domain user. The user name has the following format: <DOMAIN>\<user name> or <user name>@<domain>. The user must be granted the permissions sufficient for the required operation. For detailed information about the permissions, see the "Permissions for Exchange backup and recovery" section of the "Backing up Microsoft Exchange Server data" document.

If the third parameter value (**encrypted**) is specified, it means that the preceding password was encrypted by the **acronis_encrypt** utility (p. 141).

In Windows Server 2008 and later, the user specified in the **--exchange_credentials** parameter must differ from the user specified in the **--credentials** (p. 115) parameter that follows the **--host** parameter.

Example

```
--host=exch_srv --credentials=user,pass1  
--exchange_credentials=domain1\exch_user1,12345
```

3.3.2 instance

```
--instance=<instance name>
```

The parameter is used with the **list mssql_databases** (p. 37) command. The parameter defines the instance whose databases will be listed. If not specified, the command will fail.

3.3.3 items

```
--items=<items>
```

Microsoft Exchange Server data items

For Microsoft Exchange Server data backups, this parameter specifies Exchange items to back up or recover. For detailed information about the value format, see "Specifying Exchange data" (p. 76).

Command: backup exchange_database

In the **backup exchange_database** (p. 32) command, each item in the parameter value is a name of a storage group or database.

If the parameter is not specified, the software will back up all the databases on an Exchange server.

Command: recover exchange_database

In the **recover exchange_database** (p. 35) command, each item in the parameter value is a name of a storage group or database.

If the **--target** (p. 80) parameter value is **another_database** or **recovery_database**, the **--items** parameter must contain only one database or storage group. If the **--target** parameter value is **original** or **disk**, you can specify several databases and storage groups in the **--items** parameter.

If the parameter is not specified, the software will recover all the databases in a backup.

To learn the names of the backed-up storage groups or databases, use the **list content** (p. 45) command.

Command: backup exchange_mailbox

In the **backup exchange_mailbox** (p. 33) command, each item in the parameter value is a path to a mailbox or to a public folder. If the path ends with a database name, the software will back up all the mailboxes or public folders of the specified database.

If the parameter is not specified, the software will back up all the mailboxes and public folders on an Exchange server.

Command: recover exchange_mailbox

In the **recover exchange_mailbox** (p. 36) command, each item in the parameter value is a path within a backup to a mailbox, to a public folder, or to a subfolder. If the path ends with a database name, the software will recover all the mailboxes or public folders of the specified database.

If the parameter is not specified, the software will recover all the mailboxes and public folders contained in a backup.

To learn the exact paths in the backup, use the **list content** (p. 45) command.

Microsoft SQL Server data items

For single-pass backups of Microsoft SQL Server, this parameter specifies databases or instances to recover or mount. For detailed information about the value format, see "Specifying SQL data" (p. 77).

Commands: recover mssql_database, mount mssql_database

In the **recover mssql_database** (p. 38) and **mount mssql_database** (p. 53) commands, each item in the parameter value is a path within a backup to a database or to an instance. If the parameter is not specified, the command will fail.

To learn the names of the backed-up databases, use the **list content** (p. 45) command.

Command: umount mssql_database

In the **umount mssql_database** (p. 54) command, each item in the parameter value is a path to a mounted database or to an instance. If the parameter is not specified, the software will unmount all the mounted databases on an SQL server.

3.3.4 Specifying Exchange data

Use the following notation to access Microsoft Exchange Server databases, mailboxes and folders when backing them up or when recovering them from a backup.

Database (for Exchange 2010 or later)

<database>

Example:

```
"Mailbox Database"
```

Storage group (for Exchange 2003 and 2007)

<storage group>

Example:

```
"First Storage Group"
```

Mailbox or public folder

- For Exchange 2013:
 - <database>/<mailbox>

Example:

```
"Mailbox database/John P. Smith"
```

- For Exchange 2010:
 - <database>/<mailbox>
 - <database>/<public folder>

Examples:

```
"Mailbox database/John P. Smith"
```

```
"Mailbox database/Folder for accountants"
```

- For Exchange 2003 and 2007:
 - <storage group>/<database>/<mailbox>
 - <storage group>/<database>/<public folder>

Examples:

```
"Storage group 1/Mailbox database/John P. Smith"
```

```
"Storage group 1/Mailbox database/Folder for accountants"
```

Mailbox folder

- For Exchange 2010 or later: <database>/<mailbox>/<folder 1>/.../<folder N>

Example:

```
"Mailbox database/John P. Smith/Inbox/Mails from Boss"
```

- For Exchange 2003 and 2007: <storage group>/<database>/<mailbox>/<folder 1>/.../<folder N>

Example:

```
"Storage group 1/Mailbox database/John P. Smith/Inbox/Mails from Boss"
```

3.3.5 Specifying SQL data

Use the following notation to access Microsoft SQL Server databases.

```
<instance>
```

All databases of the specified instance.

```
<instance>/<database>
```

The specified database of the specified instance.

```
<database>
```

If the backup contains databases of only one instance, you can specify only the database name.

Examples:

```
"My Instance"  
"My Instance/Accountants"  
Accountants
```

3.3.6 Access to SQL Server instance

Acronis Backup & Recovery 11.5 can use either SQL Server Authentication or Windows Authentication to connect to a Microsoft SQL Server instance.

By default, Windows Authentication is used. This means that the software applies the credentials with which you are logged on to Windows, or the credentials you specify after the **--host** (p. 72) parameter in order to access a remote machine.

SQL Server Authentication is possible only if it is enabled in the instance properties. To connect to the instance by using SQL Server Authentication, specify the **--credentials** parameter after the **--instance** or **--destination_instance** parameter.

3.4 Location

3.4.1 loc

```
--loc=<path>
```

When backing up, the path to the location where the backup is to be created. For other operations, the path to the location where the backups are stored.

The path can be specified in the following formats:

Type of storage	Format
Local path (in Windows)	<drive>:\<folder>
Local path (in Linux)	/<directory 1>/.../<directory N>
SMB	\\<server>\<folder>
NFS	nfs://<server>/<share>/<folder>
FTP, SFTP	ftp://<server>/<folder>/* sftp://<server>/<folder>/
Acronis Backup & Recovery 11.5 Storage Node	bsp://<storage node>/<vault name>
Acronis Online Backup Storage (only for Windows)	online://
Acronis Secure Zone	atis:///asz
Tape	atis:///tape?<GUID of attached library>**

* To establish an active mode FTP connection, use the following notation: **aftp://<server>/<folder>/**

Using this format, you can access a tape library or drive only if it is directly attached to the managed machine. You can determine the GUID of this library or drive by using the **list tape_libraries (p. 59) command.

For a tape library or drive attached to a storage node, a centralized vault should be created on that storage node. To access such tape library or drive, use the **bsp://<storage node>/<vault name>** format.

3.4.2 arc

```
--arc=<archive name>
```

Name of the archive. Parameter values are case-sensitive.

The parameters that provide access to an archive must be specified in the following order: **--loc** (p. 78), **--credentials** (p. 115) (if required to access the location), **--arc**, **--password** (p. 119) (if the archive is or will be password-protected).

Example:

```
--loc=\\bkpsrv\backups --credentials=bkpuser,pass --arc=disk_archive  
--password=123
```

Restrictions on archive names

- When using the **--plain_archive** (p. 91) parameter or when backing up Microsoft Exchange Server data (commands **backup exchange_database** (p. 32) and **backup exchange_mailbox** (p. 33)), the archive name cannot end with a number.
- When using the **--plain_archive** (p. 91) parameter, the FAT16, FAT32, and NTFS file systems do not allow the following characters in the file name: backslash (\), slash (/), colon (:), asterisk (*), question mark (?), quotation mark ("), less than sign (<), greater than sign (>), and pipe (|).

Using variables in archive names

When you back up more than one machine with a single backup command, data from all of the machines is saved to the same location. Each machine backs up to a separate archive. Archive names must be unique within the location. Otherwise, the backup operation will fail.

Add variables to the archive names to make them unique within the location. For the **backup vm** (p. 28) command, the archive name must contain the **[Virtualization Server Type]** and **[Virtual Machine Name]** variables. For other backup commands, use the **[MachineName]** variable.

You can also use these variables when backing up a single machine if this is practical or efficient for you.

Examples:

```
--arc="[Virtualization Server Type]_[Virtual Machine Name]_archive1" – for the  
backup vm command  
--arc=[MachineName]_archive1 – for the backup disk and backup file commands
```

Specifying archives by backup file names

In this parameter, you can specify an archive by the file name of a backup that belongs to the archive; for example: **--arc=my_backup2.tib**.

This syntax is the only way to access an archive in command line if the archive's metadata has been lost. If the metadata is intact, the **--arc** parameter refers to the entire archive. If the metadata is lost, the **--arc** parameter refers to the backup chain that contains the specified backup. (A backup chain is a full backup and all of its dependent incremental and differential backups.)

When using this syntax in a command operating with backups, you still need to specify the **--backup** (p. 80) parameter.

Example:

```
--arc=my_backup2.tib --backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
```

If the **--backup** parameter is not specified and if the archive's metadata is intact, the command will apply to the latest backup of the archive. If the metadata is lost, the command will apply to the latest backup of the backup chain that contains the specified backup.

Restriction: You cannot specify file names of backups stored on Acronis Storage Node, Acronis Online Backup Storage, Acronis Secure Zone or tape.

3.4.3 backup

```
--backup=<backup ID>
```

Identifier of the backup with which the operation is to be performed (for example, the backup from which the data is to be recovered).

With the **export backup** (p. 47), **consolidate backup** (p. 49) and **replicate backup** (p. 48) commands, you can specify several backups.

If the parameter is not specified, the operation will be applied to the latest backup. However, you must specify this parameter with the **recover exchange_database** (p. 35) and **recover exchange_mailbox** (p. 36) commands, if the **--recovery_point** (p. 105) parameter value is **selected_backup**.

3.4.4 target

Commands: **export archive**, **export backup**, **recover file**, **recover ad_database**, **replicate backup**

```
--target=<path>
```

In the **recover file** (p. 25) command, the parameter specifies a local or network folder where folders/files will be recovered (a target folder). The formats of the parameter value are the same as in the **--loc** (p. 78) parameter. If the **--target** parameter is not specified, the original path will be re-created from the backup.

In the **recover ad_database** (p. 39) command, the parameter specifies a local or network folder where the Microsoft Active Directory database and the SYSVOL folder will be extracted (a target folder). The formats of the parameter value are the same as in the **--loc** (p. 78) parameter. If the **--target** parameter is not specified, the command will fail.

In the **export archive** (p. 41), **export backup** (p. 47), or **replicate backup** (p. 48) command, the parameter specifies the location where the archive or backup will be exported or replicated. The formats of the parameter value are the same as in the **--loc** (p. 78) parameter, except for

online:// which is not supported by the **export archive** and **export backup** commands. If the **--target** parameter is not specified, the command will fail.

Command: **recover exchange_database**

```
--target={original|disk|another_database|recovery_database}
```

In the **recover exchange_database** (p. 35) command, available values of the parameter are as follows:

- **original**
The software will recover the selected databases or storage groups to their original paths. The paths are taken from the backup.
- **disk**
The software will save the selected databases or storage groups, along with transaction log files, to a local or network folder. If this value is used, you need to specify the **--disk_location** (p. 101) parameter. If necessary, add the **--credentials** (p. 115) parameter.
- **another_database**
The software will recover the selected database or storage group to a new or existing database or storage group. Only one database or storage group can be recovered at a time.
If this value is used, you need to specify the **--destination_database** (p. 101) parameter. If the destination database does not exist, also specify the **--database_location** (p. 100) and **--log_location** (p. 103) parameters. If the destination storage group does not exist, specify the **--log_location** (p. 103) parameter and pairs of the **--database** (p. 99) and **--database_location** (p. 100) parameters for each database of the storage group being recovered.
- **recovery_database**
The software will recover the selected database or storage group to a recovery database or storage group. Only one database or storage group can be recovered at a time.
When recovering a database, you need to specify the **--database_location** (p. 100) and **--log_location** (p. 103) parameters.
When recovering a storage group, you need to specify pairs of the **--database** (p. 99) and **--database_location** (p. 100) parameters for each database of this storage group. If the destination recovery storage group does not exist, specify also the **--log_location** (p. 103) parameter.

If the parameter is not specified, the command will fail.

Command: **recover exchange_mailbox**

```
--target={original|pst}
```

In the **recover exchange_mailbox** (p. 36) command, available values of the parameter are as follows:

- **original**
The software will recover the selected mailboxes, public folders, and their contents to the Exchange server where the command will be executed.
Mailboxes that have no matching user accounts, enabled in the Active Directory, are skipped during recovery.
If the original mailbox does not exist, it will not be recreated automatically. If you need to recover a non-existing mailbox, create a new mailbox for the same account in advance.

If all of the selected mailboxes are skipped, the command will fail.

- **pst**

The software will save the selected mailboxes, public folders or mailbox folders to a Personal Storage Table (.pst) file. If this value is used, you need to specify the **--disk_location** (p. 101) parameter. If necessary, add the **--credentials** (p. 115) and **--outlookmachine** (p. 103) parameters.

If the parameter is not specified, the command will fail.

Command: **recover mssql_database**

```
--target={original|disk|another_instance}
```

In the **recover mssql_database** (p. 38) command, available values of the parameter are as follows:

- **original** (by default)

The software will recover the selected databases to their original paths. The paths are taken from the backup.

In this case, you cannot specify the credentials to access the SQL Server instance where the databases will be recovered. So, the software will use Windows Authentication to connect to the instance. If you need to use SQL Server Authentication, specify the **another_instance** value along with the original instance name, original database file path and the **--credentials** parameter.

- **disk**

The software will save the selected databases, along with the transaction log files, to a local or network folder. If this value is used, you need to specify the **--disk_location** (p. 101) parameter. If necessary, add the **--credentials** (p. 115) parameter.

- **another_instance**

The software will recover the selected databases to the specified instance.

If this value is used, you need to specify the **destination_instance** (p. 101) and **database_location** (p. 100) parameters. For information about specifying access credentials for Microsoft SQL Server, see "Access to SQL Server instance" (p. 78).

3.4.5 target_arc

```
--target_arc=<archive name>
```

The name of the target archive in the **export archive** (p. 41), **export backup** (p. 47), and **replicate backup** (p. 48) commands.

If the parameter is used with the **export archive** or **export backup** command, the name has to be unique within the target location. If there is an archive with the same name or if the parameter is not specified, the command will fail.

If the parameter is used with the **replicate backup** command and if the target archive exists, the command will append the backup to it. Otherwise, it will create a new archive.

3.4.6 mailbox_location

```
--mailbox_location=<path>
```

The path to the database whose mailboxes are to be displayed. The parameter is used with the **list exchange_mailboxes** (p. 32) command.

For detailed information about the value format, see "Specifying Exchange data" (p. 76).

If the parameter is not specified, the software will display all the mailboxes on an Exchange server.

3.5 Disks and volumes

3.5.1 disk

Commands: backup disk and backup vm

```
--disk=<disk numbers>
```

The parameter is used with the **backup disk** (p. 19) and **backup vm** (p. 28) commands to specify disks to be backed up.

Use the **list disks** (p. 18) command to obtain numbers of available disks and volumes.

You can use the **--disk** and **--volume** (p. 84) parameters within one command line, for example:

```
--disk=1 --volume=E
```

If neither the **--disk** parameter nor the **--volume** parameter is specified, the software will back up all of the machine's disks.

Commands: recover disk, recover mbr, recover vm, create asz

```
--disk=<disk number>
```

Command with which the parameter is used	What does the parameter mean?	What if the parameter is not specified?
recover disk (p. 20) recover vm (p. 29)	The number of the disk whose data is to be recovered from a backup. With the recover disk command, you can specify several disks.	If the --volume (p. 84) parameter is specified, this volume will be recovered. Otherwise, the command will recover all of the backed-up disks.
recover mbr (p. 22)	The number of the disk whose MBR is to be recovered from a backup	The command will fail.
create asz (p. 55)	The number of the disk on which Acronis Secure Zone is to be created	The command will fail.

3.5.2 nt_signature

```
--nt_signature={auto|new|backup|existing}
```

The NT signature is a record that is kept in the hard disk's MBR. It uniquely identifies the hard disk for the operating system.

When recovering a disk (p. 20) containing a system volume, you can choose what to do with the NT signature of the target disk. Specify any of the following parameters:

- **auto** (default)

The software will keep the NT signature of the target disk if it is the same NT signature as the one stored in the backup. (In other words, if you recover the disk to the same disk that was backed up.) Otherwise, the software will generate a new NT signature for the target disk.

- **new**
The software will generate a new NT signature for the target disk.
- **backup**
The software will replace the NT signature of the target disk with the one from the backup.
- **existing**
The software will leave the NT signature of the target disk untouched.

3.5.3 volume

Commands: backup disk and backup vm

```
--volume=<volume numbers>
```

The parameter is used with the **backup disk** (p. 19) and **backup vm** (p. 28) commands to specify volumes to be backed up.

Volume numbers are specified as <disk number>-<volume number>. For example:

```
--volume=1-1,1-2
```

Dynamic volumes (in Windows) or logical volumes (in Linux) are specified with the **DYN** prefix or by their GUIDs. For example:

```
--volume=DYN1  
--volume=e6ee6edc-d1ba-11d8-813e-806e6f6e6963
```

To back up all dynamic volumes or all logical volumes, specify:

```
--volume=DYN
```

Both basic and dynamic volumes can be specified by their letters. For example:

```
--volume=C
```

Mixed notation is also acceptable. For example:

```
--volume=1-1,E,e6ee6edc-d1ba-11d8-813e-806e6f6e6963
```

To view disk and volume numbers, volume letters and GUIDs, use the **list disks** (p. 18) command. To display the full length of GUIDs, add the **--output=raw** parameter.

You can use the **--disk** (p. 83) and **--volume** parameters in one command. For example:

```
--disk=1 --volume=E
```

If neither the **--disk** parameter nor the **--volume** parameter is specified, the software will back up all of the machine's disks.

Commands: recover disk, recover vm, mount

```
--volume=<volume number>
```

Command with which the parameter is used	What does the parameter mean?	What if the parameter is not specified?
--	-------------------------------	---

recover disk (p. 20) recover vm (p. 29)	The volume whose data is to be recovered from a backup. With the recover disk command, you can specify several volumes.	If the --disk (p. 83) parameter is specified, this disk will be recovered. Otherwise, the command will recover all of the backed-up disks.
mount (p. 51)	The volume to be mounted from a backup. You can specify several volumes.	The command will fail.

Volume numbers are specified as <disk number>-<volume number>. For example:

```
--volume=1-1,1-2
```

Dynamic volumes (in Windows) or logical volumes (in Linux) are specified with the **DYN** prefix. For example:

```
--volume=DYN1
```

Both basic and dynamic volumes can be specified by their letters. For example:

```
--volume=C
```

Mixed notation is also acceptable. For example:

```
--volume=1-1,E,DYN1
```

To view disks and volumes contained in a backup, use the **list content** (p. 45) command.

Command: create asz

```
--volume={<volume numbers>|all}
```

In the **create asz** (p. 55) command, the parameter specifies volumes from which the free space for Acronis Secure Zone will be taken if the unallocated space on the specified disk is not enough. The free space will be taken in proportion to each volume's size. If **--volume=all** is specified, the free space will be taken from all volumes of the specified disk.

Without this parameter, Acronis Secure Zone will use the unallocated space only.

Command: resize asz

```
--volume={<volume numbers>|all}
```

If you use the **resize asz** (p. 55) command to increase Acronis Secure Zone, the software will behave in the same way as described earlier for the **create asz** command.

If you use the command to decrease Acronis Secure Zone, the parameter specifies volumes where the free space will be added. The space will be distributed to each volume equally. If **--volume=all** is specified, the free space will be added to all volumes of the disk where the zone is located.

Without the **--volume** parameter, the freed space becomes unallocated.

Command: delete asz

```
--volume=<volume numbers>
```

In the **delete asz** (p. 57) command, the parameter specifies volumes where the free space will be added after the Acronis Secure Zone deletion. The space will be distributed to each volume equally. Without this parameter, the freed space becomes unallocated.

3.5.4 start

```
--start=<offset>{s|kb|mb|gb}
```

This parameter specifies the start position of the volume being recovered. If no measurement unit is specified, the offset is measured in megabytes (**mb**).

Use this parameter with the **recover disk** (p. 20) and **recover vm** (p. 29) commands when recovering a volume to unallocated space of a hard disk.

The **--start** parameter and the **--target_volume** (p. 107) parameter are mutually exclusive. If you specify both, an error will occur.

3.5.5 size

```
--size=<volume size>{s|kb|mb|gb}
```

The parameter specifies the new size of the volume being recovered. If no measurement unit is specified, the size is measured in megabytes (**mb**).

Use this parameter with the **recover disk** (p. 20) and **recover vm** (p. 29) commands if you need to resize the volume during recovery.

3.5.6 mbr_disk

```
--mbr_disk=<disk number>
```

Number of the disk whose master boot record (MBR) is to be recovered from a backup. The parameter is used with the **recover disk** (p. 20) command to recover an MBR in addition to recovering a volume.

You will usually recover an MBR in the following cases:

- When migrating a machine to different hardware.
- When recovering custom or non-Windows boot loaders. Acronis Backup & Recovery 11.5 automatically updates Windows loaders after the volume recovery, so there is no need to recover the MBR unless it is damaged.

3.5.7 target_mbr_disk

```
--target_mbr_disk=<disk number>
```

The disk where the master boot record specified in the **--mbr_disk** (p. 86) parameter will be recovered. The parameter is used with the **recover disk** (p. 20) command to recover an MBR in addition to recovering a volume. If the parameter is not specified, the command will fail.

3.6 Backup parameters

3.6.1 application_aware

```
--application_aware
```

The parameter is used with the **backup disk** (p. 19) command. If specified, the software will create a single-pass backup of the specified disks and volumes.

The **--application_aware** parameter and the **--raw** (p. 92) parameter are mutually exclusive. If you specify both, an error will occur.

3.6.2 backuptype

The type of the backup. If not specified, the value is **full**.

Commands: backup disk, backup file, backup vm

If the parameter is used with the **backup disk** (p. 19), **backup file** (p. 24), and **backup vm** (p. 28) commands, its format is as follows:

```
--backuptype={full|incremental|differential}
```

Command: backup exchange_database

If the parameter is used with the **backup exchange_database** (p. 32) command, its format is as follows:

```
--backuptype={full|transaction_log}
```

Command: backup exchange_mailbox

If the parameter is used with the **backup exchange_mailbox** (p. 33) command, its format is as follows:

```
--backuptype={full|incremental}
```

3.6.3 cleanup

```
--cleanup
```

With this parameter, the software will clear space for the backup being created by deleting old backups. If the parameter is not specified and the destination is out of space, the software prompts you to manually free up disk space.

The parameter is not effective when you back up to an RDX drive or USB flash drive in the removable media mode (p. 90).

Cleanup algorithm

The archive will be cleaned up only during backup and only if there is not enough space to complete the operation. The software will act as follows:

- Delete the oldest full backup with all dependent incremental/differential backups
- If there is only one full backup left and a full backup is in progress, then delete the last full backup with all dependent incremental/differential backups
- If there is only one full backup left, and an incremental or differential backup is in progress, an error occurs saying there is a lack of available space

3.6.4 Comments

archive_comment

```
--archive_comment=<comments>
```

Comments on the archive that is specified in the **--arc** (p. 79) parameter. To view comments on archives, use the **list archives** (p. 40) command with the **-a** parameter.

backup_comment

```
--backup_comment=<comments>
```

Comments on the backup that is specified in the **--backup** (p. 80) parameter. To view comments on backups, use the **list backups** (p. 40) command.

3.6.5 copy_only

```
--copy_only
```

The parameter is used with the **backup exchange_database** (p. 32) command only if the **--backuptype** (p. 87) parameter value is **full**.

The copy-only backup method allows creating full backups without truncating the transaction log files. The method can be used to obtain a full backup without interrupting other ongoing backups. The copy-only backups can be easily stored off-site for testing, analysis or other purposes.

The parameter cannot be used together with the **--express** (p. 89) parameter.

3.6.6 exclude

Disk-level and file-level backups

The following four parameters are used with the **backup disk** (p. 19), **backup file** (p. 24), and **backup vm** (p. 28) commands.

exclude_names

```
--exclude_names=<names>
```

Files and folders to be excluded from the backup. For example,
c:\pagefile.sys,c:\hiberfil.sys.

exclude_mask

```
--exclude_mask=<masks>
```

Masks to select files to be excluded from the backup. For more details, see the description of the **exclude** (p. 102) parameter used in the **recover file** command.

exclude_system

```
--exclude_system
```

In file systems that are supported by Windows, type this parameter to skip files and folders with the **System** attribute. If a folder has the **System** attribute, all of its contents (including files that do not have the **System** attribute) will be excluded.

exclude_hidden

```
--exclude_hidden
```

Type this parameter to skip files and folders that have the **Hidden** attribute (for file systems that are supported by Windows) or that start with a period (.) (for file systems in Linux such as Ext2 and Ext3). If a folder is hidden, all of its contents (including files that are not hidden) will be excluded.

Microsoft Exchange Server data backups

The following four parameters are used with the **backup exchange_mailbox** (p. 33) command.

exclude_age

```
--exclude_age=<date>
```

If the parameter is set, the software will exclude all items created before the specified date and time. The value format is "DD.MM.YYYY HH24:MM". You cannot omit any part of the date.

Without this parameter, items with any creation date and time will be backed up.

exclude_attach

```
--exclude_attach=<files and masks>
```

If the parameter is set, the software will exclude all attachments whose names match the specified values. You can use one or more wildcard characters * and ? in a file mask.

Example:

```
--exclude_attach=Vid*.avi,App?.exe,*.mp3
```

Without this parameter, all attachments will be backed up.

exclude_size

```
--exclude_size=<size>{kb|mb|gb}
```

If the parameter is set, the software will exclude all attachments larger than the specified value. If no measurement unit is specified, the size is measured in megabytes (**mb**).

Without this parameter, items with any size will be backed up.

exclude_types

```
--exclude_types=<types>
```

If the parameter is set, the software will exclude all items of the specified type. You can specify one or more of the following values: **deleted** ("Deleted Items" folders will be excluded), **sent** ("Sent Items" folders will be excluded), or **junk** ("Junk E-mail" folders will be excluded).

Example:

```
--exclude_types=deleted,junk
```

Without this parameter, items of any type will be backed up.

3.6.7 express

```
--express
```

The parameter is used with the **backup exchange_database** (p. 32) command. If specified, the backup will be created by using the express full backup method. Compared to regular full database backups, the express full backups are created much faster and occupy less space.

The parameter can be used only if all of the following conditions are met.

- The **--backuptype** (p. 87) parameter value is **full**.
- The **--loc** (p. 78) parameter value is **bsp://<storage node>/<vault name>** and this vault is deduplicating.
- The "Deduplication for Microsoft Exchange Server" add-on is installed on the machine with Agent for Exchange that will perform the command.

The **--express** and **--copy_only** (p. 88) parameters are mutually exclusive.

3.6.8 fixed_drive

--fixed_drive

The parameter is used with the backup commands only if the backup destination (the **--loc** (p. 78) parameter value) is an RDX drive or USB flash drive.

If the parameter is specified, the device will be used as a fixed drive. Otherwise, the device will be used as removable media.

The following table summarizes the difference between the two modes.

Functionality	Fixed drive	Removable media
If there is insufficient space to continue backing up, the software will prompt you to...	...manually free up disk space.	...insert new media.
Simplified naming (p. 91) of backup files...	...is unavailable even if you specify the --plain_archive parameter.	...is always used even if you do not specify the --plain_archive parameter.
An archive with several full backups can be created.	Yes	No. Before creating a new full backup, the software will delete the entire archive and start a new one.
The --cleanup (p. 87) parameter is effective.	Yes	No. An archive contains only one full backup which cannot be deleted.
You can delete (p. 50) any backup of any archive.	Yes	No. You can delete only a backup that does not have dependent backups.

In Linux, the parameter is effective if the device is specified by its name (for example, **sdf:/**). If a device is specified by its mount point (for example, **/mnt/backup**), it behaves as a fixed drive.

With the **backup vm** (p. 28), **backup exchange_database** (p. 32), or **backup exchange_mailbox** (p. 33) commands, the device is always used in the fixed drive mode, so, this parameter is ignored.

3.6.9 ignore_app_errors

--ignore_app_errors

The parameter is used with the **backup disk** (p. 19) command if the **--application_aware** (p. 86) parameter is specified.

The parameter determines the software behavior when it fails to collect application metadata during a backup. For example, this happens if a database is corrupted or the application service is stopped.

If the parameter is not specified, the backup will fail.

If the parameter is specified, the backup will continue but the application metadata will be ignored. Hence, you will not be able to recover individual SQL databases (p. 38) or Active Directory data (p. 39). However, recovery of disks, volumes and files will still be possible.

The parameter must follow the **--application_aware** parameter.

3.6.10 include

```
--include=<paths>
```

Files or folders to be included into the backup. The parameter is used with the **backup file** (p. 24) command.

3.6.11 mssql_truncate_logs

```
--mssql_truncate_logs
```

The parameter is used with the **backup disk** (p. 19) command only if the **--application_aware** (p. 86) parameter is specified.

If the parameter is specified, the Microsoft SQL Server log will be truncated after each full, incremental or differential backup. The truncation occurs only if the SQL Server metadata has been successfully collected during the backup.

Do not specify this parameter if you use a third-party application, such as the SQL Server backup and restore component, for backing up the SQL Server data.

3.6.12 plain_archive

```
--plain_archive
```

Enables simplified naming of backup files.

With this parameter, full backups are named using the archive name (the **--arc** parameter value); for example: MyData.tib. Names of incremental or differential backups have an index; for example: MyData2.tib, MyData3.tib. Before creating a new full backup, the software will delete the entire archive and start a new one.

This parameter is useful in the following cases:

- If you want to create a portable image of a machine on a detachable media
- If you are planning to move the backups to a different location by using a script
- If you want to rotate USB hard drives so that each drive keeps a single full backup or all backups created during a week

Without this parameter, each backup will have a unique file name with the exact time stamp and the backup type; for example: **MyData_2010_03_26_17_01_38_960D.tib**. This standard file naming allows for a wider range of backup destinations and backup schemes.

When you back up to a removable device (p. 90), the **--plain_archive** parameter is not needed. Instead, the **--fixed_drive** parameter determines whether the standard or simplified naming scheme will be used.

Restrictions

When using simplified file naming, the following functionality is not available:

- Backing up virtual machines from host
- Backing up Microsoft Exchange Server data
- Backing up to Acronis Storage Node, Acronis Online Backup Storage, Acronis Secure Zone or tape
- Converting an incremental or differential backup into a full one

Restrictions on archive names

- The archive name cannot end with a number.
- The FAT16, FAT32, and NTFS file systems do not allow the following characters in the file name: backslash (\), slash (/), colon (:), asterisk (*), question mark (?), quotation mark ("), less than sign (<), greater than sign (>), and pipe (|).

3.6.13 raw

```
--raw
```

The parameter is used with the **backup disk** (p. 19) and **backup vm** (p. 28) commands. Use this parameter to create a backup of a disk (volume) with unrecognized or unsupported file system. This will copy all disk/volume contents sector-by-sector. Without this parameter only the sectors containing data are backed up.

3.6.14 Backup options

3.6.14.1 cataloging

```
--cataloging={full|fast}
```

Cataloging a backup adds the contents of the backup to the data catalog. The data catalog enables you to easily find the required data version using the GUI and to select it for recovery.

Cataloging is always performed as soon as a backup is created or exported to another vault. The **--cataloging** parameter enables you to choose between full and fast cataloging.

Full cataloging

If the parameter value is **full** or is not specified, the backup contents are cataloged to the highest possible level of detail. This means that the following data will be displayed in the catalog:

- For a disk-level backup - disks, volumes, files, and folders.
- For a file-level backup - files and folders.
- For an Exchange database-level backup - databases or storage groups and mailboxes (always); folders and e-mails (depends on the **--metadata_level** (p. 95) parameter value).

- For an Exchange mailbox-level backup - mailboxes, folders, and e-mails.

Fast cataloging

You may want to set the parameter to **fast** if the full cataloging tends to affect the performance of the managed machine or if your backup window is too narrow. The following data will be displayed in the catalog:

- For a disk-level backup - only disks and volumes.
- For a file-level backup - nothing.
- For an Exchange database-level backup - only databases or storage groups and mailboxes.
- For an Exchange mailbox-level backup - only mailboxes.

To add the full contents of already existing backups to the catalog, you can start the full cataloging manually when appropriate.

Note for Virtual Edition users: When backing up to an unmanaged vault (except for a locally-attached storage), Agent for ESX(i) (Virtual Appliance) always performs **fast cataloging**.

Data catalog limitations

Encrypted or password-protected data cannot be included in the catalog. Also, cataloging is not supported for certain types of storage. Do not specify the **--cataloging** parameter:

- When using the **--encryption** (p. 94), **--password** (p. 119), or **--plain_archive** (p. 91) parameters.
- When backing up to removable media, such as CD, DVD, BD, Iomega REV, RDX or USB devices.
- When backing up to Acronis Online Backup Storage (**--loc=online://** (p. 78)).

3.6.14.2 cbt_mode

```
--cbt_mode={on_if_enabled|on|off}
```

This parameter determines whether to use Changed Block Tracking (CBT) when performing an incremental or differential backup of an ESX(i) virtual machine.

Changed Block Tracking, a feature of ESX(i) 4.0 and later, tracks changes to the contents of virtual disks. This leads to faster backups and reduces the load on the storage during a backup.

Use of CBT is configured in the virtual machine settings. The CBT configuration parameters are set up independently for a virtual machine and for each of its disks. For information about setting up the CBT configuration parameters, refer to VMware Knowledge Base:

http://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalid=1031873.

Acronis Backup & Recovery 11.5 enables you to start using CBT on multiple machines without having to manually set up multiple configuration parameters.

Available parameter values

- **on** (by default)
Acronis Backup & Recovery 11.5 automatically enables CBT for each virtual machine that is backed up, and for *all* disks of the virtual machine. The resulting CBT settings determine CBT usage during the backup and are kept after the backup is completed.
- **on_if_enabled**

If CBT is enabled for a virtual machine, Acronis Backup & Recovery 11.5 uses CBT according to the CBT settings of individual disks. Otherwise, CBT is not used.

Use this value for all backups (including full ones) if you want to preserve your custom CBT settings for virtual machines.

- **off**

Acronis Backup & Recovery 11.5 does not use CBT, regardless of the CBT settings for the virtual machines.

Restrictions

Because of the CBT support limitations in VMware vSphere, use of CBT is not possible in these cases:

- The virtual machine version is earlier than 7.
- The virtual machine has a Raw Device Mapping (RDM) disk attached in the physical compatibility mode.
- The virtual machine has a disk attached to a shared virtual SCSI bus. Use of CBT for the disk is possible only when the **SCSI Bus Sharing** setting is **None**.

The presence of snapshots, although it is a CBT support limitation in VMware vSphere, is not a restriction for using CBT in Acronis Backup & Recovery 11.5.

3.6.14.3 compression

```
--compression={none|normal|high|max}
```

Data compression level. If not specified, the value is **normal**.

3.6.14.4 encryption

```
--encryption={none|aes128|aes192|aes256}
```

The algorithm to encrypt the archive. If not specified, the value is **none**.

This parameter cannot be used without the **--password** (p. 119) parameter.

3.6.14.5 fast

```
--fast
```

Defines whether a file change is detected using the file size and time stamp or by comparing the file contents to those stored in the archive. Use this parameter to speed up incremental and differential disk-level backup.

If specified, the software determines whether a file has changed or not by the file size and the date/time when the file was last modified.

If not specified, the software will compare the entire file contents to those stored in the archive.

3.6.14.6 hdd_speed

```
--hdd_speed=<speed>{kb|p}
```

The speed of writing the data being backed up to a hard disk.

This parameter is used if the backup destination (the **--loc** (p. 78) parameter value) is an internal (fixed) hard disk of the machine being backed up. For other locations, the parameter is ignored.

<speed> should be a positive number. If the measurement unit is **kb**, the speed is measured in kilobytes per second. If the measurement unit is **p** or is not specified, the speed is measured in the percentage of the maximum I/O speed of the destination hard disk.

If the parameter is not specified, the hard disk usage is not limited (as if you typed **--hdd_speed=100p**).

Examples:

--hdd_speed=500kb – the data writing speed will be 500 kilobytes per second
--hdd_speed=50p or **--hdd_speed=50** – the data writing speed will be 50% of the maximum speed.

3.6.14.7 ignore_bad_sectors

```
--ignore_bad_sectors
```

Use this parameter to back up a rapidly dying disk without user interaction. Without this parameter, the software asks for user interaction each time it comes across a bad sector during backup. This behavior does not change even if the silent mode (p. 120) is enabled.

3.6.14.8 metadata_level

```
--metadata_level={mailboxes_only|1}|{folders_and_mailboxes|2}|{all|3}}
```

The parameter is used with the **backup exchange_database** (p. 32) command. The parameter defines the amount of metadata collected during a backup. The more detailed the metadata is, the longer the backup creation takes. However, the browsing and recovery of individual e-mails and other items contained in the mailboxes will be faster.

If a database was backed up with the default parameter value then, in order to access folders or individual e-mails, the software has to open the database directly from the backup and apply transaction logs to the database. This process may take considerable time depending on the number of transaction logs contained in the backup.

Note that individual e-mails can be browsed and recovered only by using graphical user interface. If you use command-line interface only, collecting metadata to the e-mail level does not make sense. If you need to recover entire mailboxes only, you can safely use the default value in order to speed up backups.

Available values of the parameter are as follows:

- **mailboxes_only** or **1** (by default)
The metadata will be the least detailed and the backup will be the fastest. Only mailboxes and public folders can be accessed without opening a database.
- **folders_and_mailboxes** or **2**
Individual folders within mailboxes and public folders can be accessed without opening a database.
- **all** or **3**

The metadata will be the most detailed and the backup will take the longest time to complete. Individual e-mails and other items within mailboxes and public folders can be accessed without opening a database.

3.6.14.9 multi_volume_snapshot

```
--multi_volume_snapshot={true|false}
```

This parameter is effective only for Windows operating systems.

This parameter is used with the **backup disk** (p. 19) command. This parameter is also used with the **backup file** (p. 24) command when the **--snapshot** (p. 97) parameter is specified.

The parameter determines whether to take snapshots of multiple volumes at the same time or one by one.

If the value is **true** or if the parameter is not specified, snapshots of all volumes being backed up will be created simultaneously. Use this parameter to create a time-consistent backup of data spanned across multiple volumes, for instance for an Oracle database.

If the parameter value is **false**, the volumes' snapshots will be taken one after the other. As a result, if the data spans across several volumes, the resulting backup may be not consistent.

3.6.14.10 Pre and post commands

pre_cmd

```
--pre_cmd=<command>
```

Pre data capture command. The parameter value should be the path to a batch file containing the required command along with its parameters.

Use this parameter to suspend operation of a database or application for a short period of time in order to take a snapshot of the data being backed up. While suspending the database, all running transactions are completed to prevent loss of data consistency. If this parameter is specified, you must specify the **--post_cmd** parameter.

Example:

```
--pre_cmd=c:\temp\pre_cmd.bat
```

where the contents of the batch file is

```
"net stop MSSQLSERVER"
```

post_cmd

```
--post_cmd=<command>
```

Post data capture command. The parameter value should be the path to a batch file containing the required command along with its parameters.

Use this parameter to resume operation of the database or application after the data capture is complete.

Example:

```
--post_cmd=c:\temp\post_cmd.bat
```

where the contents of the batch file is

```
"net start MSSQLSERVER"
```

3.6.14.11 snapshot

```
--snapshot={always|possible|none}
```

Defines whether to back up files (p. 24) directly (one by one) or by taking an instant data snapshot.

Available values of the parameter are as follows:

- **possible** (by default)
Create a snapshot if it is possible. Back up files directly if taking a snapshot is not possible.
- **none**
Do not create a snapshot. Always back up files directly. Trying to back up files that are opened for exclusive access will result in a read error. Also, files in the backup may not be time-consistent.
- **always**
Always create a snapshot. Using a snapshot enables the backing up of all local files. This includes files opened for exclusive access. The files will be backed up at the same point in time. If a snapshot cannot be taken, the backup will fail.

3.6.14.12 split

```
--split=<size>
```

If specified, the backup will be split into multiple files of the specified size (in MB). If not specified, the software will split the backup when necessary. Such might be the case when the backup is placed on removable media or on FAT16 and FAT32 file systems that have a file size limit of 2GB and 4GB, respectively.

3.6.14.13 Tape management

tape_eject_successful

```
--tape_eject_successful
```

If the parameter is specified, the software will eject tapes after each successful backup. Otherwise, tapes will not be ejected automatically.

tape_full_empty

```
--tape_full_empty
```

If the parameter is specified, each full backup will be written onto a free tape. Otherwise, the software will try to write a backup onto a tape containing backups of the same backup chain or archive. If not found, the software will try to use a free tape.

tape_overwrite

```
--tape_overwrite
```

The parameter applies only to stand-alone tape drives. If the parameter is specified, a tape inserted into a drive will be overwritten every time a full backup is created.

3.6.14.14 use_vss

```
--use_vss={auto|software_auto|acronis|native|software|hardware|none}
```

Volume Shadow Copy Service (VSS) notifies VSS-aware applications that the backup is about to start. This ensures the consistent state of all data being used by such applications. Then, VSS tells a snapshot provider to create the snapshot. You can select the snapshot provider that VSS will use for taking snapshots.

Available values of the parameter are as follows:

- **auto** (by default)
VSS will use the hardware-based provider that supports the source volume. If none is found, VSS will use the Microsoft Software Shadow Copy provider.
- **software_auto**
In most cases, VSS will use the Microsoft Software Shadow Copy provider.
- **acronis**
VSS will use Acronis VSS Provider for taking snapshots.
- **native**
VSS will use the system provider (Microsoft Software Shadow Copy provider) for taking snapshots.
- **software**
VSS will use any available software-based provider that supports the source volume.
- **hardware**
VSS will use the hardware-based provider that supports the source volume. If no hardware-based provider is found, snapshots will be created by means of Acronis Backup & Recovery 11.5.
- **none**
Choose this value if your database is incompatible with VSS. Snapshots will be created by means of Acronis Backup & Recovery 11.5. Snapshots are taken faster but data consistency of the applications whose transactions are not completed cannot be guaranteed.

3.6.14.15 vss_full_backup

```
--vss_full_backup
```

This parameter is used with the **backup disk** (p. 19) command unless the **--use_vss** (p. 98) parameter value is **acronis** or **none**.

If the parameter is specified, logs of Microsoft Exchange Server and of other VSS-aware applications (except for Microsoft SQL Server) will be truncated after each successful full, incremental or differential backup.

Do not specify this parameter in the following cases:

- If you use Acronis Backup & Recovery 11.5 Agent for Microsoft Exchange Server or third-party software for backing up the Exchange Server data. This is because the log truncation will interfere with the consecutive transaction log backups.
- If you use third-party software for backing up the SQL Server data. The reason is that the third-party software will take the resulting disk-level backup for its "own" full backup. As a result,

the next differential backup of the SQL Server data will fail. The backups will continue failing until the third-party software creates the next "own" full backup.

- If other VSS-aware applications are running on the machine and you need to keep their logs for any reason.

Using this parameter does not result in the truncation of Microsoft SQL Server logs. To truncate the SQL Server log after a single-pass backup (p. 86), specify the `--mssql_truncate_logs` (p. 91) parameter.

3.7 Recovery parameters

3.7.1 autorename

```
--autorename
```

The parameter is used with the **recover mssql_database** (p. 38) command. The parameter enables the renaming of databases that have the same names as those in the destination instance. A recovered database will have the following name: `<original database name>-Recovered`. If a database with this name already exists, the recovered database will be named as follows: `<original database name>-Recovered (<sequence number>)`.

Examples: `MyDatabase-Recovered`, `MyDatabase-Recovered (2)`.

If the `--autorename` parameter is not specified, the command execution result depends on the `--overwrite` (p. 104) parameter. If the `--overwrite` parameter is present, the command will overwrite the existing database. Otherwise, the database will be skipped during the recovery.

If you specify both the `--autorename` and the `--overwrite` parameters, an error will occur.

3.7.2 database

```
--database=<db_name>
```

The name of a database to be recovered.

The parameter is used with the **recover exchange_database** (p. 35) command only when recovering a *storage group*.

The parameter is needed in the following cases:

- If the `--target` (p. 80) parameter value is **another_database** and the destination storage group does not exist.
- If the `--target` parameter value is **recovery_database**.

You need to specify pairs of the `--database` and `--database_location` (p. 100) parameters for each database of the storage group being recovered. Otherwise, the operation will fail.

To learn the names of the backed-up databases, use the **list content** (p. 45) command.

Example:

```
--database=DB1 --database_location=C:\databases\DB1 --database=DB4  
--database_location=D:\my_documents\DB4
```

3.7.3 database_location

```
--database_location=<local path>
```

Command: recover exchange_database

A folder on the Exchange server to which a database will be recovered.

The parameter is used with the **recover exchange_database** (p. 35) command in the following cases:

- If the **--target** (p. 80) parameter value is **another_database** and the destination database or storage group does not exist.
- If the **--target** parameter value is **recovery_database**.

When recovering a *storage group*, you need to specify pairs of the **--database** (p. 99) and **--database_location** parameters for each database of this storage group. Otherwise, the operation will fail.

Example:

```
--database=DB1 --database_location=C:\databases\DB1 --database=DB4  
--database_location=D:\my_documents\DB4
```

When recovering a *database*, the **--database** (p. 99) parameter is not needed.

Command: recover mssql_database

A folder on the SQL server to which files of the recovered databases will be written.

The parameter is used with the **recover mssql_database** (p. 38) command if the **--target** (p. 80) parameter value is **another_instance**.

If the parameter is not specified, the command will fail.

3.7.4 database_state

```
--database_state={recovery|norecovery|standby}
```

The state of the recovered database. The parameter is used with the **recover mssql_database** (p. 38) command.

Available values of the parameter are as follows:

- **recovery** (by default)
After the recovery completes, the database will be ready for use. Users will have full access to it. The software will roll back all uncommitted transactions of the recovered database that are stored in the transaction logs. You will not be able to recover additional transaction logs from the native Microsoft SQL backups.
- **norecovery**
After the recovery completes, the database will be non-operational. Users will have no access to it. The software will keep all uncommitted transactions of the recovered database. You will be able to recover additional transaction logs from the native Microsoft SQL backups and thus reach the necessary recovery point.
- **standby**

After the recovery completes, users will have read-only access to the database. The software will undo any uncommitted transactions. However, it will save the undo actions in a temporary standby file so that the recovery effects can be reverted.

The **standby** value is primarily used to detect the point in time when a SQL Server error occurred.

When recovering a system database, this parameter is ignored. System databases are always recovered in the **recovery** state.

3.7.5 destination_database

```
--destination_database=<db>
```

The parameter is used with the **recover exchange_database** (p. 35) command if the **--target** (p. 80) parameter value is **another_database**.

The parameter specifies the database or storage group to which the database or storage group specified in the **--items** (p. 75) parameter will be recovered. An existing database or storage group can be overwritten only if you add the **--overwrite** (p. 104) parameter. If the specified database or storage group does not exist, it will be created.

For detailed information about the value format, see "Specifying Exchange data" (p. 76).

If the parameter is not specified, the command will fail.

3.7.6 destination_instance

```
--destination_instance=<instance name>
```

The parameter is used:

- With the **recover mssql_database** (p. 38) command only if the **--target** (p. 80) parameter value is **another_instance**.
- With the **mount mssql_database** (p. 53) command.

The parameter specifies the instance where the databases specified in the **--items** (p. 75) parameter will be recovered or mounted.

If the parameter is not specified or if you type a non-existing instance name, the command will fail.

3.7.7 disk_location

```
--disk_location=<path>
```

The local or network folder to which the recovered data items will be saved. The parameter is used:

- With the **recover exchange_database** (p. 35) and **recover mssql_database** (p. 38) commands only if the **--target** (p. 80) parameter value is **disk**.
- With the **recover exchange_mailbox** (p. 36) command only if the **--target** (p. 80) parameter value is **pst**.

If the parameter is not specified, the commands will fail.

3.7.8 exclude

```
--exclude=<files, folders and masks>
```

Files and folders to be excluded from the recovery. You can either specify files and folders explicitly or use wildcard characters.

Note: Exclusions override selection of data items to recover. For example, if you select to recover file *MyFile.tmp* and to exclude all *.tmp* files, file *MyFile.tmp* will not be recovered.

Specify the name of the file or folder, such as *Document.txt*.

The names are *not* case-sensitive, both in Windows and Linux. For example, if you choose to exclude all *.tmp* files and the Temp folders, also excluded will be all *.TMP* files, and the *TEMP* folders.

You can use one or more wildcard characters *** and *?*:

- The asterisk (***) substitutes for zero or more characters. For example, *Doc*.txt* covers files such as *Doc.txt* and *Document.txt*.
- The question mark (*?*) substitutes for exactly one character. For example, *Doc?.txt* covers files such as *Doc1.txt* and *Docs.txt*, but not the files *Doc.txt* or *Doc11.txt*.

Exclusion examples

Criterion	Example	Description
By name	F.log	Excludes all files named "F.log"
	F	Excludes all folders named "F"
By mask (*)	*.log	Excludes all files with the .log extension
	F*	Excludes all files and folders with names starting with "F" (such as folders F, F1 and files F.log, F1.log)
By mask (?)	F????.log	Excludes all .log files with names consisting of four symbols and starting with "F"

3.7.9 ext2_3

```
--ext2_3
```

If the parameter is specified, the file system will be converted from Ext2 to Ext3. The parameter is used with the **recover disk** (p. 20) and **recover vm** (p. 29) commands. Without this parameter, the recovered volume will inherit the file system from the backup.

3.7.10 fat16_32

```
--fat16_32
```

If the parameter is specified, the file system will be converted from FAT16 to FAT32. The parameter is used with the **recover disk** (p. 20) and **recover vm** (p. 29) commands. Without this parameter, the recovered volume will inherit the file system from the backup.

It is recommended to use the parameter if the volume size after recovery is likely to exceed 2 GB.

3.7.11 file

--file=<paths>

Files and folders to recover from the file-level backup. If not specified, all contents of the backup are recovered.

You can disable recovery of certain files and folders by using the **--exclude** (p. 102) parameter.

A file or folder specified in both the **--file** and **--exclude** parameters *will* be recovered.

3.7.12 log_location

--log_location=<local path>

A folder on the Exchange server where the transaction log files will be recovered.

The parameter is used with the **recover exchange_database** (p. 35) command in the following cases:

- If the **--target** (p. 80) parameter value is **another_database** and the destination database or storage group does not exist.
- If the **--target** parameter value is **recovery_database**, and the destination recovery storage group does not exist.

If the parameter is not specified, the operation will fail.

3.7.13 original_date

--original_date

The parameter is used with the **recover file** (p. 25) and **recover ad_database** (p. 39) commands. Recover the original date and time of the files from the backup. If not specified, the current date and time are assigned.

3.7.14 outlookmachine

--outlookmachine=<IP address or hostname>

The name or IP address of the machine where Microsoft Outlook 2003 or later is installed. The parameter is used with the **recover exchange_mailbox** (p. 36) command only if the **--target** (p. 80) parameter value is **pst**.

If specified, the created .pst file will be of the new format, and you will be able to open such a file by using Microsoft Outlook 2003 or later. If not specified, the created .pst file will be of the old format, and you will be able to open such a file by using Microsoft Outlook 97-2002.

After this parameter, you need to specify the valid user account in the **--credentials** (p. 115) parameter. When entering the name of an Active Directory user account, be sure to also specify the domain name (**DOMAIN\Username** or **Username@domain**). The user account has to be a member of the Administrators group on the machine.

3.7.15 overwrite

Commands: `recover file`, `recover ad_database`

```
--overwrite={always|older|never}
```

In the **recover file** (p. 25) or **recover ad_database** (p. 39) command, the parameter specifies what to do if the program finds in the target folder a file that has the same name as in the backup.

Available values of the parameter are as follows:

- **always** (by default) - this will give the file in the backup priority over the file on the hard disk.
- **older** - this will give priority to the most recent file modification, whether it be in the backup or on the disk.
- **never** - this will give the file on the hard disk priority over the file in the backup.

In the **recover file** (p. 25) command, if you allow files to be overwritten, you still have an option to prevent overwriting of specific files by excluding (p. 102) them from the recovery operation.

Commands: `recover exchange_database`, `recover exchange_mailbox`,
`recover mssql_database`

```
--overwrite
```

In the **recover exchange_database** (p. 35) command, the parameter allows the overwriting of the existing database or storage group (if the overwriting is allowed in the properties of the selected databases). If the parameter is not specified and the destination database or storage group exists, the operation will fail.

In the **recover exchange_mailbox** (p. 35) command, the parameter allows the overwriting of items (e-mails, calendar events, contacts, tasks, etc.) that have the same IDs as those in the backup. If the parameter is not specified, such items in the target mailbox will be skipped.

Note: *If you recover the same items more than once, each subsequent recovery will duplicate the items because original item IDs change after the overwriting.*

In the **recover mssql_database** (p. 38) command, the parameter allows the overwriting of databases that have the same names as those in the backup. If the parameter is not specified, the command execution result depends on the **--autorename** (p. 99) parameter. If the **--autorename** parameter is present, the command will rename the recovered database. Otherwise, the database will be skipped during the recovery. If you specify both the **--autorename** and the **--overwrite** parameters, an error will occur.

3.7.16 pit

```
--pit=<date and time>
```

The date and time to which the data will be recovered. The parameter value is specified in the following format: "DD.MM.YYYY HH24:MM" (for example, "27.02.2012 13:00").

The parameter is used with the **recover exchange_database** (p. 35) and **recover exchange_mailbox** (p. 36) commands only if the **--recovery_point** (p. 105) parameter value is **point_in_time**.

The software automatically finds (in the transaction log backup) the transaction log file which includes the specified point in time. After that, the data is recovered to the time of this transaction

log file creation. If there are no log files that include the specified time, the software will use the nearest point from the transaction log file backed up previously.

If the point in time is not specified, the operation will fail.

3.7.17 power_on

```
--power_on
```

Power on the target virtual machine when the recovery is complete.

3.7.18 preserve_mbr

```
--preserve_mbr
```

When recovering a volume over an existing one, the target volume is deleted from the disk along with its entry in the target disk MBR. Then, with this parameter, the recovered volume's entry will occupy the upper empty position in the target disk MBR. Thus, the target disk MBR is preserved. If the parameter is not specified, the recovered volume's entry will occupy the same position as in the source disk MBR saved in the backup. If the position is not empty, the existing entry will be moved to another position.

3.7.19 recover_absolute_path

```
--recover_absolute_path
```

The parameter is used with the **recover file** (p. 25) command. Recover with full paths to files and folders. If not specified, full paths are not used.

Example

You backed up folder **My folder** located at **C:\My data\Dir1**, and now you recover it from the latest backup to **D:\Sample\Dir2**.

```
recover file --loc=E:\my_backups --arc=my_archive --file="My folder"  
--target=D:\Sample\Dir2
```

The **--recover_absolute_path** parameter is not specified. The recovered folder will be located at **D:\Sample\Dir2\My folder**.

```
recover file --loc=E:\my_backups --arc=my_archive --file="My folder"  
--target=D:\Sample\Dir2 --recover_absolute_path
```

The **--recover_absolute_path** parameter is specified. The recovered folder will be located at **D:\Sample\Dir2\Drive(C)\My data\Dir1\My folder**.

3.7.20 recovery_point

The state to which the data will be recovered.

Command: recover exchange_database

```
--recovery_point={point_of_failure|latest_backup|point_in_time|selected_backup}
```

In the **recover exchange_database** (p. 35) command, available values of the parameter are as follows:

- **point_of_failure** (by default)
The data will be recovered to the state of the most recent transaction log file existing in Exchange. If transaction logs are not available (lost, deleted or corrupted), the data will be recovered to the moment of backup creation.
- **latest_backup**
The data will be recovered from the latest backup of an archive.
- **point_in_time**
The data will be recovered to a certain date and time. The software will first recover data to the time of the last created full backup before the specified time, and then apply the transaction log files from the transaction log backups.
If this value is used, you need to specify the **--pit** (p. 104) parameter.
- **selected_backup**
The data will be recovered from the backup that you specify with the **--backup** (p. 80) parameter.

Command: **recover exchange_mailbox**

```
--recovery_point={latest_backup|point_in_time|selected_backup}
```

In the **recover exchange_mailbox** (p. 36) command, available values of the parameter are as follows:

- **latest_backup** (by default)
The data will be recovered from the latest backup of an archive.
- **point_in_time**
The data will be recovered to a certain date and time. This value can be used only if you recover a mailbox, a public folder or a mailbox folder from a database-level backup.
If this value is used, you need to specify the **--pit** (p. 104) parameter.
- **selected_backup**
The data will be recovered from the backup that you specify with the **--backup** (p. 80) parameter.

3.7.21 target_disk

```
--target_disk=<disk number>
```

The parameter is used with the **recover disk** (p. 20), **recover vm** (p. 29), and **recover mbr** (p. 22) commands.

- When recovering volumes, use this parameter to place the volumes to unallocated space of the specified basic disk. You can specify only one target disk.
- When recovering disks, use this parameter to specify the target disks.
By using the **recover vm** command, you can recover only one disk at a time. So, only one target disk can be specified.
With the **recover disk** command, you can specify several disks. The number of disks specified in the **--target_disk** parameter must be the same as the number of disks specified in the **--disk** parameter.
- When recovering a master boot record by using the **recover mbr** command, use this parameter to specify the target disk.

3.7.22 target_volume

```
--target_volume=<volume number>
```

Volume where you will recover data which has been selected in the **--volume** (p. 84) parameter. The parameter is used with the **recover disk** (p. 20) and **recover vm** (p. 29) commands.

With the **recover disk** (p. 20) command, you can specify several volumes. The number of volumes specified in the **--target_volume** parameter must be the same as the number of volumes specified in the **--volume** parameter.

If you need to recover a volume to the unallocated space of a basic disk, use one of the following methods:

- Type **--target_volume=UNALLOCATED-<disk number>-<unallocated space sequence number>** to specify unallocated space on a specific disk.
- Specify the **--target_disk** (p. 106) parameter instead of the **--target_volume** parameter. In this case, the software will try to recover the volume to the first unallocated space of a suitable size on the specified disk.
- Specify the **--target_disk** (p. 106) and **--start** (p. 86) parameters instead of the **--target_volume** parameter. In this case, the software will recover the volume to the unallocated space on the specified disk starting from the specified start position.

Examples

--target_volume=C – to recover to a basic volume

--target_volume=DYN1 – to recover to a dynamic volume (Windows) or to a logical volume (Linux)

--target_volume=UNALLOCATED-1-1 – to recover to the first unallocated space of the first basic disk

--target_volume=UNALLOCATED-DYN – to recover to the unallocated space of the disk group (for Windows only)

3.7.23 type

```
--type={active|primary|logical}
```

Sets the recovered volume as active, primary or logical. However, this may not be possible (for example, because there cannot be more than four primary volumes on a disk). Setting a volume active sets it as primary. On the other hand, a volume set primary may remain inactive.

If the type is not specified, the software will try to keep the target volume type. If the target volume is active, the recovered volume is set active. If the target volume is primary and there are other primary volumes on the disk, one of them will be set active while the recovered volume becomes primary. If no other primary volumes remain on the disk, the recovered volume is set active.

When recovering a volume on unallocated space, the software extracts the volume type from the backup. For the primary volume, the type will be set as follows:

- if the target disk is the 1st according to BIOS and it has no other primary volumes, the recovered volume will be set active
- if the target disk is the 1st according to BIOS and there are other primary volumes on it, the recovered volume will be set logical
- if the target disk is not the 1st, the recovered volume will be set logical.

3.7.24 use_all_space

```
--use_all_space
```

This parameter is used with the **recover disk** (p. 20) and **recover vm** (p. 29) commands if you recover a volume to unallocated space.

If specified, the recovered volume will occupy all the unallocated space. Otherwise, the recovered volume size will be the same as in the backup.

3.8 Mounting parameters

3.8.1 rw

```
--rw
```

If specified, the backed-up volume will be mounted in the read/write mode. You will be able to modify its contents (save, move, create, delete files or folders) and run executables consisting of one file.

If not specified, the volume will be mounted in the read-only mode.

3.8.2 letter

Command: mount

```
--letter=<letters>
```

Letters to be assigned to the mounted volumes. The parameter is used with the **mount** (p. 51) command when mounting volumes in Windows.

The letters you specify are assigned to the volumes according to the volume order in the **--volume** (p. 84) parameter.

Example

```
--volume=2-1,1-3,1-1 --letter=K,L,M
```

The letters will be assigned as follows: 2-1=K; 1-3=L; 1-1=M.

If no letter is specified for one or several volumes, the software will assign the first available letters. In this case, use the **list disks** (p. 18) command to get the letters assigned to the volumes. If you specify more letters than volumes, the operation will fail.

Command: umount

```
--letter={<letter>|all}
```

The letter of the volume to be disconnected. The parameter is used with the **umount** (p. 52) command when unmounting a volume in Windows. If the value is **all**, all volumes will be disconnected. If the parameter is not specified, the operation will fail.

3.8.3 mount_point

Command: mount

```
--mount_point=<mount points>
```

Directories to mount the volumes to. The parameter is used with the **mount** (p. 51) command in Linux. If the parameter is not specified or if the number of mount points differs from the number of volumes, the operation will fail.

Command: umount

```
--mount_point=<mount point>
```

The directory to unmount the volume from. The parameter is used with the **umount** (p. 52) command in Linux. If the parameter is not specified, the operation will fail.

3.9 Acronis Secure Zone parameters

3.9.1 asz_size

```
--asz_size={<size>{s|kb|mb|gb}|unallocated}
```

If no measurement unit is specified, the size is measured in megabytes (**mb**).

Command: create asz

In the **create asz** (p. 55) command, the parameter specifies the size of Acronis Secure Zone.

If the parameter is not specified, the size is set as the average between the maximal (unallocated space plus free space on the volumes selected with the **--volume** (p. 84) parameter) and minimal (about 50 MB) values.

Either way, the software will first use the unallocated space. If there is not enough unallocated space, the selected volumes will be decreased. Resizing of locked volumes requires a reboot (p. 120).

With the **unallocated** value, the zone will use all unallocated space on the disk. Volumes will be moved, if necessary, but will not be resized. Moving of locked volumes requires a reboot. The **--volume** (p. 84) parameter is ignored.

Command: resize asz

In the **resize asz** (p. 55) command, the parameter specifies the new size of Acronis Secure Zone.

If you increase Acronis Secure Zone, the software will behave in the same way as described earlier for the **create asz** command.

If you decrease Acronis Secure Zone, the freed space will be added to the volumes specified in the **--volume** (p. 84) parameter. Resizing of locked volumes requires a reboot (p. 120). Without the **--volume** parameter or if the **--asz_size** parameter is set to **unallocated**, the freed space becomes unallocated.

If the parameter is not specified, the software just displays the current Acronis Secure Zone size and free space.

3.10 Filtering

The filtering parameters are used to filter the data retrieved by the listing commands (**list activities** (p. 63), **list archives** (p. 40) and others).

3.10.1 content_path

The path to the contents inside the backup. The parameter is used with the **list content** (p. 45) command unless the **--content_type** (p. 110) parameter value is **volume** or **ad_database**. If not specified, the first 5000 root elements will be shown.

Disk-level and file-level backups

For disk-level and file-level backups, this parameter is a file system path. In Windows, specify volumes in the path by their letters (not numbers, like **1-1**). In Linux, specify the volume's mount point.

Examples:

```
--content_path=C:\Windows\system32
--content_path=/home/user1/work
```

Microsoft Exchange Server data backups

For detailed information about the value format, see "Specifying Exchange data" (p. 76).

Single-pass backups

For single-pass backups, the value format depends on the data type you want to view. This data type is determined by the **--content_type** parameter value.

- If **--content_type=mssql_database**, this parameter is an instance name.

Example:

```
--content_path=NEWSERVER
```

- If **--content_type=file**, this parameter is a file system path. Specify volumes in the path by their letters (not numbers, like **1-1**).

Example:

```
--content_path=D:\databases
```

3.10.2 content_type

```
--content_type={volume|file|exchange_database|exchange_mailbox|mssql_database|ad_database}
```

The type of content to display. The parameter is used with the **list content** (p. 45) command when viewing the contents of a disk-level or database-level backup.

Disk-level backups

When viewing the contents of a disk-level backup, the applicable values of the parameter are **volume** and **file**. If the value is **volume** or if the parameter is not specified, the command will list disks and volumes contained in the backup. Otherwise, the list of backed up files and folders will be shown.

Microsoft Exchange Server data backups

When viewing the contents of a database-level backup, the applicable values of the parameter are **_exchange_database** and **exchange_mailbox**. If the value is **exchange_database** or if the parameter is not specified, the command will list storage groups and databases contained in the backup. Otherwise, the list of backed up mailboxes and public folders will be shown.

Single-pass backups

When viewing the contents of a single-pass backup of Microsoft SQL Server, the applicable values of the parameter are **mssql_database**, **volume**, and **file**. When viewing the contents of a single-pass backup of Microsoft Active Directory data, the applicable values of the parameter are **ad_database**, **volume**, and **file**.

If the value is **volume** or if the parameter is not specified, the command will list disks and volumes contained in the backup.

3.10.3 filter_available_for_backup

```
--filter_available_for_backup={true|false}
```

If the parameter value is **true**, the software lists only virtual machines that are being managed by an agent. If the value is **false**, only unmanageable virtual machines are displayed. A virtual machine is unmanageable if the agent is absent, stopped or corrupted. This makes it unavailable for the management server. The parameter is used with the **list vms** (p. 27) command. If the parameter is not specified, the command shows both manageable and unmanageable virtual machines.

3.10.4 filter_date

```
--filter_date=<dates and times>
```

The parameter is used with the **list backups** (p. 44) command. If specified, the command will retrieve only backups that were created on certain dates and at certain time. If not specified, backups with any creation date and time will be displayed.

Specify a list of exact dates and times in the following format: "DD.MM.YYYY HH24:MM:SS". You can omit seconds, minutes and hours. This will mean "any second", "any second and any minute" or "any second, any minute and any hour", respectively.

Examples:

- **--filter_date="15.02.2011 12:00"** shows backups created between 15.02.2011 12:00:00 and 15.02.2011 12:00:59.
- **--filter_date="15.02.2011 12"** shows backups created between 15.02.2011 12:00:00 and 15.02.2011 12:59:59.
- **--filter_date=15.02.2011** shows backups created between 15.02.2011 00:00:00 and 15.02.2011 23:59:59.

3.10.5 filter_edition

```
--filter_edition=<editions>
```

The parameter is used with the **list mssql_instances** (p. 37) command. If specified, the software will list only instances of those Microsoft SQL Server editions that contain the values you have specified.

Without this parameter, instances of any Microsoft SQL Server edition will be displayed.

Example:

If you specify **--filter_edition=Enterprise**, the software will display instances of the following Microsoft SQL Server editions: Microsoft SQL Server 2005 Enterprise Edition, Microsoft SQL Server 2008 R2 Enterprise Edition, and Microsoft SQL Server 2012 Enterprise Edition.

3.10.6 filter_guid

```
--filter_guid=<GUIDs>
```

GUIDs for selecting objects to be output. The parameter is used with the **list tape_libraries** (p. 59), **list vms** (p. 27), and **list activities** (p. 63) commands. If not specified, objects with any GUID will be displayed.

3.10.7 filter_host

```
--filter_host=<hostnames>
```

The parameter is used with the **list vms** (p. 27) command. If specified, the software will display only virtual machines residing on the listed hosts. If not specified, virtual machines residing on all registered hosts will be displayed.

3.10.8 filter_library

```
--filter_library=<GUID>
```

The GUID of the tape library whose slots you want to list with the **list tape_slots** (p. 59) command. If not specified, the command will list slots of all the tape libraries attached to the machine.

To learn the GUID of a tape library, use the **list tape_libraries** (p. 59) command.

3.10.9 filter_machines

```
--filter_machines=<quantities of machines>
```

The parameter is used with the **list vmsservers** (p. 27) command. If specified, the software will list only those virtualization servers or server clusters that contain the specified quantities of machines. If not specified, servers or clusters with any quantity of machines will be displayed.

3.10.10 filter_name

```
--filter_name=<names>
```

Object names for selecting objects to be output.

If the parameter is used with the **list tape_libraries** (p. 59), **list vms** (p. 27) or **list vmsservers** (p. 27) command, the software will display objects whose names *coincide* with the values you have specified.

If the parameter is used with the **list exchange_mailboxes** (p. 32), **list mssql_instances** (p. 37), or **list mssql_databases** (p. 37) command, the software will display objects whose names *contain* the values you have specified.

Without this parameter, objects with any name will be displayed.

3.10.11 filter_state

```
--filter_state=<states>
```

States for selecting objects to be output. The parameter is used with the **list activities** (p. 63), **list tasks** (p. 68), **list plans** (p. 65), and **list vms** (p. 27) commands. If the parameter is not specified, objects with any state will be listed.

For the **list activities** command, you can specify one or more of the following states: **running**, **paused**, **waiting**, **waiting_for_children**, or **completed**.

For the **list tasks** and **list plans** commands, you can specify one or more of the following states: **idle**, **waiting**, **running**, or **need_interaction**.

For the **list vms** command, you can specify one or more of the following states: **running**, **stopped**, **suspended**, **wait_input**, or **unknown**.

3.10.12 filter_status

```
--filter_status=<statuses>
```

Statuses for selecting objects to be output. The parameter is used with the **list vms** (p. 27) and **list plans** (p. 65) commands. If not specified, objects with any status will be displayed.

A virtual machine status shows how successful the machine is backed up. It depends on the statuses of all backup plans related to this virtual machine.

You can specify one or more of the following statuses: **ok**, **warning**, **error**, or **unknown**.

3.10.13 filter_type

Types for selecting objects to be output.

Commands: **list archives**, **list backups**

```
--filter_type=<types>
```

In the **list archives** (p. 40) command, you can specify one or more of the following types: **disk**, **file**, **exchange_db**, and **exchange_doc**.

In the **list backups** (p. 44) command, you can specify one or more of the following types: **full**, **incremental**, **differential**, and **transaction_log**.

Command: **list vmsservers**

```
--filter_type=<server types>
```

In the **list vmservers** (p. 27) command, you can specify one or more of the following types: **standalone** and **cluster**.

3.10.14 filter_user

```
--filter_user=<user names>
```

The parameter is used with the **list tasks** (p. 68) and **list plans** (p. 65) commands. If specified, the software will list only tasks that run (or only plans whose tasks run) under the specified user accounts. If not specified, tasks run under any user account will be displayed.

3.10.15 filter_version

```
--filter_version=<versions>
```

The parameter is used with the **list mssql_instances** (p. 37) command. If specified, the software will list only instances of those Microsoft SQL Server versions that contain the values you have specified.

Without this parameter, instances of any Microsoft SQL Server version will be displayed.

Example:

If you specify **--filter_version=500**, the software will display instances of the following Microsoft SQL Server versions: 9.00.5000.00 and 10.00.5500.00.

3.11 Tape management parameters

3.11.1 assign2free

```
--assign2free
```

The parameter is used with the **inventory tape** (p. 60) command. If specified, the detected tapes will be moved from the **Unrecognized tapes** or **Imported tapes** pools to the **Free tapes** pool.

Warning. Only use this parameter if you are absolutely sure that the data stored on your tapes can be overwritten.

3.11.2 libraries

```
--libraries=<GUIDs>
```

GUIDs of tape libraries or stand-alone tape drives to be inventoried. The parameter is used with the **inventory tape** (p. 60) command.

If not specified, the command will fail. To learn GUIDs of tape libraries or stand-alone tape drives, use the **list tape_libraries** (p. 59) command.

3.11.3 mode

```
--mode={full|fast}
```

The method of inventorying tapes (p. 60).

Fast inventorying

If the parameter value is **fast** or is not specified, Acronis Backup & Recovery 11.5 scans tapes for barcodes. Using barcodes, the software can quickly return a tape to the pool where it was before.

Select this method to recognize tapes used by the same tape device attached to the same machine. Other tapes will be sent to the **Unrecognized tapes** pool.

If your tape library contains no barcode reader, all tapes will be sent to the **Unrecognized tapes** pool. To recognize your tapes, perform full inventorying or combine fast and full inventorying as described later in this section.

Full inventorying

If the parameter value is **full**, Acronis Backup & Recovery 11.5 reads tags written by Acronis software and analyzes other information about the contents of the loaded tapes. Select this method to recognize empty tapes and tapes written by Acronis software on any tape device and any machine.

Combination of fast and full inventorying

Full inventorying of an entire tape device may take a long time. If you need to inventory only a few tapes, combine fast and full inventorying. Step-by-step instructions are provided in "Operations with tapes" (p. 135).

3.11.4 slots

```
--slots=<GUIDs>
```

GUIDs of tape library slots to be inventoried. The parameter is used with the **inventory tape** (p. 60) command only if the **--libraries** (p. 114) parameter contains the GUID of one library.

If the parameter is not specified, all of the tape library slots will be inventoried. To learn GUIDs of tape library slots, use the **list tape_slots** (p. 59) command.

3.12 General parameters

3.12.1 credentials

```
--credentials=<user name>,<password>,encrypted
```

Credentials to access a machine, a backup location, or a folder. The parameter must directly follow the object for which credentials are required (for example, **--host**, **--loc**, **--target**).

To access Acronis Secure Zone, specify only the password in this parameter.

To access a network share that does not require credentials, specify **--credentials=anonymous**.

If the third parameter value (**encrypted**) is specified, it means that the preceding password was encrypted by the **acronis_encrypt** utility (p. 141).

A command can contain several **--credentials** parameters.

Example

```
acrocmd export archive --loc=bsp://ASN/my_vault --credentials="ASN user",pass1
--arc=my_archive --password=123 --target=\\bkpsrv\backups
--credentials=netuser,pass2
```

This command exports a password-protected archive from a managed vault to a network share. The first credentials are required to access the vault **my_vault** managed by the storage node **ASN**. The **--password** parameter specifies the password for the archive **my_archive**. The second credentials enable writing to the shared folder **\\bkpsrv\backups**.

3.12.2 Error handling

```
--retry_count=<number of attempts>
--retry_delay=<delay>
```

These parameters are used with the backup and recovery commands only.

When a recoverable error occurs, the software re-attempts to perform the unsuccessful operation. You can set the number of attempts and the time interval between attempts. The attempts will be stopped as soon as the operation succeeds OR the specified number of attempts is performed, depending on which comes first.

You need to specify both parameters. The **--retry_delay** parameter must directly follow the **--retry_count** parameter.

Example: --retry_count=10 --retry_delay=20s

If the parameters are not specified, the number of attempts is 5 and the time interval between attempts is 30 seconds (as if you typed **--retry_count=5 --retry_delay=30s**). To completely disable re-attempts, specify **--retry_count=0**.

The interval may be set in seconds (**s**, by default), minutes (**m**) or hours (**h**).

Examples:

- 10-second interval: **--retry_delay=10** or **--retry_delay=10s**
- 1-minute interval: **--retry_delay=1m**
- 1-hour interval: **--retry_delay=1h**

3.12.3 file_params

```
{-f|--file_params}=<full local path>
```

Specifies the full path to an input parameter file. The path must be local (for example, **c:\temp\1.txt** or **/home/user1/1.txt**). For more detailed information, see Syntax (p. 8).

3.12.4 force_yes

```
--force_yes
```

If the parameter is specified, the software will automatically handle situations requiring user interaction as if the user answers **Yes** or **OK** to the interaction request. If the interaction request does not imply these answers (for example, the possible answers to a reboot prompt are **Reboot** and **Cancel**), the software will ignore this request. If an operation cannot continue without user interaction, it will fail.

If the parameter is not specified, the command allows interaction with the user.

The parameter is mainly intended for the **recover lvm_structure** (p. 23) command. It automates the recovery of a Linux system, along with its software RAID/LVM structure, to a machine with different logical volume structure or without logical volumes. This command always prompts the user to confirm the replacement of the machine's logical volume structure.

Please be aware that by using the **--force_yes** parameter you may unintentionally confirm deletion of useful data. If you want the software to simply ignore interaction requests, use the **--silent_mode** (p. 120) parameter rather than the **--force_yes** parameter. These parameters are mutually exclusive.

3.12.5 id

```
--id=<GUID>
```

GUID of the activity, task or backup plan with which the operation is to be performed. The parameter is used with the **get log** (p. 63) command and with the task (p. 68) and plan (p. 65) management commands.

3.12.6 log

```
--log=<full path>
```

Saves the log of the operation with which the parameter is used to the specified file. The format of the log file depends on the **--log_format** (p. 117) parameter value.

3.12.7 log_format

```
--log_format={structured|unstructured}
```

The format of the log file specified in the **--log** (p. 117) parameter. If the value is **structured** or if the parameter is not specified, the software will write logs in the structured xml format. The format is described in the `acrocnd.xsd` file located in the folder where the command-line utility is installed. The default installation paths of the utility are listed in the "Installation" (p. 7) section under "Installation paths".

If the value is **unstructured**, the software will write logs in the Acronis xml format.

3.12.8 network_speed

```
--network_speed=<speed>{kb|p}
```

The speed of transferring the data through the network during a backup or validation command execution.

In the **backup commands**, this parameter is used if the backup destination (the **--loc** (p. 78) parameter value) is a location on the network, i.e., a network share, a managed vault, an FTP/SFTP server, or Acronis Online Backup Storage. For other location types, this parameter is ignored.

In the **validation commands**, this parameter is used with the same backup destinations, except for a managed vault.

The parameter defines the amount of the network connection bandwidth allocated for transferring the backup data. If the parameter is not specified, the software uses all the network bandwidth it can get when transferring the backup data. You can reserve a part of the network bandwidth for other network activities.

<speed> should be a positive number. If the measurement unit is **kb**, the speed is measured in kilobytes per second. If the measurement unit is **p** or is not specified, the speed is measured in the percentage of the estimated maximum speed of the network connection. For the online storage, only the **kb** measurement unit is effective.

Examples:

--network_speed=500kb – the data transferring speed will be 500 kilobytes per second
--network_speed=50p or **--network_speed=50** – the data transferring speed will be 50% of the estimated maximum speed.

3.12.9 oss_numbers

```
--oss_numbers={true|false}
```

The parameter is used in the following cases:

- With the **backup disk** (p. 19), **recover disk** (p. 20), **create asz** (p. 55), **resize asz** (p. 55), and **delete asz** (p. 57) commands. With these commands, the parameter applies to the volumes specified in the **--volume** (p. 84) parameter value.
- With the **list content** (p. 45) command if the **--content_type** parameter value is **volume** or with the **list disks** (p. 18) command. With these commands, the parameter applies to numbers of the output volumes.

If the value is **true** or if the parameter is not specified, the volume numbers are adjusted for the MBR partition table. This means that primary volumes have numbers 1-1, 1-2, 1-3, 1-4; logical volume numbers start with 1-5.

If the parameter value is **false**, consecutive volume numbering must be used.

Example

If the disk has one primary and two logical partitions, their numbers can appear as follows:

```
--volume=1-1,1-5,1-6
```

or

```
--oss_numbers=false --volume=1-1,1-2,1-3
```

3.12.10 output

```
--output={formatted|raw}
```

Output mode. Applicable values are:

- **formatted** (by default)
Outputs human-readable formatted table. The maximum width of a table column is 20 characters. The text is left aligned. Table headers and header separators are shown.
- **raw**

This mode is intended for use as input for a third-party parser. Headers are not visible; column header separator lines are not visible; the column separator is "\t" (tab character). Also, this mode enables you to see the full length of a value that is longer than 20 characters (for example, the GUID of a backup plan).

3.12.11 password

```
--password=<password>,encrypted
```

Password for the archive in the backup and recovery operations, archive and backup management operations. The parameter must directly follow the **--arc** (p. 79) parameter.

Also, this parameter is used in the **create asz** (p. 55) command to specify a password for Acronis Secure Zone.

If the second parameter value (**encrypted**) is specified, it means that the preceding password was encrypted by the **acronis_encrypt** utility (p. 141).

3.12.12 process_priority

```
--process_priority={low|normal|high}
```

The priority of a backup or validation process running in a system. In the validation commands, this parameter is ignored if the backup destination is a managed vault.

This parameter determines the amount of CPU and system resources allocated to that process. Decreasing the priority will free more resources for other applications. Increasing the priority might speed up the backup or validation process by requesting the operating system to allocate more resources like the CPU to the backup application. However, the resulting effect will depend on the overall CPU usage and other factors like disk in/out speed or network traffic.

Available values are as follows:

- **low** (by default)
Use this value to minimize resources taken by the backup or validation process and leave more resources to other processes running on the machine.
- **normal**
Use this value to run the backup or validation process at the normal speed and allocate resources on a par with other processes.
- **high**
Use this value to maximize the backup or validation process speed by taking resources from other processes.

3.12.13 progress

```
--progress
```

Enables displaying the operation progress information (percent completed, elapsed time, estimated time) on the screen. The progress information is recorded in the log regardless of the **--progress** parameter presence.

3.12.14 reboot

reboot and reboot later

```
--reboot  
--reboot --later
```

Reboot the machine before the operation (if required).

Use the **--reboot** parameter when performing the following operations that require a reboot: recovering a volume that contains the currently active operating system, recovering locked files, creating/deleting Acronis Secure Zone on a system disk, cloning a system disk. The machine will be rebooted without a prompt.

If neither the **--reboot** parameter nor the **--silent_mode=on** (p. 120) parameter is specified, the operation will request user interaction. If the **--reboot** parameter is not specified and the **--silent_mode=on** parameter is specified, the operation will fail.

To postpone the operation until a user reboots the system manually, add the **--later** parameter. With this parameter, the operation will be performed after the user initiates a reboot. This parameter can only be used with the **create asz** (p. 55) and **resize asz** (p. 55) commands.

If you specify the **--reboot** parameter with operations that do not necessarily require a reboot, this parameter will be ignored.

reboot after

```
--reboot_after
```

Reboot the server after the operation is completed.

3.12.15 silent_mode

```
--silent_mode={on|off}
```

If the parameter value is **on**, the silent mode is enabled. It means that the software will automatically handle situations requiring user interaction. If an operation cannot continue without user interaction, it will fail. Details of the operation, including errors, if any, can be found in the operation log.

If the value is **off** or if the parameter is not specified, the command allows interaction with the user. Set this value if the operation requires a user interaction, such as inserting removable media (CD, DVD or tape).

To prohibit interaction when the software comes across a bad sector during backup, use the **--ignore_bad_sectors** (p. 95) parameter. The **--silent_mode** parameter does not work in this particular case.

The **--silent_mode** and **--force_yes** (p. 116) parameters are mutually exclusive.

3.12.16 use_registry_defaults

```
--use_registry_defaults
```

The parameter is used with the backup and recovery commands, except for **recover mbr** (p. 22). It determines the values of backup and recovery options that are not explicitly specified in a command string.

If the parameter is specified, the software will use the default values of backup and recovery options set in the graphical user interface of Acronis Backup & Recovery 11.5. These values are stored on the machine with the agent that performs the command. On a machine running Windows, the values are stored in the registry; on a machine running Linux, the values are stored in the Acronis Backup & Recovery 11.5 configuration files.

If the parameter is not specified, the software will use the default values described in this Command-Line Reference. These values are contained in the command-line utility code.

4 Usage examples

4.1 Backup and recovery

4.1.1 Disks and volumes

Listing disks (p. 18)

- Listing all disks of the local machine.

```
acrocmd list disks
```

- Listing disks of a remote machine.

```
acrocmd list disks --host=192.168.1.2 --credentials=user1,pass1
```

- Listing disks of a virtual machine.

```
acrocmd list disks --host=srv1 --credentials="srv1\AMS user",pass1 --service=ams  
--vmid=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
```

Backing up disks and volumes (p. 19)

- Backing up the first volume of the second disk and the third volume of the first disk. The backup will be saved to a local folder and will be split into 4.5-GB parts to be later written on DVDs. To get the volume numbers, use the **list disks** (p. 18) command.

```
acrocmd backup disk --volume=2-1,1-3 --split=4608 --loc="F:\my backups" --arc="my  
archive"
```

- Backing up the entire machine to a file with a simplified name. For more details, see the **--plain_archive** (p. 91) parameter description. The operation log will be saved to a text file.

```
acrocmd backup disk --loc=F:\ --arc=my_machine --plain_archive  
--log=D:\logs\log.txt
```

- Backing up disks 1 and 2 excluding .bak files. The compression level will be set to maximum. The backup will be saved to a network shared folder. To get the disk numbers, use the **list disks** (p. 18) command.

```
acrocmd backup disk --disk=1,2 --compression=max --exclude_mask=*.bak  
--loc=\\bkpsrv\backups --credentials=bkpuser,pass --arc=disk_archive
```

- Creating an incremental backup of volume C:. The Volume Shadow Copy Service (VSS) will be enabled and will automatically select between the available hardware-based and software-based snapshot providers. The backup will be saved to a managed vault.

```
acrocmd backup disk --volume=C --backuptype=incremental --use_vss=auto  
--loc=bsp://storage_node1/my_vault --credentials=bkpuser,pass --arc=c_archive
```

- Backing up the first (according to the **list disks** (p. 18) command output) dynamic volume in Windows or logical volume in Linux. The backup will be saved to a network shared folder.

```
acrocmd backup disk --volume=DYN1 --loc=\\srv1\backups  
--credentials=netuser1,pass1 --arc=dyn1_arc
```

For more information about selecting logical volumes in Linux, see [Selecting logical volumes and MD devices for backup](#) (p. 139)

- Backing up all dynamic volumes in Windows or all logical volumes in Linux. The backup will be saved to an FTP server.

```
acrocmd backup disk --volume=DYN --loc=ftp://srv1/backups  
--credentials=ftpuser1,pass1 --arc=alldyn_arc
```

- Backing up a machine to a network shared folder. If the backup succeeds, logs of VSS-aware applications (except for Microsoft SQL Server) will be truncated after the backup.

```
acrocmd backup disk --loc=\\srv1\backups --credentials=netuser1,pass1  
--arc=my_apps --vss_full_backup
```

Single-pass disk and application backup

- Creating a single-pass backup of the local machine. The backup will be saved to a network shared folder. Since neither the **--vss_full_backup** (p. 98) parameter nor the **--mssql_truncate_logs** (p. 91) parameter is specified, logs of VSS-aware applications will not be truncated. If the software fails to collect the application metadata, the backup will continue.

```
acrocmd backup disk --application_aware --loc=\\srv1\backups  
--credentials=netuser1,pass1 --arc=machine1_app --ignore_app_errors
```

The user who runs the command must be a member of the **sysadmin** role on each of the instances installed on the machine.

- Creating a single-pass backup of a remote machine. The backup will be saved to a vault on a storage node. Microsoft SQL Server logs will be truncated after each backup. Logs of other VSS-aware applications will not be truncated. If the software fails to collect the metadata of any application, the backup will fail because the **--ignore_app_errors** (p. 90) parameter is not specified.

```
acrocmd backup disk --host=192.168.1.2 --credentials=user1,pass1  
--application_aware --loc=bsp://storage_node1/my_vault --arc=my_archive_app  
--mssql_truncate_logs
```

The user whose credentials are specified after the **--host** parameter must be a member of the **sysadmin** role on each of the instances installed on the machine. If there is no such user, you may access the machine through the management server:

```
acrocmd backup disk --host=srv1 --credentials="srv1\AMS user",pass --service=ams  
--address=192.168.1.2 --application_aware --loc=bsp://storage_node1/my_vault  
--arc=my_archive_app --mssql_truncate_logs
```

In this case, the command will be executed under the account of the agent service running on the machine.

Recovering disks and volumes (p. 20)

Recovering disks

- Recovering a machine from the latest backup of an archive residing on a network share. Since neither the **--disk** (p. 83) nor the **--volume** (p. 84) parameter is specified, the command will recover all of the backed-up disks. Since neither the **--target_disk** (p. 106) nor the **--target_volume** (p. 107) parameter is specified, the software will automatically map the disks to the target machine's disks. If you run the command in the operating system, a reboot prompt will be displayed.

```
acrocmd recover disk --loc=\\srv1\folder1 --credentials=user1,pass1
--arc=my_machine
```

- Recovering hard disks 1 and 2 from the latest backup of an archive to hard disks 3 and 4.

```
acrocmd recover disk --loc=F:\backups --arc=my_archive --disk=1,2 --target_disk=3,4
```

- Recovering hard disk 2 from a backup located in an NFS shared folder to hard disk 1.

```
acrocmd recover disk --loc=nfs://server/backups:/ --arc=my_archive
--backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX --disk=2 --target_disk=1
```

- Recovering two hard disks from the latest backup of an archive located on tapes. Since the **--target_disk** (p. 106) parameter is not specified, the software will automatically map the disks to the target machine's disks.

```
acrocmd recover disk --loc=atis:///tape?XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
--arc=disk_archive --disk=2,3
```

- Recovering hard disk 1 from the latest backup of an archive to hard disk 4.

The archive is specified by the file name of a backup that belongs to the archive (**my_machine2.tib**). Please be aware that the command will apply to the latest backup rather than to the one specified in the **--arc** parameter. If the archive metadata is lost, the command will apply to the latest backup of the backup chain. (A backup chain is a full backup and all of its dependent incremental and differential backups.)

```
acrocmd recover disk --loc=F:\backups --arc=my_machine2.tib --disk=1
--target_disk=4
```

Recovering volumes

- Recovering the second volume of the first disk from the latest backup of an archive.

Since neither the **--target_disk** (p. 106) nor the **--target_volume** (p. 107) parameter is specified, the software will automatically map the volume to the original one. If the original volume is not found, the software will recover to the first unallocated space of a suitable size. If no unallocated space of a suitable size is found, the command will fail.

```
acrocmd recover disk --loc=/home/user1/my_backups --arc=my_machine1 --volume=1-2
```

- Recovering three volumes from a backup to the specified volumes.

```
acrocmd recover disk --loc=F:\ --arc=my_machine
--backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX --volume=1-1,1-2,2-1
--target_volume=3-1,3-3,4-1
```

- Recovering a volume from a backup residing in a managed vault to hard disk 2. A new volume will be created starting from megabyte 8192. It will have the size of 6400 megabytes and the "active" flag.

```
acrocmd recover disk --loc=bsp://storage_node1/my_vault --credentials=admin,pass
--arc=my_archive --backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX --volume=1-1
--target_disk=2 --start=8192 --size=6400 --type=active
```

- Recovering a basic volume from the latest backup of an archive to the first dynamic volume (in Windows) or logical volume (in Linux).

```
acrocmd recover disk --loc=\\srv1\backups --credentials=netuser1,pass1
--arc=machine1_dyn1 --volume=2-1 --target_volume=DYN1
```

- Recovering a basic volume (**2-2**) and a dynamic (logical) volume (**DYN4**) onto a basic disk.

Since the **--target_disk** (p. 106) parameter is specified, the volumes will be recovered to the unallocated space of that disk. The resulting volumes will be basic. If no unallocated space of a suitable size is found, the command will fail.

```
acrocnd recover disk --loc=F:\ --arc=my_machine  
--backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX --volume=2-2,DYN4 --target_disk=3
```

- Recovering a dynamic (logical) volume from a backup to a dynamic (logical) volume.

```
acrocnd recover disk --loc=ftp://srv1/backups --credentials=ftpuser1,pass1  
--arc=alldyn_arc --backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX --volume=DYN3  
--target_volume=DYN4
```

- Recovering a volume to the unallocated space of a disk group. The resulting volume will be dynamic.

In the following example, the type of the resulting volume will be simple because a basic volume was backed up.

```
acrocnd recover disk --loc=F:\ --arc=my_machine --volume=2-3  
--target_volume=UNALLOCATED-DYN
```

In the following example, the type of the resulting volume will be inherited from the backed-up volume because a dynamic volume was backed up.

```
acrocnd recover disk --loc=ftp://srv1/backups --credentials=ftpuser1,pass1  
--arc=alldyn_arc --volume=DYN3 --target_volume=UNALLOCATED-DYN
```

Recovering MBR (p. 22)

- Recovering an MBR of hard disk 1 from the latest backup of an archive located in Acronis Secure Zone to the same hard disk 1.

```
acrocnd recover mbr --loc=atis:///asz --arc=my_archive --disk=1 --target_disk=1
```

Recovering logical volume structure (p. 23)

- Creating the same logical volume structure on the local machine as in the latest backup of an archive. The machine must be booted with Linux-based bootable media.

```
acrocnd recover lvm_structure --loc=\\bkpsrv\backups --credentials=netuser1,pass1  
--arc=my_archive
```

4.1.2 Files

Backing up files and folders (p. 24)

- Backing up a file. The backup will be saved to a local folder.

```
acrocnd backup file --include=C:\documents\my_thesis.doc  
--loc=E:\backups\my_thesis --arc=my_thesis
```

- Creating a backup of network shared folders. The backup will be saved to a local folder. The archive will be protected by a password and encrypted.

```
acrocnd backup file --include=\\srv1\folder1 \\srv2\folder2 --password=123  
--encryption=aes256 --loc=D:\backups --arc=my_archive
```

- Creating a backup of a local folder. The backup will be saved to a vault on a storage node. The disk snapshot must be taken. If taking a snapshot is not possible, the backup will fail.

```
acrocnd backup file --include=D:\documents --snapshot=always  
--loc=bsp://storage_node1/my_vault --arc=my_archive
```

- Backing up the user home directory in Linux. The backup will be saved to a SAMBA share.

```
acrocnd backup file --include=/home/anna --loc=\\bkpsrv\backups\anna  
--credentials=netuser1,pass1 --arc=home_dir
```

- Creating a backup of a local folder. The backup will be placed to an online storage, with encryption enabled.

```
acrocmd backup file --include=c:\work --password=123 --encryption=aes256
--loc=online:// --credentials="user@mail.com",pass --arc=my_archive
```

Recovering files and folders (p. 25)

- Recovering a file from a backup stored in a local folder to the original folder. Since the **--overwrite** parameter is not specified, the existing file will be overwritten.

```
acrocmd recover file --loc=E:\backups\my_thesis --arc=my_thesis
--backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX --file=C:\documents\my_thesis.doc
```

- Recovering a folder and its contents from the latest backup of an archive residing in Acronis Secure Zone to a local folder.

```
acrocmd recover file --loc=atis:///asz --arc=my_archive --file=C:\Documents
--target=D:\my_folder
```

- Recovering a folder and its contents from a backup. The archive is specified by the file name of a backup that belongs to the archive (**my_machine3.tib**). This syntax is useful for archives created using the **--plain_archive** (p. 91) parameter.

Please be aware that the command will apply to the backup specified in the **--backup** parameter rather than to the one specified in the **--arc** parameter.

```
acrocmd recover file --loc=E:\backups\my_machine --arc=my_machine3.tib
--backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX --file=C:\Documents
--target=D:\my_folder
```

- Recovering all contents of the latest backup of an archive residing on a network share to the original folder. The existing files and folders will not be overwritten. The files' security settings and original dates will be preserved.

```
acrocmd recover file --loc=nfs://server/backups:/ --arc=my_data --overwrite=never
--recover_security=true --original_date
```

- Recovering the user home directory in Linux from a backup stored on a SAMBA share.

```
acrocmd recover file --loc=\\bkpsrv\backups\anna --credentials=netuser1,pass1
--arc=home_dir --backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX --file=/home/anna
```

- Recovering the contents of the latest backup of an archive residing on a network share. The software will recover all files and folders except for the *.tmp and *.bak files.

```
acrocmd recover file --loc=\\srv1\folder1 --credentials=user1,pass1 --arc=my_docs
--exclude=*.tmp,*.bak
```

4.1.3 Virtual machines

Listing virtualization servers (p. 27)

- Listing virtualization servers and server clusters that are present on the specified management server.

```
acrocmd list vmservers --host=srv1 --credentials="srv1\AMS user",pass1
--service=ams
```

Listing virtual machines (p. 27)

- Listing virtual machines that are managed by the management server.

```
acrocmd list vms --host=srv1 --credentials="srv1\AMS user",pass1 --service=ams
```

- Listing virtual machines that are managed by the management server and that have the "error" status.

```
acrocmd list vms --host=srv1 --credentials="srv1\AMS user",pass1 --service=ams
--filter_status=error
```

Backing up virtual machines (p. 28)

- Backing up a virtual machine. The incremental backup will be saved to a managed vault. Progress will be shown. If Changed Block Tracking (CBT) is enabled for the virtual machine, Acronis Backup & Recovery 11.5 will use CBT according to the CBT settings of individual disks.

```
acrocmd backup vm --vmid=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
--loc="bsp://storage_node1/my vm vault" --arc="my vm archive"
--backuptype=incremental --progress --cbt_mode=on_if_enabled --host=srv1
--credentials="srv1\AMS user",pass1 --service=ams
```

- Backing up four virtual machines. A separate archive will be created for each machine. All machines will be backed up in parallel. CBT will be enabled and used for each of the virtual machines.

```
acrocmd backup vm
--vmid=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX1,XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
2,XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX3,XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX4
--loc=\\srv1\folder1 --credentials=netuser1,pass1 --arc="[Virtualization Server
Type]_[Virtual Machine Name]_archive1" --simultaneous_backup=4 --host=srv1
--credentials="srv1\AMS user",pass1 --service=ams
```

Recovering virtual machines (p. 29)

- Recovering all disks from the latest backup of the archive residing in a managed vault to an existing virtual machine.

```
acrocmd recover vm --vmid=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
--loc="bsp://storage_node1/my vm vault" --arc="my vm archive" --host=srv1
--credentials="srv1\AMS user",pass1 --service=ams
```

- Recovering the first disk from the latest backup of an archive stored in the **\\bkpsrv\vms** shared folder to a new VMware Workstation virtual machine. The virtual machine files will be saved to the **\\srv1\vms** shared folder.

```
acrocmd recover vm --disk=1 --vmname=my_vm_1 --vmtype=vmware --vmstorage=\\srv1\vms
--credentials=netuser1,pass1 --loc=\\bkpsrv\vms --credentials=netuser2,pass2
--arc="my vm archive" --host=srv1 --credentials="srv1\AMS user",pass1 --service=ams
```

- Recovering all disks from the specified backup to a new ESX(i) virtual machine. The virtual machine will be created in Storage1 of the specified ESX(i) server (Server1).

```
acrocmd recover vm --vmname=my_vm_1 --vmserver_name=Server1 --vmstorage=Storage1
--loc=\\bkpsrv\vms --credentials=netuser1,pass1 --arc="my vm archive"
--backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX --host=srv1
--credentials="srv1\AMS user",pass1 --service=ams
```

- Recovering all disks from the latest backup of an archive to a new Hyper-V virtual machine. The virtual machine will be created in a local folder of the specified Hyper-V server (Server1).

```
acrocmd recover vm --vmname=my_vm_1 --vmserver_name=Server1
--vmstorage="C:\ProgramData\Microsoft\Windows\Hyper-V\Virtual Machines"
--loc=\\bkpsrv\vms --credentials=netuser1,pass1 --arc="my vm archive" --host=srv1
--credentials="srv1\AMS user",pass1 --service=ams
```

4.1.4 Microsoft Exchange

Listing Exchange storage groups and databases (p. 31)

- Listing Exchange storage groups and databases on the local Exchange server.

```
acrocmd list exchange_databases --exchange_credentials=domain1\exch_user1,12345
```

- Listing Exchange storage groups and databases on an Exchange server. The Exchange server is accessed via the management server.

```
acrocmd list exchange_databases --host=srv1 --credentials=user,pass1 --service=ams  
--address=exch_srv --exchange_credentials=domain1\exch_user1,12345
```

Listing mailboxes and public folders (p. 32)

- Listing mailboxes and public folders of all the databases on the local Exchange server.

```
acrocmd list exchange_mailboxes --exchange_credentials=domain1\exch_user1,12345
```

- Listing mailboxes and public folders of a database on an Exchange server.

```
acrocmd list exchange_mailboxes --host=exch_srv --credentials=user,pass1  
--exchange_credentials=domain1\exch_user1,12345 --mailbox_location=db1
```

Backing up Exchange storage groups and databases (p. 32)

- Backing up two storage groups on the local Exchange server. The backup will be saved to a managed vault. Since the **--metadata_level** (p. 95) parameter is not specified, the backup will be the fastest as compared with other values of this parameter. However, access to individual e-mails in the resulting backup (by using graphical user interface) may take considerable time.

```
acrocmd backup exchange_database --exchange_credentials=domain1\exch_user1,12345  
--items=storage_group_1,storage_group_2 --loc=bsp://storage_node1/my_vault  
--credentials=bkpuser,pass --arc=exchg_db_arc(1)
```

- Creating an express full backup of three databases on an Exchange 2010 server. The backup will be saved to a network share. Since the **--metadata_level** (p. 95) parameter is set to **all**, the backup will be the slowest as compared with other values of this parameter. However, access to individual e-mails in the resulting backup (by using graphical user interface) will be the fastest.

```
acrocmd backup exchange_database --host=exch_srv --credentials=user,pass1  
--exchange_credentials=domain1\exch_user1,12345 --items=db1,db2,db5  
--loc=\\bkpsrv\exchg_backups --credentials=bkpuser,pass --arc=exchg_db_arc(2)  
--express --metadata_level=all
```

Backing up mailboxes and public folders (p. 33)

- Backing up two mailboxes on an Exchange server. The backup will be saved to a managed vault.

```
acrocmd backup exchange_mailbox --host=exch_srv --credentials=user,pass1  
--exchange_credentials=domain1\exch_user1,12345 --items="storage group 1/mailbox  
database/John P. Smith","storage group 1/mailbox database/Mary Ann Johnson"  
--loc=bsp://storage_node1/my_vault --credentials=bkpuser,pass  
--arc=exchg_mb_arc(1)
```

- Backing up all mailboxes and public folders of a database on the local Exchange server. The backup will be saved to a network share. "Deleted Items" and "Junk E-Mail" folders as well as attachments larger than 1 MB will be excluded.

```
acrocmd backup exchange_mailbox --exchange_credentials=domain1\exch_user1,12345  
--items="mailbox database" --loc=\\bkpsrv\exchg_backups  
--credentials=bkpuser,pass --arc=exchg_mb_arc(2) --exclude_size=1mb  
--exclude_types=deleted,junk
```

Recovering Exchange storage groups and databases (p. 35)

- Recovering a storage group containing two databases from the latest backup of an archive. The storage group will be recovered to a new storage group.

```
acrocmbd recover exchange_database --host=exchange_srv
--credentials=user123,pass123 --exchange_credentials=domain1\exch_user1,12345
--loc=bsp://storage_node1/my_vault --credentials=bkpuser,pass
--arc=exchg_db_arc(1) --items=storage_group_1 --recovery_point=latest_backup
--target=another_database --destination_database=new_sg --database=db1
--database_location=d:\ExchData\db1 --database=db2
--database_location=d:\ExchData\db2 --log_location=e:\new_sg_logs
```

- Recovering a database (Exchange 2010 or later) to the point of failure. (The **--recovery_point** (p. 105) parameter is not specified, therefore its default value **point_of_failure** is used.) The database will be recovered to its original location on the server.

```
acrocmbd recover exchange_database --host=exchange_srv
--credentials=user123,pass123 --exchange_credentials=domain1\exch_user1,12345
--loc=bsp://storage_node1/my_vault --credentials=bkpuser,pass
--arc=exchg_db_arc(2) --items=db1 --target=original
```

- Recovering two databases (Exchange 2010 or later) to a point in time. The databases and transaction log files will be saved to a network share.

```
acrocmbd recover exchange_database --host=exchange_srv
--credentials=user123,pass123 --exchange_credentials=domain1\exch_user1,12345
--loc=\\bkpsrv\exchg_backups --credentials=bkpuser,pass --arc=exchg_db_arc(2)
--items=db1,db2 --recovery_point=point_in_time --pit="06.09.2011 17:00"
--target=disk --disk_location=\\host\share --credentials=netuser,pass
```

Recovering mailboxes and public folders (p. 36)

- Recovering a mailbox from the latest backup of an archive. (The **--recovery_point** (p. 105) parameter is not specified, therefore its default value **latest_backup** is used.) The mailbox will be recovered to the specified Exchange server.

```
acrocmbd recover exchange_mailbox --host=exchange_srv
--credentials=user123,pass123 --exchange_credentials=domain1\exch_user1,12345
--loc=bsp://storage_node1/my_vault --credentials=bkpuser,pass
--arc=exchg_mb_arc(1) --items="storage group 1/mailbox database/John P. Smith"
--target=original
```

- Recovering a mailbox to a point in time. This method of recovery is available only from a database-level backup. The mailbox will be recovered to the specified Exchange server.

```
acrocmbd recover exchange_mailbox --host=exchange_srv
--credentials=user123,pass123 --exchange_credentials=domain1\exch_user1,12345
--loc=bsp://storage_node1/my_vault --credentials=bkpuser,pass
--arc=exchg_mb_arc(1) --items="storage group 1/mailbox database/Mary Ann Johnson"
--recovery_point=point_in_time --pit="06.09.2011 17:00" --target=original
```

- Recovering a mailbox from the specified backup. The mailbox will be recovered to a .pst file. The .pst file will be saved to a local folder.

```
acrocmbd recover exchange_mailbox --exchange_credentials=domain1\exch_user1,12345
--loc=\\bkpsrv\exchg_backups --credentials=bkpuser,pass --arc=exchg_mb_arc(2)
--items="mailbox database/Peter D. Wayne" --recovery_point=selected_backup
--backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX --target=pst
--disk_location="e:\pst files"
```

4.1.5 Microsoft SQL

Listing Microsoft SQL Server instances (p. 37)

- Listing Microsoft SQL Server instances on the local machine.

```
acrocmbd list mssql_instances
```

- Listing instances of Microsoft SQL Server 2005 that are located on a remote machine and whose names contain the fragment "WEB".

```
acrocmd list mssql_instances --host=192.168.1.2 --credentials=user1,pass1
--filter_edition=2005 --filter_name=WEB
```

Listing Microsoft SQL databases (p. 37)

- Listing databases of a Microsoft SQL Server instance located on a remote machine. Since the **--credentials** parameter is not specified after the **--instance** parameter, the software will use Windows Authentication (the credentials specified after the **--host** parameter) to connect to the specified instance.

```
acrocmd list mssql_databases --host=192.168.1.2 --credentials=user1,pass1
--instance=WEBSERVER
```

- Listing only those databases of the "NEWSERVER" instance whose names contain the fragment "account". Since the **--credentials** parameter is specified after the **--instance** parameter, the software will use SQL Server Authentication to connect to the instance.

```
acrocmd list mssql_databases --instance=NEWSERVER --credentials="SQL user",pass
--filter_name=account
```

Backing up Microsoft SQL servers

This operation is performed by using the **backup disk** (p. 19) command. See the examples in the "Disks and volumes" (p. 121) section under "Single-pass disk and application backup".

Recovering Microsoft SQL databases (p. 38)

- Recovering a database from the latest backup of an archive. Since the **--target** (p. 80) parameter is not specified, the database will be recovered to the original instance. The user who runs the command must be a member of the **sysadmin** role on this instance. If a database with the same name exists in this instance, it will be overwritten. The database will be recovered in the **norecovery** state so that you can recover additional transaction logs from the native Microsoft SQL backups.

```
acrocmd recover mssql_database --loc=\\srv1\backups --credentials=netuser1,pass1
--arc=machine1_app --items=WEBSERVER/Accountants --overwrite
--database_state=norecovery
```

- Extracting all databases of an instance from the specified backup. The database files along with the transaction log files will be saved to a network share.

```
acrocmd recover mssql_database --loc=\\srv1\backups --credentials=netuser1,pass1
--arc=machine1_app --backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
--items=NEWSERVER --target=disk --disk_location=\\host\share
--credentials=netuser,pass
```

- Recovering two databases from the specified backup. The databases will be recovered to another instance. If a database with the same name exists in the that instance, the recovered database will be renamed. Since the **--database_state** parameter is not specified, the databases will be recovered in the **recovery** state and will be ready for use.

```
acrocmd recover mssql_database --loc=bsp://storage_node1/my_vault
--arc=my_archive_app --backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
--items=WEBSERVER/Accountants,NEWSERVER/Anna --target=another_instance
--destination_instance=SUPERVISION --credentials="SQL user",pass2
--database_location=D:\databases --autorename
```

If the user who runs the command is a member of the **sysadmin** role on the destination instance, the **--credentials** parameter is not needed after the **--destination_instance** parameter. Otherwise, you need to specify the **sysadmin** credentials.

4.1.6 Microsoft Active Directory

Backing up a domain controller

This operation is performed by using the **backup disk** (p. 19) command. See the examples in the "Disks and volumes" (p. 121) section under "Single-pass disk and application backup."

Recovering Microsoft Active Directory data (p. 39)

- Extracting Microsoft Active Directory data as files from the latest backup of an archive residing on a network share. The files will be saved to a local folder. Since the **--overwrite** (p. 104) parameter is not specified, the existing files will be overwritten.

```
acrocmd recover ad_database --loc=\\srv1\backups --credentials=netuser1,pass1  
--arc=machine1_app --target=E:\ad_db
```

- Extracting Microsoft Active Directory data as files from a backup stored in a vault on a storage node. The files will be saved to a network share. The existing files will not be overwritten. The original dates of the files will be preserved.

```
acrocmd recover ad_database --loc=bsp://storage_node1/my_vault  
--credentials=bkpuser,pass --arc=my_archive_app  
--backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX --target=\\share\active_dir\new  
--credentials=netuser2,pass2 --overwrite=never --original_date
```

4.2 Operations with archives and backups

4.2.1 Archives

Listing archives (p. 40)

- Listing archives in a managed vault. Since the **--all** parameter is specified, all fields will be output for each archive: name; creation date; machine whose data is contained in the archive; owner (the user who saved the archive to the destination); occupied space in bytes; and comments on the archive.

```
acrocmd list archives --all --loc=bsp://storage_node1/my_vault --credentials="ASN  
user",pass123
```

Exporting archives (p. 41)

- Exporting a password-protected archive stored in a shared folder to a local folder.

```
acrocmd export archive --loc=\\bkpsrv\backups --credentials=netuser1,pass  
--arc=my_archive --password=123 --target=E:\copies --target_arc=my_archive_copy
```

- Exporting all archives from a managed vault to a shared folder.

```
acrocmd export archive --loc=bsp://storage_node/my_vault --credentials="ASN  
user",pass --target=\\bkpsrv\backups --credentials=netuser,pass2
```

The first credentials must belong to an administrator of the specified vault, in order to enable access to all archives stored there. The second credentials enable writing to the shared folder.

Exporting archives from a managed vault is always executed by the storage node service. In the above example, the **mms** service running on the local machine will transmit the command to the

asn service. If you want to run the same command directly on the storage node (where no **mms** is running), specify the "ASN user" credentials after the storage node host:

```
acrocmd export archive --host=storage_node --credentials="ASN user",pass  
--service=asn --loc=bsp://storage_node/my_vault --target=\\bkpsrv\backups  
--credentials=netuser,pass2
```

- Importing an archive from a local folder of the storage node to a managed vault.

Usage scenario: create an archive with an initial full backup on a removable device, bring this device to the remote location where a storage node is installed, and then import the archive to a managed vault. After that, you can direct or replicate the subsequent incremental backups to the managed vault over the network.

```
acrocmd export archive --host=storage_node --credentials="ASN user",pass  
--service=asn --loc=E:\folder --arc=my_archive  
--target=bsp://storage_node/my_vault --progress
```

In this example, the parameter value **--service=asn** is used because the archive is imported from the local folder of the storage node. When importing an archive from a network share, you can make any service (**asn**, **mms** or **ams**) execute the command. However, the **asn** service is the most appropriate executor if you want to off-load the import from the agent installed on the production server.

Validating an archive (p. 42)

- Validating all backups of an archive.

```
acrocmd validate archive --loc=E:\backups\ --arc=my_archive
```

Cataloging an archive (p. 42)

- Cataloging all the backups of an archive stored in a shared folder.

```
acrocmd catalog archive --loc=\\bkpsrv\backups --credentials=netuser,pass  
--arc=my_archive
```

Deleting an archive (p. 43)

- Deleting an archive.

```
acrocmd delete archive --loc=bsp://storage_node1/my_vault --credentials="ASN  
user",pass123 --arc=my_archive
```

4.2.2 Backups

Listing backups (p. 44)

- Listing backups of an archive stored in a local folder. The output will be displayed in the raw format (p. 118). Therefore, you will be able to see and use complete GUIDs of backups.

```
acrocmd list backups --loc=E:\backups\ --arc=my_archive --output=raw
```

- Listing backups of an archive stored in a managed vault and saving the complete output to a text file. This allows you to use GUIDs of backups in scripts.

In the following example, the output in the raw format (p. 118) is redirected to a text file.

```
acrocmd list backups --loc=bsp://storage_node1/my_vault --credentials="ASN  
user",pass123 --arc=my_archive --output=raw > c:\GUID.txt
```

In the following example, the operation log, including the output data, is written to a text file in the structured xml format.

```
acrocmd list backups --loc=bsp://storage_node1/my_vault --credentials="ASN  
user",pass123 --arc=my_archive --log=c:\log.txt
```

Listing backup content (p. 45)

- Listing the content of a backup from an archive residing in Acronis Secure Zone.

```
acrocmd list content --loc=atis:///asz --credentials=aszpass --arc=my_archive  
--backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
```

Validating a backup (p. 45)

- Validating a backup.

```
acrocmd validate backup --loc=E:\backups\ --arc=my_archive  
--backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
```

Cataloging a backup (p. 46)

- Cataloging the latest backup of an archive stored in a network folder.

```
acrocmd catalog backup --loc=\\bkpsrv\backups --credentials=netuser,pass2  
--arc=my_archive
```

- Cataloging a backup stored in a managed vault. The cataloging is always executed by the storage node, regardless of the machine where you run this command from. This example assumes that you run the command on the storage node.

```
acrocmd catalog backup --loc=bsp://storage_node1/my_vault --arc=my_archive  
--backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX --service=asn
```

Exporting backups (p. 47)

- Exporting the selected backups of an archive stored in a managed vault to a local folder.

```
acrocmd export backup --loc=bsp://storage_node1/my_vault --credentials="ASN  
user",pass --arc=my_archive --password=123  
--backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX1,XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXX  
XX2 --target=E:\copies --target_arc=my_archive_copy
```

- Importing the latest backup of an archive from a network folder to a managed vault.

```
acrocmd export backup --host=storage_node --credentials=user1,pass1 --service=asn  
--loc=\\bkpsrv\backups --credentials=netuser,pass2 --arc=my_archive  
--target=bsp://storage_node/my_vault --progress
```

Because the parameter value **--service=asn** is used, the command will be executed by the storage node service. The first credentials must belong to a user of the specified vault. The second credentials enable reading from the shared folder.

Replicating a backup (p. 48)

- Replicating the latest backup of an archive stored in a local folder to a tape device directly attached to the machine.

```
acrocmd replicate backup --loc=C:\Backups --arc=my_archive --password=123  
--target=atis:///tape?XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
```

- Replicating the selected backup of an archive from a network share to Acronis Online Backup Storage.

```
acrocmd replicate backup --loc=\\bkpsrv\backups --credentials=netuser,pass1  
--arc=my_archive --backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX  
--target=online:// --credentials=user@mail.com,pass2  
--target_arc=my_archive_copy
```

Converting a backup to full (p. 49)

- Converting the latest backup of the archive to a full backup. As a result of the operation, the incremental or differential backup is substituted with a full one (for the same point in time).

```
acrocmd convert full --loc=C:\Backups --arc=my_archive  
--backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXXX
```

Consolidating backups (p. 49)

- Deleting all backups from an archive except for the specified ones.

```
acrocmd consolidate backup --loc=C:\Backups --arc=my_archive --password=123  
--backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXXX1,XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXXX  
XX2
```

Deleting backups (p. 50)

- Deleting the specified backups from an archive.

```
acrocmd delete backup --loc=C:\Backups --arc=my_archive --password=123  
--backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXXX1,XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXXX  
XX2
```

4.2.3 Mounting volumes

Listing mounts (p. 51)

- Listing the volumes mounted from backups.

```
acrocmd list mounts
```

Mounting (p. 51) (Agent for Windows only)

- Mounting the first volume of the first disk from a backup in the read-only mode. The resulting volume will be assigned letter "Z".

```
acrocmd mount --loc=E:\backups --arc=my_archive  
--backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXXX --volume=1-1 --letter=Z
```

Mounting (p. 51) (Agent for Linux only)

- Mounting the first volume of the second disk from the latest backup of an archive located on the **srv1** node in the **/backups** directory exported by NFS.

```
acrocmd mount --mount_point=/mnt/md1 --loc=nfs://srv1/backups:/ --arc=my_archive  
--volume=1-2
```

- Mounting the first volume of the first disk from a backup in the read-write mode.

```
acrocmd mount --mount_point=/mnt/md2 --loc=/home/backups --arc=mybackup  
--backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXXX --volume=1-1 --rw
```

Unmounting (p. 52) (Agent for Windows only)

- Unmounting a volume.

```
acrocmd umount --letter=Z
```

Unmounting (p. 52) (Agent for Linux only)

- Unmounting a device mounted at the mount point.

```
acrocmd umount --mount_point=/mnt/md1
```

4.2.4 Mounting SQL databases

Listing mounts (p. 53)

- Listing the Microsoft SQL databases mounted from backups.

```
acrocmd list mssql_mounts
```

Mounting SQL databases (p. 53)

- Mounting two databases from the latest backup of an archive.

```
acrocmd mount mssql_database --loc=\\srv1\backups --credentials=netuser1,pass1  
--arc=machine1_app --items=WEBSERVER/Accountants,NEWSERVER/Anna  
--destination_instance=SUPERVISION --credentials="SQL user",pass2
```

Unmounting SQL databases (p. 54)

- Unmounting all databases mounted to the "SUPERVISION" instance by using the **mount mssql_database** command.

```
acrocmd umount mssql_database --items=SUPERVISION
```

4.3 Operations with Acronis Secure Zone

Creating Acronis Secure Zone (p. 55)

- Creating Acronis Secure Zone on disk 2 of the local machine. Since the **--asz_size** (p. 109) parameter is not specified, Acronis Secure Zone will be created with a default size which is the average between the maximal (all the unallocated space) and minimal (about 50 MB) values.

```
acrocmd create asz --disk=2
```

- Creating Acronis Secure Zone of size 500 MB on disk 1 of the local machine. If the unallocated space is not enough, the space will be taken from the second volume of that disk.

```
acrocmd create asz --disk=1 --volume=1-2 --asz_size=500
```

- Creating Acronis Secure Zone of size 20 GB on disk 1 of a remote machine.

```
acrocmd create asz --host=192.168.1.2 --credentials=john,pass1 --disk=1  
--asz_size=20gb
```

Resizing Acronis Secure Zone (p. 55)

- Displaying the Acronis Secure Zone size and free space in gigabytes.

```
acrocmd resize asz --size_measure=gb
```

- Increasing Acronis Secure Zone on the local machine (we assume that the current size is less than 10 GB). Acronis Secure Zone is on disk 1. If the unallocated space on that disk is not enough, the space will be taken from the second volume of that disk. The command output will contain the resulting size and free space in gigabytes.

```
acrocmd resize asz --asz_size=10gb --volume=1-2 --size_measure=gb
```

- Decreasing Acronis Secure Zone on a remote machine (we assume that the current size is more than 10 GB). Since the **--volume** parameter is not specified, the freed space will become unallocated. The command output will contain the resulting size and free space in megabytes because the **--size_measure** parameter is not specified.

```
acrocmd resize asz --host=192.168.1.2 --credentials=john,pass1 --asz_size=10gb
```

Cleaning up Acronis Secure Zone (p. 56)

- Cleaning up Acronis Secure Zone on the local machine. The cleanup operation deletes the backups corrupted due to a power loss or another reason.

```
acrocmd cleanup asz
```

- Cleaning up Acronis Secure Zone on a remote machine.

```
acrocmd cleanup asz --host=srv1 --credentials="srv1\AMS user",pass1 --service=ams  
--address=192.168.1.2
```

Deleting a backup from Acronis Secure Zone (p. 57)

- Deleting the latest backup of an archive stored in Acronis Secure Zone on the local machine.

```
acrocmd delete asz_files --credentials=asz_pass --arc=my_archive --password=123
```

Deleting Acronis Secure Zone (p. 57)

- Deleting Acronis Secure Zone from the local machine. The freed space will be added to the 1st volume of disk 1. (This is the disk where Acronis Secure Zone is located.)

```
acrocmd delete asz --volume=1-1
```

- Deleting Acronis Secure Zone from a remote machine. The freed space will become unallocated.

```
acrocmd delete asz --host=srv1 --credentials="srv1\AMS user",pass1 --service=ams  
--address=192.168.1.2
```

4.4 Operations with Acronis Startup Recovery Manager

Activating Acronis Startup Recovery Manager (p. 58)

- Activating Acronis Startup Recovery Manager on the local machine.

```
acrocmd activate asrm
```

- Activating Acronis Startup Recovery Manager on a remote machine.

```
acrocmd activate asrm --host=srv1 --credentials="srv1\AMS user",pass1 --service=ams  
--address=192.168.1.2
```

Deactivating Acronis Startup Recovery Manager (p. 58)

- Deactivating Acronis Startup Recovery Manager on the local machine.

```
acrocmd deactivate asrm
```

- Deactivating Acronis Startup Recovery Manager on a remote machine.

```
acrocmd deactivate asrm --host=srv1 --credentials="srv1\AMS user",pass1  
--service=ams --address=192.168.1.2
```

4.5 Operations with tapes

Listing tape libraries (p. 59)

- Viewing the information about all tape libraries and stand-alone tape drives attached to the local machine. The output will be displayed in the raw format (p. 118). Therefore, you will be able to see and use complete GUIDs of tape libraries.

```
acrocmd list tape_libraries --output=raw
```

- Viewing the information about a tape device attached to the local machine.

```
acrocmd list tape_libraries --filter_name="hp MSL6060"
```

- Viewing the information about all tape devices attached to Acronis Backup & Recovery 11.5 Storage Node.

```
acrocmd list tape_libraries --host=storage_node --credentials="ASN user",pass  
--service=asn
```

Listing tape slots (p. 59)

- Viewing the information about slots of all tape libraries attached to the local machine.

```
acrocmd list tape_slots
```

- Viewing the information about slots of a tape library attached to the local machine. The output will be displayed in the raw format (p. 118). Therefore, you will be able to see and use complete GUIDs of tape library slots.

```
acrocmd list tape_slots --filter_library=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXXX
--output=raw
```

Inventorying tapes (p. 60)

- Inventorying the tapes loaded into two tape devices. Since the **--mode** (p. 114) parameter is not specified, fast inventory will be performed.

```
acrocmd inventory tape
--libraries=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXXX1,XXXXXXXX-XXXX-XXXX-XXXX-XXXXX
XXXXX2
```

- Full inventory of the tapes loaded into a tape device. The detected tapes will be moved from the **Unrecognized tapes** or **Imported tapes** pools to the **Free tapes** pool.

```
acrocmd inventory tape --libraries=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXXX
--mode=full --assign2free
```

- Full inventory of the tapes loaded into three slots of a tape library.

```
acrocmd inventory tape --mode=full
--libraries=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXXX
--slots=YYYYYYYY-YYYY-YYYY-YYYY-YYYYYYYYYYYY1,YYYYYYYY-YYYY-YYYY-YYYY-YYYYYYYYY
Y2,YYYYYYYY-YYYY-YYYY-YYYY-YYYYYYYYYYYY3
```

- Combination of fast and full inventorying.

Full inventorying of an entire tape device may take a long time. If you need to inventory only a few tapes, combine fast and full inventorying.

1. Perform fast inventorying of the tape device:

```
acrocmd inventory tape --libraries=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXXX
```

2. List tape slots of the tape device. Specify the **--output=raw** parameter to see complete GUIDs of tape slots.

```
acrocmd list tape_slots --filter_library=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXXX
--output=raw
```

3. In the command output, find the tapes you want to inventory and note which slots they occupy.

4. Perform full inventorying of these slots:

```
acrocmd inventory tape --mode=full
--libraries=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXXX
--slots=YYYYYYYY-YYYY-YYYY-YYYY-YYYYYYYYYYYY1,YYYYYYYY-YYYY-YYYY-YYYY-YYYYY
YYYYY2
```

4.6 Operations with vaults

Validating a vault (p. 60)

- Validating all archives in a managed vault except for password-protected ones. To validate a password-protected archive, use the **validate archive** (p. 42) command.

```
acrocmd validate vault --loc=bsp://storage_node1/my_vault --credentials="ASN
user",pass123
```

- Validating all archives in a network shared folder except for password-protected ones.

```
acrocmd validate vault --loc=\\srv1\backups --credentials=netuser1,pass1
```

Cataloging a vault (p. 61)

- Cataloging all the backups stored in a local folder (except for backups that are not supported by the data catalog, see the command description).

```
acrocmd catalog vault --loc=E:\backups\
```

- Cataloging all the backups stored in a managed vault (except for backups that are not supported by the data catalog, see the command description). This operation is always executed by the storage node service.

```
acrocmd catalog vault --loc=bsp://storage_node1/my_vault --credentials="ASN user",pass123 --progress
```

Exporting a vault and importing archives to a vault

These operations are performed by means of the **export archive** (p. 41) command (see examples (p. 130)).

4.7 Operations with disks

Cloning a disk (p. 62)

- Cloning disk 2 of the local machine to disk 3 of the same machine.

```
acrocmd clone disk --source=2 --target=3
```

4.8 Administration operations

4.8.1 Collecting information

Getting log (p. 63)

- Exporting the log of an activity with the specified GUID to a file.

```
acrocmd get log --id=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX --loc=c:\logs\task.log
```

Listing activities (p. 63)

- Viewing all current activities of Acronis Managed Machine Service that runs on the local machine. The output will be displayed in the raw format (p. 118). Therefore, you will be able to see and use complete GUIDs of activities.

```
acrocmd list activities --output=raw
```

- Viewing the running activities of Acronis Backup & Recovery 11.5 Management Server.

```
acrocmd list activities --host=srv1 --credentials="srv1\AMS user",pass1  
--service=ams --filter_state=running
```

- Viewing activities of Acronis Managed Machine Service that runs on a remote machine. The software will show only completed activities.

```
acrocmd list activities --host=srv1 --credentials="srv1\AMS user",pass1  
--service=ams --address=192.168.1.2 --filter_state=completed
```

- Viewing the running activities of Acronis Backup & Recovery 11.5 Storage Node. By reviewing the command output, which displays the time elapsed from an activity start, you can detect hung-up processes on the storage node.

```
acrocmd list activities --host=srv1 --credentials="srv1\ASN user",pass1  
--service=asn --filter_state=running
```

Getting system information (p. 64)

- Saving the system information of the local machine to a file.

```
acrocmd sysinfo --loc=c:\logs\sysinfo.zip
```

4.8.2 Plans

Listing plans (p. 65)

- Viewing all backup plans on the local machine. The output will be displayed in the raw format (p. 118). Therefore, you will be able to see and use complete GUIDs of plans.

```
acrocmd list plans --output=raw
```

- Viewing all centralized backup plans existing on Acronis Backup & Recovery 11.5 Management Server.

```
acrocmd list plans --host=srv1 --credentials="srv1\AMS user",pass1 --service=ams
```

- Viewing all backup plans with the **warning** status on the local machine.

```
acrocmd list plans --filter_status=warning
```

Deleting a plan (p. 65)

- Deleting a backup plan on the local machine.

```
acrocmd delete plan --id=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
```

Exporting a plan (p. 66)

- Exporting a backup plan from the local machine to a file.

```
acrocmd export plan --id=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX  
--loc=c:\temp\plan.xml
```

Importing a plan (p. 66)

- Importing a backup plan to the local machine.

```
acrocmd import plan --loc=c:\temp\plan.xml
```

Disabling a plan (p. 67)

- Disabling a backup plan on the local machine.

```
acrocmd disable plan --id=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
```

Enabling a plan (p. 68)

- Enabling a previously disabled backup plan on the local machine.

```
acrocmd enable plan --id=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
```

4.8.3 Tasks

Listing tasks (p. 68)

- Viewing all tasks on the local machine. The output will be displayed in the raw format (p. 118). Therefore, you will be able to see and use complete GUIDs of tasks.

```
acrocmd list tasks --output=raw
```

- Viewing all running tasks on a remote machine.

```
acrocmd list tasks --host=192.168.1.2 --credentials=user1,pass1  
--filter_state=running
```

Running a task (p. 69)

- Starting execution of a task on the local machine.

```
acrocmd run task --id=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
```

Stopping a task (p. 69)

- Stopping execution of a task on a remote machine.

```
acrocmd stop task --host=srv1 --credentials="srv1\AMS user",pass1 --service=ams  
--address=192.168.1.2 --id=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
```

Deleting a task (p. 70)

- Deleting a task on the local machine.

```
acrocmd delete task --id=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
```

4.8.4 Licenses

Listing licenses (p. 70)

- Listing the Acronis Backup & Recovery 11.5 licenses assigned to a remote machine.

```
acrocmd list licenses --host=192.168.1.2 --credentials=user1,pass1
```

4.9 Selecting logical volumes and MD devices for backup

Let's assume that the system has four physical disks: Disk 1, Disk 2, Disk 3 and Disk 4.

- A RAID-1 volume is configured on two basic volumes: sdb1, sdd1
- A logical volume is configured on two basic volumes: sdb2, sdd2
- Disk 3 is empty.

A list of volumes can be obtained by using the following command:

```
acrocmd list disks
```

Num	Partition	Flags	Start	Size	Type	GUID

Disk 1				16,384 MB	PS_MBR	
1-1	sda1	Pri,Act	0.031 MB	203.9 MB	Ext 2	
1-2	sda2	Pri	204 MB	12,002 MB	Reiser	
1-3	sda3	Pri	12,206 MB	1,028 MB	Linux swap	
Unallocated-1-1	Unallocated		13,233 MB	3,151 MB		
Disk 2				8,192 MB	PS_MBR	
Unallocated-2-1	Unallocated		4,110 MB	4,082 MB		
Disk 3				1,024 MB	PS_NONE	
Unallocated-3-1	Unallocated		0 MB	1,024 MB		
Disk 4				8,192 MB	PS_MBR	
Unallocated-4-1	Unallocated		4,110 MB	4,082 MB		
Dynamic volumes:						
1 Dyn1	MyVG-MyLV		0 MB	4,096 MB	Ext 3	A5C349F8...
1 Dyn2	md0		0 MB	2,055 MB	Ext 2	FFF5E076...

The logical volume, DYN1, occupies basic volumes 2-2 and 4-2 (which are not shown by the above command). The RAID-1 volume, DYN2, occupies basic volumes 2-1 and 4-1 (which are not shown by the above command either).

To back up the logical DYN1 volume, run the following command (here, the name of the backup is assumed to be **my_archive** and its location to be **/home/user**):

```
acrocmd backup disk --volume=DYN1 --loc=/home/user --arc=my_archive
```

To back up the RAID-1 volume DYN2, run the following command:

```
acrocmd backup disk --volume=DYN2 --loc=/home/user --arc=my_archive
```

To back up all three hard disks with volumes, select the volumes 1-1, 1-2, 1-3, DYN1 and DYN2:

```
acrocmd backup disk --volume=1-1,1-2,1-3,DYN1,DYN2 --loc=/home/user --arc=my_archive
```

If you select Disk 3 or volumes 2-1, 2-2, 4-1 or 4-2, the program will create a raw (sector-by-sector) backup.

4.10 Scheduling backups under Linux using the cron service

To automate backups, you can use the **cron** service familiar to many UNIX users.

Example

Let's assume that you need to back up a volume regularly. A full backup has to be created weekly, supported by incremental backups created daily.

Use the **list disks** (p. 18) command to obtain the necessary volume number. For example, the volume number is 2-1.

Create two executable files for the daily and weekly backup (for example, **abr.cron**) and place them into the **/etc/cron.daily** and **/etc/cron.weekly** directories, respectively.

To initiate weekly full backups of volume 2-1, add the following line to the **/etc/cron.weekly/abr.cron** file:

```
#!/bin/bash
acrocmd backup disk --volume=2-1 --loc=/mnt/my_archives/my_host --arc=my_archive
```

where **/mnt/my_archives/my_host** is the path to the backup location.

The second **abr.cron** file is needed to initiate daily incremental backups.

```
#!/bin/bash
acrocmd backup disk --volume=2-1 --backuptype=incremental
--loc=/mnt/my_archives/my_host --arc=my_archive
```

For more information, see Help of the **cron** service.

5 Comparison of the old and new command-line syntax

The following table lists commands that were used in the Acronis Backup & Recovery 10 command-line utility, and the corresponding commands of the Acronis Backup & Recovery 11.5 command-line utility. This comparison can help you learn new commands faster and easier.

Old syntax	New syntax
asrm_activate	activate asrm
asrm_deactivate	deactivate asrm

asz_content	list archives
asz_create	create asz
asz_delete	delete asz
asz_delete_files	delete asz_files
asz_files	—
clone	clone disk
consolidate	export backup
convert	recover vm
create	backup disk
deploy	recover disk
deploy_mbr	recover mbr
explore	mount
export	export archive
export /include_pits:[pits numbers]	export backup
filebackup	backup file
filerestore	recover file
list	list disks
list /arc:[archive name] or list /arc_id:[archive id]	list backups
list /filename:[file name]	list content
list /vault:[path]	list archives
ls_check	list licenses
pit_info	list backups
unplug	umount
verify	validate archive

6 acronis_encrypt utility

The **acronis_encrypt** utility allows you to encrypt a string of characters, for example, a password. The utility is available on any machine where the **acrocmbd** utility or Acronis Backup & Recovery 11.5 Management Console is installed. The path to the utility is as follows:

- In a 32-bit version of Windows: **%CommonProgramFiles%\Acronis\Utils**
- In a 64-bit version of Windows: **%CommonProgramFiles(x86)%\Acronis\Utils**
- In Linux: **/usr/sbin**

To use the utility, perform the following steps.

1. Type **acronis_encrypt <string you want to encrypt>**.
2. The utility outputs a string, for example **"XXXYYYZZ888"**.
3. Copy this string and paste it into the necessary command string or script.