Acronis

Acronis Cyber Protect 15

COMMAND-LINE REFERENCE

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1 Command-line utility overview

Acronis Cyber Protect supports the command-line interface with the **acrocmd** utility.

acrocmd does not contain any tools that physically execute the commands. It merely provides the command-line interface to Acronis Cyber Protect components—agents and the management server.

Once installed on a Windows or Linux machine, the **acrocmd** utility can be run from any folder or directory. This utility is also available in 64-bit Linux-based bootable media and in PE-based bootable media. When **acrocmd** is installed on a Mac machine or is accessed under Mac-based bootable media, you need to specify the full path to the utility.

1.1 Installation

Install the command-line utility on the machine from which you prefer to operate (run commands or scripts). The machine may run Windows, Linux, or Mac. From this machine, you can manage other machines running any of these operating systems.

The command-line utility is installed by default with Agent for Windows, Agent for Linux, or Agent for Mac.

In Windows, you can also install the utility separately from the setup file. To do this, in the offline installer click **Customize installation settings**, and then clear all of the check boxes except for **Command-Line Tool**.

The default installation paths are:

- **%ProgramFiles%\Acronis\CommandLineTool** (in Windows)
- **/usr/lib/Acronis/CommandLineTool** (in Linux)
- **/Library/Application Support/BackupClient/Acronis/sbin** (in Mac)

1.2 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

An equal sign separates a parameter name and a value list. A comma separates values in a value list.

Example:

```
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
```

1.3 Local, remote, and centralized management

Acronis Cyber Protect enables you to perform local, remote, and centralized management of any machine where an Acronis Cyber Protect agent is installed.

Local management

For local management, you install the command-line utility on the same machine where the Acronis Cyber Protect 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 Cyber Protect 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

This functionality is only available in on-premise deployments of Acronis Cyber Protect, i.e. when Acronis Cyber Protect Management Server is installed in your local network. For details about types of deployment, refer to the "Installation overview" section of the Acronis Cyber Protect help.

Commands on a machine

Through Acronis Cyber Protect 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 Cyber Protect 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

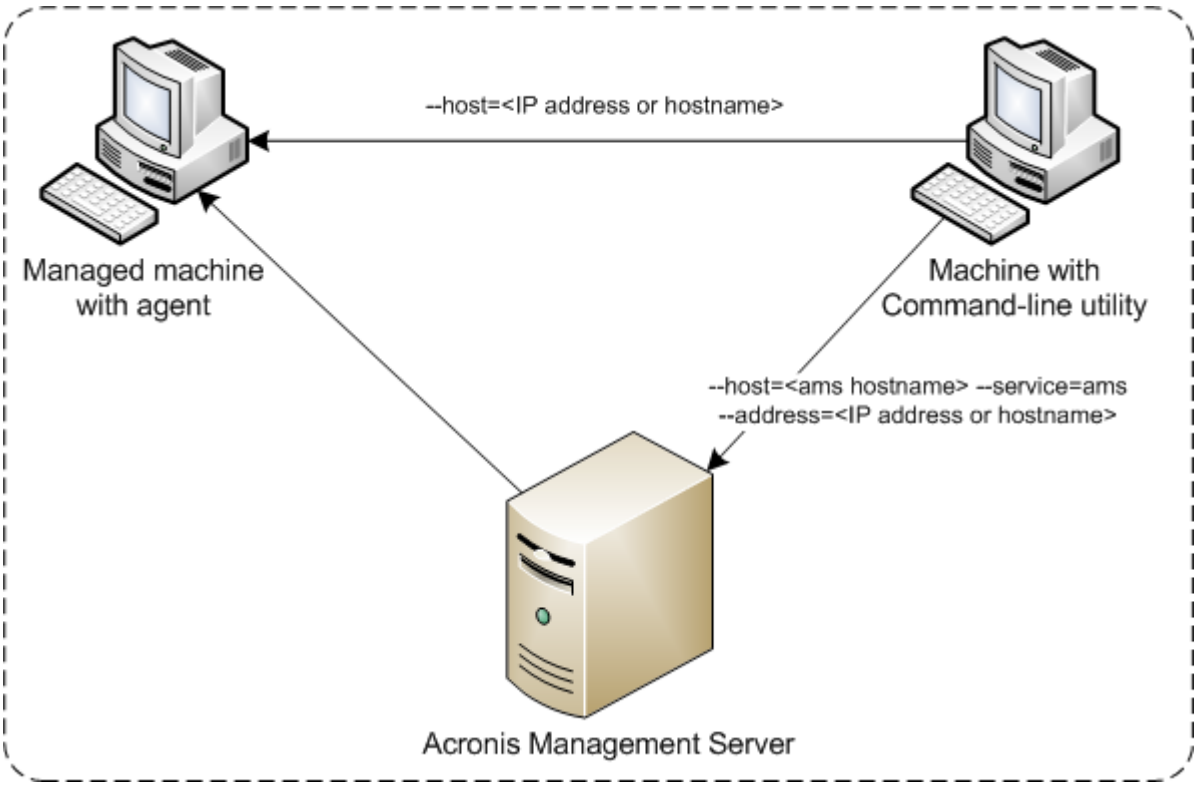
There are commands that can be executed by the management server itself.

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 Cyber Protect Management Server.



Options of access to a managed machine

1.4 Uninstallation

Uninstallation in Windows

To completely uninstall Acronis Cyber Protect, along with the command-line utility, go to **Control panel** and select **Programs and Features** (**Add or Remove Programs** in Windows XP) > **Acronis Cyber Protect** > **Uninstall**.

To uninstall the command-line utility separately from the product

1. Download the Acronis Cyber Protect setup program. The links to the setup programs are present on the **Downloads** page (click the account icon in the top-right corner > **Downloads**).
2. Run the setup program.
3. Click **Modify the current installation**.
4. Clear the check box next to the name of the command-line utility.
5. Click **Modify**.

Uninstallation in Linux and Mac

In Linux and Mac, the command-line utility is uninstalled along with all Acronis Cyber Protect components. For the information about complete uninstallation of the product, refer to:

https://www.acronis.com/support/documentation/AcronisCyberBackup_12.5/index.html#37129.html

1.5 List of abbreviated names

This document uses the following abbreviated names.

AMS – Acronis Cyber Protect Management Server and this component's service.

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

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. 16) command.

2.1 Commands by services

2.1.1 Disk and file 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. 70) command description.

Command	AMS	MMS			
		Agent for Windows	Agent for Linux	Agent for Mac	Bootable media*
Backup and recovery					
list disks (p. 16)		+	+	+	+
backup disk (p. 17)		+	+	+	+
recover disk (p. 18)		+	+	+	+
recover mbr (p. 20)		+	+		+
recover lvm_structure (p. 21)					Linux-based
backup file (p. 22)		+	+	+	+
recover file (p. 23)		+	+	+	+
Operations with archives and backups					
list archives (p. 38)	+	+	+	+	+
export archive (p. 39)	+	+	+	+	+
validate archive (p. 40)	+	+	+	+	+
delete archive (p. 40)	+	+	+	+	+
list backups (p. 41)	+	+	+	+	+
list content (p. 42)		+	+	+	+
validate backup (p. 42)	+	+	+	+	+
export backup (p. 43)	+	+	+	+	+
replicate backup (p. 44)	+	+	+		+
convert full (p. 45)	+	+	+		+
consolidate backup (p. 46)	+	+	+		+
delete backup (p. 46)	+	+	+	+	+

Command	AMS	MMS			
		Agent for Windows	Agent for Linux	Agent for Mac	Bootable media*
list mounts (p. 47)		+	+		+
mount (p. 47)		+	+		+
umount (p. 48)		+	+		+
Operations with Acronis Secure Zone					
create asz (p. 49)		+	+		+
resize asz (p. 50)		+	+		+
cleanup asz (p. 50)		+	+		+
delete asz_files (p. 51)		+	+		+
delete asz (p. 51)		+	+		+
Operations with Acronis Startup Recovery Manager					
activate asrm (p. 52)		+	+		+
deactivate asrm (p. 52)		+	+		+
Operations with tapes					
list tape_libraries (p. 53)		+	+		
list tape_slots (p. 53)		+	+		
inventory tape (p. 54)		+	+		
Operations with vaults					
validate vault (p. 54)	+	+	+	+	+
Operations with disks					
clone disk (p. 55)		+	+		+
Operations with machines					
add machine (p. 56)	+				
Administration operations					
get log (p. 62)	+	+	+	+	+
sysinfo (p. 62)	+	+	+		+
list activities (p. 63)	+	+	+	+	
stop activity (p. 64)	+	+	+		
list plans (p. 64)	+	+	+	+	
delete plan (p. 66)	+				
disable plan (p. 65)	+				
enable plan (p. 65)	+				
list tasks (p. 66)	+	+	+	+	
run task (p. 67)	+	+	+	+	
stop task (p. 67)	+	+	+	+	
delete task (p. 68)	+				

Command	AMS	MMS			
		Agent for Windows	Agent for Linux	Agent for Mac	Bootable media*
list licenses (p. 68)		+	+	+	+

* The command-line utility is not available in 32-bit Linux-based bootable media.

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. 70) command description.

Command	AMS	MMS			
		Agent for Exchange	Agent for SQL	Agent for Active Directory*	Reserved
Backup and recovery					
list exchange_databases (p. 32)		+			
backup exchange_database (p. 32)		+			
recover exchange_database (p. 33)		+			
recover exchange_mailbox (p. 34)		+			
list mssql_instances (p. 35)			+		
list mssql_databases (p. 35)			+		
backup mssql_database (p. 36)			+		
recover mssql_database (p. 37)			+		
Operations with archives and backups **					
list archives (p. 38)	+	+	+		
export archive (p. 39)	+	+	+		
validate archive (p. 40)	+	+	+		
delete archive (p. 40)	+	+	+		
list backups (p. 41)	+	+	+		
list content (p. 42)		+	+		
validate backup (p. 42)	+	+	+		

Command	AMS	MMS			
		Agent for Exchange	Agent for SQL	Agent for Active Directory*	Reserved
export backup (p. 43)	+	+	+		
replicate backup (p. 44)	+	+	+		
convert full (p. 45)	+				
consolidate backup (p. 46)	+				
delete backup (p. 46)	+	+	+		

* This agent can execute all of the commands that can be executed by Agent for Windows (p. 11).

** Agent for Exchange and Agent for SQL can perform these operations only with backups of the respective application data.

2.1.3 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. 70) command description.

Command	AMS	MMS			
		Agent for VMware	Agent for Hyper-V	Reserved	Reserved
Backup and recovery					
list vmservers (p. 24)	+	+	+		
list vms (p. 25)	+	+	+		
deploy vm_agent (p. 25)	+				
list disks (p. 16)		+	+		
backup vm (p. 27)	+*	+	+		
backup esxi_config (p. 28)		+			
recover vm (p. 30)	+*	+	+		
delete vm (p. 31)	+				
Advanced operations with virtual machines					
list replicas (p. 56)	+	+			
replicate vm (p. 57)		+			
failover vm (p. 58)		+			
fallback vm (p. 58)		+			
mount vm (p. 60)		+	+		
umount vm (p. 61)		+	+		
finalize vm_recovery (p. 61)		+			

Command	AMS	MMS			
		Agent for VMware	**Agent for Hyper-V**	Reserved	Reserved
Operations with archives and backups					
list archives (p. 38)	+	+	+		
export archive (p. 39)	+	+	+		
validate archive (p. 40)	+	+	+		
delete archive (p. 40)	+	+	+		
list backups (p. 41)	+	+	+		
list content (p. 42)	+	+	+		
validate backup (p. 42)	+	+	+		
export backup (p. 43)	+	+	+		
replicate backup (p. 44)	+	+	+		
convert full (p. 45)	+	+	+		
consolidate backup (p. 46)	+	+	+		
delete backup (p. 46)	+	+	+		
Operations with vaults					
validate vault (p. 54)	+	+	+		
Operations with machines					
add machine (p. 56)	+				
Administration operations					
get log (p. 62)	+	+	+		
sysinfo (p. 62)	+	+	+		
list activities (p. 63)	+	+	+		
stop activity (p. 64)	+	+	+		
list plans (p. 64)	+	+	+		
delete plan (p. 66)	+				
disable plan (p. 65)	+				
enable plan (p. 65)	+				
list tasks (p. 66)	+	+	+		
run task (p. 67)	+	+	+		
stop task (p. 67)	+	+	+		
delete task (p. 68)	+				
list licenses (p. 68)		+	+		

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

2.2 help

The command provides the information about the supported commands.

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

  For example, **acrocmd 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. 117)

Parameters

--oss_numbers={true|false} (p. 112)

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. 112)
--log_format={structured|unstructured} (p. 112)
--output={formatted|raw} (p. 113)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

Access to a virtual machine

{--vmid=<virtual machine ID>**|--vmname=**<virtual machine name>**|--vmconfig=**<path>**}** (p. 71)

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.

Examples (p. 117)

Parameters

What to back up

--disk=<disk numbers> (p. 82)
--volume=<volume numbers> (p. 83)
--oss_numbers={true|false} (p. 112)
--exclude_hidden (p. 87)
--exclude_mask=<masks> (p. 87)
--exclude_names=<names> (p. 87)
--exclude_system (p. 87)

Where to save the backup

--loc=<path> (p. 78)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--arc=<archive name> (p. 79)
--password=<password>**,encrypted** (p. 113)

How to back up

--archive_comment=<comments> (p. 87)
--backup_comment=<comments> (p. 87)
--backuptype={full|incremental|differential} (p. 86)
--archive_format={11|12|auto} (p. 86)
--cleanup (p. 87)
--fixed_drive (p. 88)
--plain_archive (p. 89)
--raw (p. 90)

Backup options

--compression={none|normal|high} (p. 91)
--encryption={none|aes128|aes192|aes256} (p. 91)
--fast (p. 91)
--force_yes (p. 111)
--hdd_speed=<speed>**{kb|p}** (p. 91)
--ignore_bad_sectors (p. 92)
--multi_volume_snapshot={true|false} (p. 92)
--network_speed=<speed>**{kb|p}** (p. 92)
--post_cmd=<command> (p. 93)
--pre_cmd=<command> (p. 93)
--process_priority={low|normal|high} (p. 113)
--reboot_after (p. 114)
--retry_count=<number of attempts> (p. 110)

--retry_delay=<delay> (p. 110)
--silent_mode={on|off} (p. 115)
--split=<size> (p. 94)
--use_registry_defaults (p. 115)
--use_vss={none|auto|software_auto|software|hardware|acronis|native} (p. 94)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP addresses or hostnames> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

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. 117)

Parameters

What to recover

--loc=<path> (p. 78)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--arc=<archive name> (p. 79)
--password=<password>**,encrypted** (p. 113)
--backup=<backup ID> (p. 80)
--disk=<disk numbers> (p. 82)
--nt_signature={auto|new|backup|existing} (p. 83)
--volume=<volume numbers> (p. 83)
--oss_numbers={true|false} (p. 112)
--mbr_disk=<disk number> (p. 85)

Where to recover

--target_disk=<disk numbers> (p. 101)
--target_volume=<volume numbers> (p. 101)

Recovering disks

If the **--target_disk** parameter is specified, the software will recover each disk specified in the **--disk** parameter to the corresponding 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 corresponding 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. 85)
--size=<volume size>**{s|kb|mb|gb}** (p. 85)
--target_mbr_disk=<disk number> (p. 85)

How to recover

--fat16_32 (p. 98)
--ext2_3 (p. 98)
--preserve_mbr (p. 99)
--recovery_mode={auto|incremental|full} (p. 100)
--recreate_archive_meta={true|false} (p. 115)
--type={active|primary|logical} (p. 102)
--use_all_space (p. 102)

Recovery options

--force_yes (p. 111)
--reboot (p. 114)
--reboot_after (p. 114)
--retry_count=<number of attempts> (p. 110)
--retry_delay=<delay> (p. 110)
--silent_mode={on|off} (p. 115)
--use_registry_defaults (p. 115)

Acronis Universal Restore parameters

These parameters are only applicable under bootable media.

--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. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP addresses or hostnames> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

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. 18) command with either the **--disk** parameter (the MBR will be recovered automatically) or the **--volume**, **--mbr_disk**, and **--target_mbr_disk** parameters.

Examples (p. 117)

Parameters

What to recover

--loc=<path> (p. 78)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--arc=<archive name> (p. 79)
--password=<password>**,encrypted** (p. 113)
--backup=<backup ID> (p. 80)
--disk=<disk number> (p. 82)

Where to recover

--target_disk=<disk number> (p. 101)

Recovery options

--force_yes (p. 111)
--reboot (p. 114)
--reboot_after (p. 114)
--retry_count=<number of attempts> (p. 110)
--retry_delay=<delay> (p. 110)
--silent_mode={on|off} (p. 115)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP addresses or hostnames> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

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 64-bit Linux-based bootable media. If you are using 32-bit media, either run the command on another machine with the **acrocmd** utility installed or recover the LVM structure via the graphical user interface.

Before executing the command, ensure 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. 18) 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. 117)

Parameters

What to recover

--loc=<path> (p. 78)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--arc=<archive name> (p. 79)
--password=<password>**,encrypted** (p. 113)
--backup=<backup ID> (p. 80)

Recovery options

--force_yes (p. 111)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>,<password>**,encrypted** (p. 109)

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. 119)

Parameters

What to back up

--include=<paths> (p. 89)
--exclude_hidden (p. 87)
--exclude_mask=<masks> (p. 87)
--exclude_names=<names> (p. 87)
--exclude_system (p. 87)

Where to save the backup

--loc=<path> (p. 78)
--credentials=<user name>,<password>**,encrypted** (p. 109)
--arc=<archive name> (p. 79)
--password=<password>**,encrypted** (p. 113)

How to back up

--archive_comment=<comments> (p. 87)
--backup_comment=<comments> (p. 87)
--backuptype={full|incremental|differential} (p. 86)
--cleanup (p. 87)
--fixed_drive (p. 88)
--plain_archive (p. 89)

Backup options

--compression={none|normal|high} (p. 91)
--encryption={none|aes128|aes192|aes256} (p. 91)
--force_yes (p. 111)
--hdd_speed=<speed>**{kb|p}** (p. 91)
--ignore_bad_sectors (p. 92)
--multi_volume_snapshot={true|false} (p. 92)
--network_speed=<speed>**{kb|p}** (p. 92)
--post_cmd=<command> (p. 93)
--pre_cmd=<command> (p. 93)
--process_priority={low|normal|high} (p. 113)
--reboot_after (p. 114)
--retry_count=<number of attempts> (p. 110)
--retry_delay=<delay> (p. 110)

--silent_mode={on|off} (p. 115)
--snapshot={always|possible|none} (p. 93)
--split=<size> (p. 94)
--use_registry_defaults (p. 115)
--use_vss={none|auto|software_auto|software|hardware|acronis|native} (p. 94)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP addresses or hostnames> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.3.2.2 recover file

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

Examples (p. 119)

Parameters

What to recover

--loc=<path> (p. 78)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--arc=<archive name> (p. 79)
--password=<password>**,encrypted** (p. 113)
--backup=<backup ID> (p. 80)
--file=<paths> (p. 98)
--exclude=<files, folders and masks> (p. 97)

Where to recover

--target=<path> (p. 80)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)

How to recover

--overwrite={always|older|never} (p. 99)
--recover_absolute_path (p. 100)
--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. 98)

Recovery options

--force_yes (p. 111)
--reboot (p. 114)
--reboot_after (p. 114)
--retry_count=<number of attempts> (p. 110)
--retry_delay=<delay> (p. 110)
--silent_mode={on|off} (p. 115)
--use_registry_defaults (p. 115)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>,<password>,**encrypted** (p. 109)
--address=<IP address or hostnames> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.3.3 Virtual machines

The commands listed in this section are available only if Agent for VMware or Agent for Hyper-V is installed. (This does not apply to the **recover vm** (p. 30) 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 VMware.

Examples (p. 120)

Parameters

--filter_guid=<GUIDs> (p. 106)
--filter_name=<names> (p. 106)
--filter_machines=<quantities of machines> (p. 106)
--filter_type=<server types> (p. 108)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--output={formatted|raw} (p. 113)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP addresses or hostnames> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.3.3.2 list vms

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

Examples (p. 120)

Parameters

--filter_available_for_backup={true|false} (p. 105)
--filter_guid=<GUIDs> (p. 106)
--filter_host=<hostnames> (p. 106)
--filter_name=<names> (p. 106)
--filter_state=<states> (p. 107)
--filter_status=<statuses> (p. 107)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--output={formatted|raw} (p. 113)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.3.3.3 deploy vm_agent

Deploys Agent for VMware (Virtual Appliance) to an ESX(i) host managed by a vCenter Server or to a stand-alone ESX(i) host.

You can deploy only one agent at a time. The **--service=ams** parameter is mandatory because the command is executed by the management server.

Examples (p. 120)

Parameters

--vsphere_address=<IP address or hostname>

vCenter Server that manages the vSphere to which you want to deploy the agent. If you need to deploy the agent to a stand-alone ESX(i) host, specify this host.

If the parameter is not specified, the command will fail.

--credentials=<user name>**,**<password>**,encrypted** (p. 109)

Credentials for the vCenter Server or stand-alone ESX(i) host.

--vmconnection_credentials=<user name>**,**<password>**,encrypted**

Credentials that the agent will use to access the vCenter Server or the ESX(i) host. The account must have the necessary privileges on the vCenter Server, as described in the "Privileges for VM backup and recovery" section of the "Backing up virtual machines" document.

If the parameter is not specified, the agent will use the credentials specified after the **--vsphere_address** parameter.

--vmhost=<IP address or hostname>

ESX(i) host to which you want to deploy the agent. If not specified, the host will be selected automatically.

The parameter is used only if the **--vsphere_address** parameter points to a vCenter Server. If it points to a stand-alone ESX(i) host, the **--vmhost** parameter is redundant.

--vmname=<virtual machine name>

Name of the virtual appliance. If not specified, the value is **AcronisESXAppliance-[N]** where **[N]** is a sequence number of the appliance deployment attempt.

--vmstorage=<datastore name>

Location of the virtual appliance. If not specified, the software will automatically select one of the datastores available to the host.

--vmnic={flexible|E1000|vmxnet|vmxnet2|vmxnet3}

Type of the virtual appliance's network adapter. If not specified, the value is **vmxnet3**.

--vmnetwork=<network label> (p. 75)

--mac_address=<MAC address>

MAC address of the virtual appliance's network adapter. The format is **XX:XX:XX:XX:XX:XX**. For example, **--mac_address=00:50:56:8c:00:00**. If not specified, the software will generate the MAC address.

Network settings of the virtual appliance

If any of the parameters described in this section are not specified, the virtual appliance will obtain the values from the DHCP server that is present on your network.

--ip_address=<IP address>

IP address. For example, **--ip_address=10.200.200.10**.

--subnet_mask=<subnet mask>

Subnet mask. For example, **--subnet_mask=255.255.255.0**.

--gateway=<default gateway>

Default gateway. For example, **--gateway=10.200.200.1**.

--dns=<DNS servers>

IP addresses of the DNS servers. For example, **--dns=10.200.200.101,10.200.200.102**.

--dns_suffix=<DNS suffix>

DNS suffix. For example, **--dns_suffix=mydomain.com**.

--wins=<WINS servers>

IP addresses of the WINS servers. For example, **--wins=10.200.200.111,10.200.200.112**.

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote management server

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)

Access to the management server service

--service=ams (p. 70)

2.3.3.4 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. 120)

Parameters

Access to a virtual machine

{--vmid=<virtual machine IDs>**|--vmname=**<virtual machine names>**|--vmconfig=**<paths>**}** (p. 71)

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 VMware 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. 82)
--volume=<volume numbers> (p. 83)
--exclude_hidden (p. 87)
--exclude_mask=<masks> (p. 87)
--exclude_names=<names> (p. 87)
--exclude_system (p. 87)

Where to save the backup

--loc=<path> (p. 78)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--arc=<archive name> (p. 79)
--password=<password>**,encrypted** (p. 113)

How to back up

--archive_comment=<comments> (p. 87)
--backup_comment=<comments> (p. 87)
--backup_format={always_incremental|standard} (p. 86)
--backuptype={full|incremental|differential} (p. 86)
--cleanup (p. 87)
--raw (p. 90)
--vmsnapshot_retry_count=<number of attempts> (p. 110)
--vmsnapshot_retry_delay=<delay> (p. 110)
--vmsnapshot_quiesce={true|false}

If the value is **true** or if the parameter is not specified, quiesced snapshots of virtual machines will be taken.

Backup options

--cbt_mode={on|off} (p. 90)
--compression={none|normal|high} (p. 91)
--encryption={none|aes128|aes192|aes256} (p. 91)
--fast (p. 91)
--force_yes (p. 111)
--hdd_speed=<speed>**{kb|p}** (p. 91)
--network_speed=<speed>**{kb|p}** (p. 92)
--process_priority={low|normal|high} (p. 113)
--retry_count=<number of attempts> (p. 110)
--retry_delay=<delay> (p. 110)
--silent_mode={on|off} (p. 115)
--split=<size> (p. 94)
--use_registry_defaults (p. 115)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote physical machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.3.3.5 backup esxi_config

Creates a backup of an ESXi host configuration. Such a backup enables you to recover the host to bare metal.

The virtual machines running on the host are not included in the backup. They can be backed up and recovered separately.

Examples (p. 120)

Parameters

What to back up

{--vmserver_name=<host name>|**--vmserver_id=**<host GUID>**}**

Name or identifier of the ESXi host whose configuration will be backed up. If the software finds more than one host with the same name, an error occurs.

To learn names and identifiers of virtualization hosts, use the **list vmservers** (p. 24) command.

--credentials=<password>**,encrypted**

Password for the 'root' account on the selected host.

Where to save the backup

--loc=<path> (p. 78)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--arc=<archive name> (p. 79)
--password=<password>**,encrypted** (p. 113)

How to back up

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

Backup options

--compression={none|normal|high} (p. 91)
--encryption={none|aes128|aes192|aes256} (p. 91)
--force_yes (p. 111)
--hdd_speed=<speed>**{kb|p}** (p. 91)
--network_speed=<speed>**{kb|p}** (p. 92)
--process_priority={low|normal|high} (p. 113)
--retry_count=<number of attempts> (p. 110)
--retry_delay=<delay> (p. 110)
--silent_mode={on|off} (p. 115)
--split=<size> (p. 94)
--use_registry_defaults (p. 115)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP addresses or hostnames> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.3.3.6 recover vm

Recovers a disk or volume backup onto a new or existing virtual machine.

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

- **Agent for VMware** 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.

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. 120)

Parameters

What to recover

--loc=<path> (p. 78)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--arc=<archive name> (p. 79)
--password=<password>**,encrypted** (p. 113)
--backup=<backup ID> (p. 80)
--disk=<disk numbers> (p. 82)
--volume=<volume number> (p. 83)

Where to recover

- If you want to recover to an existing virtual machine:
  {--vmid=<virtual machine ID>**|--vmname=**<virtual machine name>**|--vmconfig=**<path>**}** (p. 71)
- If you want to create a new virtual machine on an ESX(i) or Hyper-V host:
  --vmname=<virtual machine name> (p. 72)
  --vmstorage=<path> (p. 72)
  {--vmserver_name=<server name>**|--vmserver_id=**<server GUID>**}** (p. 72)
  --vmram=<memory size> (p. 72)
  --vmcpu=<number of CPUs> (p. 72)
  --vmdisk_size=<disk sizes> (p. 72)
  --vmdisk_type=<disk types> (p. 72)
  --vmdisk_provisioning=<disk provisioning types> (p. 72)

--target_disk=<disk number> (p. 101)
--target_volume=<volume number> (p. 101)
--start=<offset>**{s|kb|mb|gb}** (p. 85)
--size=<volume size>**{s|kb|mb|gb}** (p. 85)

How to recover

--ext2_3 (p. 98)
--fat16_32 (p. 98)
--preserve_mbr (p. 99)
--recovery_mode={auto|incremental_with_snapshot|incremental|full} (p. 100)
--recreate_archive_meta={true|false} (p. 115)
--type={active|primary|logical} (p. 102)
--use_all_space (p. 102)

Recovery options

--force_yes (p. 111)
--power_on (p. 99)
--retry_count=<number of attempts> (p. 110)
--retry_delay=<delay> (p. 110)
--silent_mode={on|off} (p. 115)
--use_registry_defaults (p. 115)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.3.3.7 delete vm

Deletes an ESXi virtual machine that is registered at the management server.

Warning *This command does not prompt for confirmation. Be sure that you specify the correct virtual machine GUID or name.*

Examples (p. 120)

Parameters

{--vmid=<virtual machine ID>**|--vmname=**<virtual machine name>**}** (p. 71)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote physical machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.3.4 Microsoft Exchange

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

2.3.4.1 list exchange_databases

Lists storage groups (for Exchange 2007) and databases.

Examples (p. 122)

Parameters

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--output={formatted|raw} (p. 113)
{-f|--file_params}=<full local path> (p. 111)
--exchange_credentials=<domain user name>**,**<password>**,encrypted** (p. 75)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.3.4.2 backup exchange_database

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

Examples (p. 122)

Parameters

What to back up

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

Where to save the backup

--loc=<path> (p. 78)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--arc=<archive name> (p. 79)
--password=<password>**,encrypted** (p. 113)

How to back up

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

Backup options

--compression={none|normal|high} (p. 91)
--encryption={none|aes128|aes192|aes256} (p. 91)
--force_yes (p. 111)

--post_cmd=<command> (p. 93)
--pre_cmd=<command> (p. 93)
--retry_count=<number of attempts> (p. 110)
--retry_delay=<delay> (p. 110)
--silent_mode={on|off} (p. 115)
--split=<size> (p. 94)
--use_registry_defaults (p. 115)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)
--exchange_credentials=<domain user name>**,**<password>**,encrypted** (p. 75)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.3.4.3 recover exchange_database

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

Examples (p. 122)

Parameters

What to recover

--loc=<path> (p. 78)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--arc=<archive name> (p. 79)
--password=<password>**,encrypted** (p. 113)
--backup=<backup ID> (p. 80)
--items=<items> (p. 75)

Where to recover

--target={original|disk|another_database|recovery_database} (p. 80)
--disk_location=<path>
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--destination_database=<db> (p. 96)
--database=<db_name> (p. 95)
--database_location=<local path> (p. 95)
--log_location=<local path> (p. 98)

How to recover

--overwrite (p. 99)

Recovery options

--force_yes (p. 111)
--retry_count=<number of attempts> (p. 110)
--retry_delay=<delay> (p. 110)
--silent_mode={on|off} (p. 115)
--use_registry_defaults (p. 115)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)
--exchange_credentials=<domain user name>**,**<password>**,encrypted** (p. 75)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.3.4.4 recover exchange_mailbox

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

Examples (p. 122)

Parameters

What to recover

--loc=<path> (p. 78)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--arc=<archive name> (p. 79)
--password=<password>**,encrypted** (p. 113)
--backup=<backup ID> (p. 80)
--items=<items> (p. 75)

How to recover

--overwrite (p. 99)

Recovery options

--force_yes (p. 111)
--retry_count=<number of attempts> (p. 110)
--retry_delay=<delay> (p. 110)
--silent_mode={on|off} (p. 115)
--use_registry_defaults (p. 115)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)
--exchange_credentials=<domain user name>**,**<password>**,encrypted** (p. 75)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.3.5 Microsoft SQL

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

2.3.5.1 list mssql_instances

Lists Microsoft SQL Server instances.

Examples (p. 123)

Parameters

--filter_edition=<editions> (p. 106)
--filter_name=<names> (p. 106)
--filter_version=<versions> (p. 108)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--output={formatted|raw} (p. 113)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

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. 123)

Parameters

--filter_name=<names> (p. 106)
--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. 112)
--log_format={structured|unstructured} (p. 112)
--output={formatted|raw} (p. 113)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.3.5.3 backup mssql_database

Creates a backup of the specified Microsoft SQL Server instances or databases.

Examples (p. 123)

Parameters

What to back up

--items=<items> (p. 75)
--sql_credentials=<user name>**,**<password>**,encrypted**

Credentials of a user who is a member of the **sysadmin** role in the instance that you want to back up.

Where to save the backup

--loc=<path> (p. 78)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--arc=<archive name> (p. 79)
--password=<password>**,encrypted** (p. 113)

How to back up

--archive_comment=<comments> (p. 87)
--backup_comment=<comments> (p. 87)
--backuptype={full|incremental} (p. 86)
--mssql_truncate_logs (p. 89)

Backup options

--compression={none|normal|high} (p. 91)
--encryption={none|aes128|aes192|aes256} (p. 91)
--force_yes (p. 111)
--hdd_speed=<speed>**{kb|p}** (p. 91)
--network_speed=<speed>**{kb|p}** (p. 92)
--post_cmd=<command> (p. 93)
--pre_cmd=<command> (p. 93)
--process_priority={low|normal|high} (p. 113)
--retry_count=<number of attempts> (p. 110)
--retry_delay=<delay> (p. 110)
--silent_mode={on|off} (p. 115)
--split=<size> (p. 94)
--use_registry_defaults (p. 115)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP addresses or hostnames> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.3.5.4 recover mssql_database

Recovers the specified Microsoft SQL databases.

Examples (p. 123)

Parameters

What to recover

--loc=<path> (p. 78)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--arc=<archive name> (p. 79)
--password=<password>**,encrypted** (p. 113)
--backup=<backup ID> (p. 80)
--items=<items> (p. 75)

Where to recover

--target={original|disk|another_instance} (p. 80)
--disk_location=<path>
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--destination_instance=<instance name> (p. 97)
--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. 95)

How to recover

--overwrite (p. 99)
--autorename (p. 94)
--database_state={recovery|norecovery|standby} (p. 96)

Recovery options

--retry_count=<number of attempts> (p. 110)
--retry_delay=<delay> (p. 110)
--silent_mode={on|off} (p. 115)
--use_registry_defaults (p. 115)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

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. 124)

Parameters

--loc=<path> (p. 78)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--filter_type=<types> (p. 108)
{-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, comments on the archive, whether the

archive is encrypted (password-protected) or not, and size of the backed-up data. If not specified, only name, type, and creation date will be displayed for each archive.

--recreate_archive_meta={true|false} (p. 115)
--utc (p. 116)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--output={formatted|raw} (p. 113)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams|asn} (p. 70)

In a managed location (**--loc=bsp://**<storage node>**/**<location 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. 43) 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 network folder or export the entire vault to a different location. See the examples for more details.

Examples (p. 124)

Parameters

--loc=<path> (p. 78)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--arc=<archive name> (p. 79)
--password=<password>**,encrypted** (p. 113)
--target=<path> (p. 80)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--target_arc=<archive name> (p. 82)
--silent_mode={on|off} (p. 115)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams|asn} (p. 70)

Exporting archives from a managed location (**--loc=bsp://**<storage node>**/**<location 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. 124)

Parameters

--loc=<path> (p. 78)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--arc=<archive name> (p. 79)
--password=<password>**,encrypted** (p. 113)
--process_priority={low|normal|high} (p. 113)
--read_speed=<speed>**{kb|p}** (p. 114)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams|asn} (p. 70)

In a managed location (**--loc=bsp://**<storage node>**/**<location 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 delete archive

Deletes an archive.

Examples (p. 124)

Parameters

--loc=<path> (p. 78)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--arc=<archive name> (p. 79)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams|asn} (p. 70)

In a managed location (**--loc=bsp://**<storage node>**/**<location 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. 125)

Parameters

--loc=<path> (p. 78)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--arc=<archive name> (p. 79)
--password=<password>**,encrypted** (p. 113)
--filter_date=<dates and times> (p. 105)
--filter_type=<types> (p. 108)
--recreate_archive_meta={true|false} (p. 115)
--utc (p. 116)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--output={formatted|raw} (p. 113)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams|asn} (p. 70)

In a managed location (**--loc=bsp://**<storage node>**/**<location 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. 125)

Parameters

--loc=<path> (p. 78)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--arc=<archive name> (p. 79)
--password=<password>**,encrypted** (p. 113)
--backup=<backup ID> (p. 80)
--content_type={volume|file|exchange_database|exchange_mailbox|mssql_database} (p. 105)
--content_path=<path> (p. 104)
--oss_numbers={true|false} (p. 112)
--utc (p. 116)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--output={formatted|raw} (p. 113)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams|asn} (p. 70)

In a managed location (**--loc=bsp://**<storage node>**/**<location 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. 125)

Parameters

--loc=<path> (p. 78)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--arc=<archive name> (p. 79)
--password=<password>**,encrypted** (p. 113)
--backup=<backup ID> (p. 80)
--process_priority={low|normal|high} (p. 113)
--read_speed=<speed>**{kb|p}** (p. 114)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams|asn} (p. 70)

In a managed location (**--loc=bsp://**<storage node>**/**<location 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 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. 39) 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. 125)

Parameters

--loc=<path> (p. 78)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--arc=<archive name> (p. 79)
--password=<password>**,encrypted** (p. 113)
--backup=<backup IDs> (p. 80)
--target=<path> (p. 80)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)

--target_arc=<archive name> (p. 82)
--silent_mode={on|off} (p. 115)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams|asn} (p. 70)

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

2.4.2.5 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. 125)

Parameters

--loc=<path> (p. 78)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--arc=<archive name> (p. 79)

The command does not support archives that use the simplified backup naming (p. 89).

--password=<password>**,encrypted** (p. 113)
--backup={<backup IDs>**|all}** (p. 80)

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

--target=<path> (p. 80)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--target_arc=<archive name> (p. 82)
--full

If specified, the type of the source backups will be ignored and full backups will be created in the target location.

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams|asn} (p. 70)

Replicating backups from a managed location (**--loc=bsp://**<storage node>**/**<location 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 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. 125)

Parameters

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

The command does not support the following locations: Acronis Cloud Storage and CD/DVD.

--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--arc=<archive name> (p. 79)

The command does not support archives that use the simplified backup naming (p. 89) and archives of Microsoft Exchange Server data (p. 31).

--password=<password>**,encrypted** (p. 113)
--backup=<backup ID> (p. 80)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams|asn} (p. 70)

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

2.4.2.7 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. 125)

Parameters

--loc=<path> (p. 78)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--arc=<archive name> (p. 79)
--password=<password>**,encrypted** (p. 113)
--backup=<backup IDs> (p. 80)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.4.2.8 delete backup

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

Examples (p. 125)

Parameters

--loc=<path> (p. 78)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--arc=<archive name> (p. 79)
--password=<password>**,encrypted** (p. 113)
--backup=<backup IDs> (p. 80)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams|asn} (p. 70)

In a managed location (**--loc=bsp://**<storage node>**/**<location 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. 126)

Parameters

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--output={formatted|raw} (p. 113)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

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. 126)

Parameters

What to mount

--loc=<path> (p. 78)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--arc=<archive name> (p. 79)
--password=<password>**,encrypted** (p. 113)
--backup=<backup ID> (p. 80)
--volume=<volume numbers> (p. 83)

How to mount (Agent for Windows only)

--rw (p. 103)
--letter=<letters> (p. 103)
--for_all_users={true|false} (p. 102)

How to mount (Agent for Linux only)

--rw (p. 103)
--mount_point=<mount points> (p. 103)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

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. 126)

Parameters

--letter={<letter>**|all}** (p. 103) (Agent for Windows only)
--mount_point=<mount point> (p. 103) (Agent for Linux only)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

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. 127)

Parameters

--disk=<disk number> (p. 82)
--volume={<volume numbers>**|all}** (p. 83)
--oss_numbers={true|false} (p. 112)
--asz_size={<size>**{s|kb|mb|gb}|unallocated}** (p. 104)
--password=<password>**,encrypted** (p. 113)
--reboot (p. 114)
--later (p. 114)
--silent_mode={on|off} (p. 115)
--force_yes (p. 111)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP addresses or hostnames> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

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.

The command takes free space from the selected volumes.

Examples (p. 127)

Parameters

--asz_size={<size>**{s|kb|mb|gb}|unallocated}** (p. 104)
--volume={<volume numbers>**|all}** (p. 83)
--oss_numbers={true|false} (p. 112)
--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. 114)
--later (p. 114)
--silent_mode={on|off} (p. 115)
--force_yes (p. 111)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP addresses or hostnames> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.5.3 cleanup asz

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

Examples (p. 127)

Parameters

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>,<password>**,encrypted** (p. 109)
--address=<IP addresses or hostnames> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

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. 127)

Parameters

--credentials=<password>**,encrypted** (p. 109)

Password for Acronis Secure Zone.

--arc=<archive name> (p. 79)
--password=<password>**,encrypted** (p. 113)

Password for the archive.

--force_yes (p. 111)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>,<password>**,encrypted** (p. 109)
--address=<IP addresses or hostnames> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.5.5 delete asz

Deletes Acronis Secure Zone.

Examples (p. 127)

Parameters

--volume=<volume numbers> (p. 83)
--oss_numbers={true|false} (p. 112)
--silent_mode={on|off} (p. 115)
--force_yes (p. 111)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP addresses or hostnames> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

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. 128)

Parameters

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP addresses or hostnames> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.6.2 deactivate asrm

Deactivates the Acronis Startup Recovery Manager.

Examples (p. 128)

Parameters

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP addresses or hostnames> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

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 agent or a storage node is running.

Examples (p. 128)

Parameters

--filter_guid=<GUIDs> (p. 106)
--filter_name=<names> (p. 106)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--output={formatted|raw} (p. 113)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams|asn} (p. 70)

2.7.2 list tape_slots

Lists slots of the tape libraries attached to a machine where an agent or a 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. 128)

Parameters

--filter_library=<GUID>

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--output={formatted|raw} (p. 113)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams|asn} (p. 70)

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. 128)

Parameters

--mode={full|fast} (p. 109)
--libraries=<GUIDs> (p. 109)
--slots=<GUIDs> (p. 109)
--assign2free (p. 108)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams|asn} (p. 70)

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. 40) command.

Examples (p. 129)

Parameters

--loc=<path> (p. 78)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--process_priority={low|normal|high} (p. 113)
--read_speed=<speed>**{kb|p}** (p. 114)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams|asn} (p. 70)

In a managed location (**--loc=bsp://**<storage node>**/**<location 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. 129)

Parameters

--source=<source disk number>

The number of the source disk.

--target=<target disk number>

The number of the target disk.

--reboot (p. 114)
--reboot_after (p. 114)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.10 Operations with machines

2.10.1 add machine

Adds a machine with an agent to the management server. The **--service=ams** parameter is mandatory because the command is executed by the management server.

Examples (p. 130)

Parameters

--machine_address=<IP address or hostname>

Machine to be added.

--credentials=<user name>**,**<password>**,encrypted** (p. 109)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote management server

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)

Access to the management server service

--service=ams (p. 70)

2.11 Advanced operations with virtual machines

2.11.1 Replicating virtual machines

The commands listed in this section are available only if Agent for VMware is installed.

2.11.1.1 list replicas

Lists replicas of the specified VMware ESXi virtual machine.

Examples (p. 130)

Parameters

{--vmid=<virtual machine ID>**|--vmname=**<virtual machine name>**|--vmconfig=**<path>**}** (p. 71)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--output={formatted|raw} (p. 113)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.11.1.2 replicate vm

Creates a replica of the specified ESXi virtual machine.

Examples (p. 130)

Parameters

What to replicate

{--vmid=<virtual machine ID>**|--vmname=**<virtual machine name>**|--vmconfig=**<path>**}** (p. 71)

Where to replicate

--vmreplica_name=<virtual machine name>

Name of the virtual machine replica.

{--vmserver_name=<server name>**|--vmserver_id=**<server GUID>**}** (p. 72)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--vmstorage=<path> (p. 72)
--vmresource_pool=<path> (p. 74)

How to replicate

--vmprovisioning_mode={thin|thick|original_vm} (p. 74)
--cbt_mode={on|off} (p. 90)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.11.1.3 failover vm

Fails over to a virtual machine replica. Failover is a transition of the workload from the original virtual machine to its replica.

Examples (p. 130)

Parameters

{--vmid=<virtual machine ID>**|--vmname=**<virtual machine name>**|--vmconfig=**<path>**}** (p. 71)

Replica identifier or name, or path to its configuration file.

--vmnetwork=<network label> (p. 75)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.11.1.4 fallback vm

Fails back from a replica. The replica will be recovered to an existing or a new virtual machine.

Examples (p. 130)

Parameters

What to fail back

{--vmid=<virtual machine ID>**|--vmname=**<virtual machine name>**|--vmconfig=**<path>**}** (p. 71)

Replica identifier or name, or path to its configuration file.

Where to fail back

If none of the parameters mentioned in this block is specified, the command will fail back to the original virtual machine. Otherwise, the failback will be performed to an existing or a new virtual machine.

--vcenter=<IP address or hostname>

vCenter to recover the virtual machine to. If you have a stand-alone ESXi host, this parameter is not needed.

--credentials=<user name>**,**<password>**,encrypted** (p. 109)

{--vmserver_name=<server name>**|--vmserver_id=**<server GUID>**}** (p. 72)

ESXi host to recover the virtual machine to.

--credentials=<user name>**,**<password>**,encrypted** (p. 109)

--vmstorage=<path> (p. 72)

When recovering to a new virtual machine, this parameter is mandatory. When recovering to an existing machine, this parameter is not needed.

--vmresource_pool=<path> (p. 74)

When recovering to a new virtual machine, this parameter is optional. When recovering to an existing machine, this parameter is not needed.

--target_name=<virtual machine name>

Name of the target virtual machine. If a machine with this name does not exist in the specified virtualization environment, a new machine will be created. Otherwise, the machine will be overwritten. However if you specify the **--vmstorage** parameter and, optionally, the **--vmresource_pool** parameter but the **--target_name** parameter contains the name of an existing machine, the command will fail.

How to fail back

--apply_changes

If specified, the changes made to the replica will be added to the target virtual machine.

--start_after_recovery

If specified, the target virtual machine will be powered on after the failback is complete.

--vmprovisioning_mode={thin|thick|original_vm} (p. 74)

The parameter is used only when recovering to a new virtual machine.

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.11.2 Running virtual machines from backups

The commands listed in this section are available only if Agent for VMware or Agent for Hyper-V is installed.

2.11.2.1 mount vm

Runs a virtual machine from a disk-level backup that contains an operating system.

Examples (p. 130)

Parameters

What to mount

--loc=<path> (p. 78)
--credentials=<user name>,<password>,**encrypted** (p. 109)
--arc=<archive name> (p. 79)
--password=<password>,**encrypted** (p. 113)
--backup=<backup ID> (p. 80)

Where to mount

{--vmserver_name=<server name>|**--vmserver_id**=<server GUID>**}** (p. 72)
--credentials=<user name>,<password>,**encrypted** (p. 109)
--vmstorage=<path> (p. 72)
--vmresource_pool=<path> (p. 74)
--vmnetwork=<network label> (p. 75)
--target_vmname=<virtual machine name>

The target virtual machine name. If the target virtualization host contains a machine with this name, the recovered virtual machine will be named as follows: <virtual machine name> **(**<sequence number>**)**. If you do not specify this parameter, the target virtual machine will be named as follows: <source virtual machine name> **(**<sequence number>**)**.

How to mount

--auto_start={true|false}

If the value is **true** or if the parameter is not specified, the resulting virtual machine will be automatically powered on.

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>,<password>,**encrypted** (p. 109)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.11.2.2 umount vm

Deletes a virtual machine that is running from a backup.

Examples (p. 130)

Parameters

{--vmid=<virtual machine ID>**|--vmname=**<virtual machine name>**|--vmconfig=**<path>**}** (p. 71)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.11.2.3 finalize_vm_recovery

The command is available only for an ESXi machine that is running from a backup. The command makes this machine permanent, i.e. recovers all of its virtual disks, along with the changes that occurred while the machine was running, to the datastore that stores these changes.

Examples (p. 130)

Parameters

{--vmid=<virtual machine ID>**|--vmname=**<virtual machine name>**|--vmconfig=**<path>**}** (p. 71)
--vmprovisioning_mode={thin|thick} (p. 74)
--new_vmname=<virtual machine name>

New name for the machine. If the parameter is not specified, the finalized virtual machine will have the same name as the original one.

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--progress (p. 114)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.12 Administration operations

2.12.1 Collecting information

2.12.1.1 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. 131)

Parameters

--id=<GUID> (p. 112)
--loc=<full path> (p. 78)

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

--credentials=<user name>**,**<password>**,encrypted** (p. 109)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams|asn} (p. 70)

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

2.12.1.2 sysinfo

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

Examples (p. 131)

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. 109)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams|asn} (p. 70)

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

2.12.2 Activities

2.12.2.1 list activities

Lists the current and past activities of the specified service (Acronis Managed Machine Service, Acronis Cyber Protect Management Server, or Acronis Cyber Protect 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. 70) parameter is not specified, the activities of Acronis Managed Machine Service are listed.

For Acronis Cyber Protect 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 stop (p. 64) hung-up processes.

Examples (p. 131)

Parameters

--filter_guid=<GUIDs> (p. 106)
--filter_resource=<resource name> (p. 107)
--filter_state=<states> (p. 107)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--output={formatted|raw} (p. 113)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams|asn} (p. 70)

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

2.12.2.2 stop activity

Stops the activity with the specified GUID. To learn GUIDs of activities, use the **list activities** (p. 63) command.

Examples (p. 131)

Parameters

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

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams|asn} (p. 70)

2.12.3 Plans

2.12.3.1 list plans

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

Examples (p. 132)

Parameters

--filter_state=<states> (p. 107)
--filter_status=<statuses> (p. 107)
--filter_user=<user names> (p. 108)
--utc (p. 116)

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--output={formatted|raw} (p. 113)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.12.3.2 disable plan

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

Examples (p. 132)

Parameters

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

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.12.3.3 enable plan

Enables a previously disabled (p. 65) protection plan. As a result, the specified protection plan will run again according to its schedule.

Examples (p. 132)

Parameters

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

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.12.3.4 delete plan

Deletes the specified protection plan.

Examples (p. 132)

Parameters

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

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.12.4 Tasks

2.12.4.1 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. 132)

Parameters

--filter_state=<states> (p. 107)
--filter_user=<user names> (p. 108)
--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 protection 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. 112)
--log_format={structured|unstructured} (p. 112)

--output={formatted|raw} (p. 113)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>,<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams|asn} (p. 70)

2.12.4.2 run task

Starts execution of the specified task.

Examples (p. 132)

Parameters

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

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>,<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.12.4.3 stop task

Stops execution of the specified task.

Examples (p. 132)

Parameters

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

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.12.4.4 delete task

Deletes the specified task.

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

Examples (p. 132)

Parameters

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

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.12.5 Licenses

2.12.5.1 list licenses

Lists Acronis Cyber Protect licenses assigned to a machine.

If you specify **--service=ams**, the command lists licenses registered on the management server. If you specify **--service=mms** or omit this parameter, the command lists licenses that were specified during the local installation without the management server.

Examples (p. 133)

Parameters

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--output={formatted|raw} (p. 113)
{-f|--file_params}=<full local path> (p. 111)

Access to a remote machine

--host=<IP address or hostname> (p. 70)
--credentials=<user name>**,**<password>**,encrypted** (p. 109)
--address=<IP address or hostname> (p. 70)

Access to a specific service within a machine

--service={mms|ams} (p. 70)

2.12.5.2 add license

Assigns a license to an agent that is not registered on the management server. After licensing, this agent can only perform local backups.

If the command is used more than once on the same machine, with different license keys, only the last license will be assigned.

Only perpetual licenses are supported. Licenses for versions older than Acronis Cyber Protect 15 are not supported.

Examples (p. 133)

Parameters

--key=<license key>

General parameters

--log=<full path> (p. 112)
--log_format={structured|unstructured} (p. 112)
--output={formatted|raw} (p. 113)
{-f|--file_params}=<full local path> (p. 111)

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 (available in on-premise deployments only), you must explicitly specify the **asn** or the **ams** service in 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 recover vm --loc=\\<server>\<folder> --arc=<archive name> --vmname=<virtual
machine name>
```

- You can run this command on a machine where Agent for VMware (Windows) and the command-line utility are installed. The command-line utility connects to the local agent. The agent executes the command.

```
acrocmd recover vm --loc=\\<server>\<folder> --arc=<archive name> --vmname=<virtual
machine name> --host=<IP address or hostname> --credentials=<user name>,<password>
--service=ams
```

- You can run this command on a machine where only the command-line utility is installed. In this case, the command-line utility connects to the management server that selects the agent that will execute the command.

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. 17), **backup file** (p. 22),

recover disk (p. 18), **recover mbr** (p. 20), **recover file** (p. 23), **create asz** (p. 49), and **delete asz** (p. 51). 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

Because Agent for VMware 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>
```

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. 25) command to obtain identifiers of virtual machines.

With the **backup vm** (p. 27) 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. 27) 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. 27) command, you can specify several values of this parameter.

3.2.2 New virtual machine

3.2.2.1 New virtual machine on an ESX(i) or Hyper-V host

vmname

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

Name of a new virtual machine.

vmstorage

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

Location of the new virtual machine.

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

  Example:

  ```
  --vmstorage=Storage_1
  ```

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

  Example:

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

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. 24) 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. 24) command. The **--vmserver_id** and **--vmserver_name** parameters are mutually exclusive.

Virtual machine configuration (p. 72)

3.2.2.2 Virtual machine configuration

Use the parameters described in this section with the **recover vm** (p. 30) command when creating a new virtual machine on an ESX(i) or Hyper-V host.

vmram

```
--vmram=<memory size>{mb|gb}
```

Memory size of the new virtual machine. If the parameter is not specified, the value is as follows:

- If a virtual machine was backed up, the memory size of the backed-up machine.
- If a physical machine was backed up, the default setting of the virtualization server.

Examples:

```
--vmram=512mb
--vmram=1gb
```

vmcpu

```
--vmcpu=<number of CPUs>
```

Number of virtual processors of the new virtual machine. If the parameter is not specified, the value is 1.

Virtual disk parameters

If you specify one of the **--vmdisk_size**, **--vmdisk_type**, and **--vmdisk_provisioning** parameters, you must specify all of them.

vmdisk_size

```
--vmdisk_size=<disk sizes>
```

Sizes of the virtual disks to be created. The software assigns each value specified in the **--vmdisk_size** parameter to the corresponding disk specified in the **--disk** (p. 82) parameter. If the number of values of the **--disk** and **--vmdisk_size** parameters differ, the command will fail.

You can specify values in megabytes and gigabytes.

Example:

```
--vmdisk_size=100gb,512mb,120gb
```

If the parameter is not specified, the software will reproduce the sizes of the original machine's disks.

vmdisk_type

```
--vmdisk_type=<disk types>
```

Interface types of the virtual disks to be created. The available values are **ide** and **scsi**. The software assigns each value specified in the **--vmdisk_type** parameter to the corresponding disk specified in the **--disk** (p. 82) parameter. If the number of values of the **--disk** and **--vmdisk_type** parameters differ, the command will fail.

Example:

```
--vmdisk_type=ide,scsi,scsi
```

If the parameter is not specified, the software assigns the following values.

- On an ESX(i) host:
  - If the backed-up machine has no IDE disks, the system disk is assigned the **scsi** value.
  - If the backed-up machine has at least one IDE disk, the system disk is assigned the **ide** value.
- On a Hyper-V host, the system disk is assigned the **ide** value.

- A non-system disk is assigned the type of the corresponding disk of the original machine.

`vmdisk_provisioning`

```
--vmdisk_provisioning=<disk provisioning types>
```

Provisioning types of the virtual disks to be created. The available values are **`thick`** and **`thin`**. The software assigns each value specified in the **`--vmdisk_provisioning`** parameter to the corresponding disk specified in the **`--disk`** (p. 82) parameter. If the number of values of the **`--disk`** and **`--vmdisk_provisioning`** parameters differ, the command will fail.

Example:

```
--vmdisk_provisioning=thin,thin,thick
```

If the parameter is not specified, the software assigns the following values.

- If a physical machine was backed up, all disks have the **`thick`** provisioning type.
- If a virtual machine was backed up, the software reproduces the provisioning types of the original machine's disks.

3.2.3 vmprovisioning_mode

Format in which to store the virtual disks of a new virtual machine.

Commands: `replicate vm` **and** `fallback vm`

```
--vmprovisioning_mode={thin|thick|original_vm}
```

If the parameter is used with the **`replicate vm`** (p. 57) and **`fallback vm`** (p. 58) commands, available values are as follows:

- **`thin`**
  The virtual disks will be stored in the thin provisioning format.
- **`thick`**
  The virtual disks will be stored in the thick provisioning format.
- **`original_vm`** (by default)
  The virtual disks will be stored in the same provisioning format as the disks of the original virtual machine.

Command: `finalize_vm_recovery`

```
--vmprovisioning_mode={thin|thick}
```

If the parameter is used with the **`finalize_vm_recovery`** (p. 61) command, available values are as follows:

- **`thin`** (by default)
  The virtual disks will be stored in the thin provisioning format.
- **`thick`**
  The virtual disks will be stored in the thick provisioning format.

3.2.4 vmresource_pool

```
--vmresource_pool=<path>
```

The parameter is used with the **replicate vm** (p. 57), **fallback vm** (p. 58), and **mount vm** (p. 60) commands. The parameter defines the path to the resource pool or the vApp that will contain the virtual machine. Note that the path does not start with a slash.

Example

```
--vmresource_pool=resource_pool_1/vapp_name_1/resource_pool_2
```

3.2.5 vmnetwork

Network to which the virtual machine's network adapter will be connected. For example, **--vmnetwork="VM Network"**.

In the **deploy vm_agent** (p. 25) or **mount vm** (p. 60) command, if the parameter is not specified, the software will automatically select one of the available networks.

In the **failover vm** (p. 58) command, if the parameter is not specified, the virtual machine replica will not be connected to a network.

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. 135).

In Windows Server 2008 and later, the user specified in the **--exchange_credentials** parameter must differ from the user specified in the **--credentials** (p. 109) 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. 35) 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. 77).

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. 33) 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. 42) command.

Command: `recover exchange_mailbox`

In the **recover exchange_mailbox** (p. 34) 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. 42) command.

Microsoft SQL Server data items

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

Command: `backup mssql_database`

In the **backup mssql_database** (p. 36) command, each item in the parameter value is a path to a database or to an instance.

If the parameter is not specified, the command will fail.

Command: `recover mssql_database`

In the **recover mssql_database** (p. 37) command, 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. 42) command.

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 2007)

`<storage group>`

Example:

```
"First Storage Group"
```

Mailbox or public folder

- For Exchange 2013 or later:
  - `<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 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 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 Cyber Protect 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. 70) 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>`
SFTP	**sftp://**`<server>/<folder>/`
Acronis Cyber Protect Storage Node	**bsp://**`<storage node>/<location name>`
Acronis Cloud Storage	**online://**
Acronis Secure Zone	**atis:///asz**
Tape	**atis:///tape?**`<GUID of attached library>*`

*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. 53) command.

For a tape library or drive attached to a storage node, a managed location should be created on that storage node. To access such tape library or drive, use the **bsp://**<storage node>**/**<location 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. 109) (if required to access the location), **--arc**, **--password** (p. 113) (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. 89) parameter or when backing up Microsoft Exchange Server data (command **backup exchange_database** (p. 32)), the archive name cannot end with a number.
- When using the **--plain_archive** (p. 89) 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. 27) 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 Cloud 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. 43), **consolidate backup** (p. 46), **replicate backup** (p. 44), and **delete backup** (p. 46) commands, you can specify several backups.

Usually, 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. 33) and **recover exchange_mailbox** (p. 34) commands.

3.4.4 target

Commands: export archive, export backup, recover file, replicate backup

```
--target=<path>
```

In the **recover file** (p. 23) 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 **export archive** (p. 39), **export backup** (p. 43), or **replicate backup** (p. 44) 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. 33) 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** parameter. If necessary, add the **--credentials** (p. 109) 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. 96) parameter. If the destination database does not exist, also specify the **--database_location** (p. 95) and **--log_location** (p. 98) parameters. If the destination storage group does not exist, specify the **--log_location** (p. 98) parameter and pairs of the **--database** (p. 95) and **--database_location** (p. 95) 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. 95) and **--log_location** (p. 98) parameters.

  When recovering a storage group, you need to specify pairs of the **--database** (p. 95) and **--database_location** (p. 95) parameters for each database of this storage group. If the destination recovery storage group does not exist, specify also the **--log_location** (p. 98) parameter.

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. 37) 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** parameter. If necessary, add the **--credentials** (p. 109) 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. 97) and **database_location** (p. 95) 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. 39), **export backup** (p. 43), and **replicate backup** (p. 44) 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.

3.5 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. 17) and **backup vm** (p. 27) commands to specify disks to be backed up.

Use the **list disks** (p. 16) command to obtain numbers of available disks and volumes.

You can use the **--disk** and **--volume** (p. 83) 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. 18) **recover vm** (p. 30)	Numbers of the disks to be recovered from a backup	If the **--volume** (p. 83) parameter is specified, this volume will be recovered. Otherwise, the command will recover all of the backed-up disks.
recover mbr (p. 20)	The number of the disk whose MBR is to be recovered from a backup	The command will fail.
create asz (p. 49)	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. 18) 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. 17) and **backup vm** (p. 27) 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. 16) command. To display the full length of GUIDs, add the **--output=raw** parameter.

You can use the **--disk** (p. 82) 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. 18) **recover vm** (p. 30)	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. 82) parameter is specified, this disk will be recovered. Otherwise, the command will recover all of the backed-up disks.
mount (p. 47)	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
```

To recover 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,DYN1
```

To view disks and volumes contained in a backup, use the **list content** (p. 42) command.

Command: create asz

```
--volume={<volume numbers>|all}
```

In the **create asz** (p. 49) 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. 50) 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. 51) 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. 18) and **recover vm** (p. 30) commands when recovering a volume to unallocated space of a hard disk.

The **--start** parameter and the **--target_volume** (p. 101) 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. 18) and **recover vm** (p. 30) 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. 18) 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 Cyber Protect 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. 85) parameter will be recovered. The parameter is used with the **recover disk** (p. 18) 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 archive_format

```
--backup_format={always_incremental|standard}
```

The parameter determines the backup format in the **backup disk** (p. 17) and **backup vm** (p. 27) commands.

If the value is **standard** or if the parameter is not specified, each backup created by the command will be stored in a separate .tib file. The backup type (full, incremental, differential) is determined by the **--backuptype** (p. 86) parameter.

If the value is **always_incremental**, the initial full and subsequent incremental backups (created by the same command) will be stored in a single .tib file. The **--backuptype (p. 86)** parameter is ignored.

Limitations of the Always incremental (Single-file) format

- If the value is **always_incremental** and any of the following locations is specified in the **--loc** (p. 78) parameter, the backup will fail.
  - Acronis Cloud Storage
  - NFS shares
  - Acronis Secure Zone
  - Removable devices not in the "Fixed drive" (p. 88) mode.
- If the value is **always_incremental** and the **--split** (p. 94) parameter is specified, the backup will fail.
- **consolidate backup** (p. 46) and **convert full** (p. 45) commands cannot manage single-file backups.

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. 17), **backup file** (p. 22), and **backup vm** (p. 27) commands, its format is as follows:

```
--backuptype={full|incremental|differential}
```

Command: backup mssql_database

If the parameter is used with the **backup mssql_database** (p. 36) 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. 88).

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. 38) 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. 38) command.

3.6.5 copy_only

```
--copy_only
```

The parameter is used with the **backup exchange_database** (p. 32) command.

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.

3.6.6 exclude

These parameters are used with the **backup disk** (p. 17), **backup file** (p. 22), and **backup vm** (p. 27) 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. 97) 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.

3.6.7 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. 89) 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.

Functionality	Fixed drive	Removable media
You can delete (p. 46) 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. 27) or **backup exchange_database** (p. 32) commands, the device is always used in the fixed drive mode, so, this parameter is ignored.

3.6.8 include

```
--include=<paths>
```

Files or folders to be included into the backup. The parameter is used with the **backup file** (p. 22) command.

3.6.9 mssql_truncate_logs

```
--mssql_truncate_logs
```

The parameter is used with the **backup mssql_database** (p. 36) command.

If the parameter is specified, the Microsoft SQL Server log will be truncated after each full or incremental 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.

3.6.10 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. 88), the **--plain_archive** parameter is not needed. Instead, the **--fixed_drive** parameter determines whether the standard or simplified naming scheme will be used.

Restrictions

Do not specify the **--plain_archive** parameter in the following commands:

- **backup vm** (p. 27)
- **backup exchange_database** (p. 32)
- Any command that backs up to Acronis Cloud Storage or Acronis Secure Zone

Do not apply the following commands to backups that have simplified names:

- **replicate backup** (p. 44)
- **convert full** (p. 45)

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 (|).

3.6.11 raw

```
--raw
```

The parameter is used with the **backup disk** (p. 17) and **backup vm** (p. 27) 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.

3.6.12 Backup options

3.6.12.1 cbt_mode

```
--cbt_mode={on|off}
```

This parameter determines whether to use Changed Block Tracking (CBT) when performing an incremental or differential backup.

The CBT technology accelerates the backup process. Changes to the disk content are continuously tracked at the block level. When a backup starts, the changes can be immediately saved to the backup.

Available parameter values

- **on** (by default)

  Acronis Cyber Protect automatically enables CBT for each virtual machine that is backed up. The resulting CBT settings determine CBT usage during the backup and are kept after the backup is completed.
- **off**

  Acronis Cyber Protect does not use CBT.

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 Cyber Protect.

3.6.12.2 compression

```
--compression={none|normal|high}
```

Data compression level. If not specified, the value is **normal**.

3.6.12.3 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. 113) parameter.

3.6.12.4 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.

3.6.12.5 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.

3.6.12.6 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. 115) is enabled.

3.6.12.7 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. 17) command. This parameter is also used with the **backup file** (p. 22) command when the **--snapshot** (p. 93) 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.

3.6.12.8 network_speed

```
--network_speed=<speed>{kb|p}
```

The speed of transferring the data being backed up through network.

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 or Acronis Cloud Storage. For other location types, this parameter is ignored.

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 cloud 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.

3.6.12.9 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"
```

3.6.12.10 snapshot

```
--snapshot={always|possible|none}
```

Defines whether to back up files (p. 22) 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.

3.6.12.11 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.

3.6.12.12 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 described below. If a snapshot cannot be taken by using any of the specified providers, Acronis Cyber Protect will not use VSS. Instead, it will take a snapshot by using its own Snapshot Manager driver (snapman.sys).

- **auto**

  VSS will use the hardware-based provider that supports the source volume. If one is not found, VSS will try to use a software-based provider, the Microsoft Software Shadow Copy provider, and Acronis VSS Provider in turn.
- **software_auto**

  VSS will use any available software-based provider. If one is not found, VSS will try to use the Microsoft Software Shadow Copy provider, and Acronis VSS Provider in turn.
- **acronis**

  VSS will use Acronis VSS Provider.
- **native** (by default)

  VSS will use the Microsoft Software Shadow Copy provider.
- **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.
- **none**

  Choose this value if your database is incompatible with VSS. Acronis Cyber Protect will take a snapshot by using its own Snapshot Manager driver (snapman.sys). Snapshots are taken faster but data consistency of the applications whose transactions are not completed cannot be guaranteed.

3.7 Recovery parameters

3.7.1 autorename

```
--autorename
```

The parameter is used with the **recover mssql_database** (p. 37) 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. 99) 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. 33) 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. 95) 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. 42) 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. 33) 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. 95) 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. 95)** 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. 37) 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. 37) 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. 33) 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. 99) 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. 77).

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. 37) command only if the **--target** (p. 80) parameter value is **another_instance**.

The parameter specifies the instance where the databases specified in the **--items** (p. 75) parameter will be recovered.

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. 33) and **recover mssql_database** (p. 37) commands only if the **--target** (p. 80) parameter value is **disk**.

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, 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 F*	Excludes all files with the .log extension 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. 18) and **recover vm** (p. 30) 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. 18) and **recover vm** (p. 30) 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. 97) 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. 33) 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. 23) command. 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 overwrite

Command: recover file

```
--overwrite={always|older|never}
```

In the **recover file** (p. 23) 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.

If you allow files to be overwritten, you still have an option to prevent overwriting of specific files by excluding (p. 97) them from the recovery operation.

Commands: recover exchange_database, recover exchange_mailbox, recover mssql_database

```
--overwrite
```

In the **recover exchange_database** (p. 33) 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. 33) 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. 37) 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. 94) 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.

3.7.15 power_on

```
--power_on
```

Power on the target virtual machine when the recovery is complete.

3.7.16 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.

3.7.17 recover_absolute_path

```
--recover_absolute_path
```

The parameter is used with the **recover file** (p. 23) 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.**

3.7.18 recovery_mode

```
--recovery_mode={auto|incremental_with_snapshot|incremental|full}
```

Specifies the method of a disk or volume recovery to a physical (p. 18) or virtual machine (p. 30).

Available values of the parameter are as follows:

- **auto** (by default)

  If you recover to the original virtual machine, the software will select the incremental mode. Otherwise, the full mode will be applied.
- **incremental_with_snapshot**

  This value is effective only when recovering to virtual machines. This mode is the fastest.

  When recovering to a VMware virtual machine: The software will use virtual machine snapshots and Changed Block Tracking (CBT) to determine which blocks have changed and to recover only these blocks. However, after the recovery a snapshot is kept.

  When recovering to a Hyper-V virtual machine: The software will use Changed Block Tracking (CBT) to determine which blocks have changed and to recover only these blocks.
- **incremental**

  The software will calculate hashes of disk blocks to recover only the changed blocks.

  When recovering to physical machines, this mode is recommended only if the backup is stored in Acronis Cloud Storage.
- **full**

The software will recover all disk blocks, both changed and unchanged.

3.7.19 target_disk

```
--target_disk=<disk number>
```

The parameter is used with the **recover disk** (p. 18), **recover vm** (p. 30), and **recover mbr** (p. 20) 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.

3.7.20 target_volume

```
--target_volume=<volume number>
```

Volume where you will recover data which has been selected in the **--volume** (p. 83) parameter. The parameter is used with the **recover disk** (p. 18) and **recover vm** (p. 30) commands.

With the **recover disk** (p. 18) 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. 101) 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. 101) and **--start** (p. 85) 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)

3.7.21 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.

3.7.22 use_all_space

```
--use_all_space
```

This parameter is used with the **recover disk** (p. 18) and **recover vm** (p. 30) commands in the following cases:

- You recover a disk to a larger disk.

  If the parameter is specified, the recovered disk's volumes will be resized so they occupy the whole target disk.
- You recover a volume to unallocated space.

  If the parameter is specified, the recovered volume will occupy all the unallocated space.

If the parameter is not specified, the recovered disk or volume size will be equal to the original disk or volume size.

3.8 Mounting parameters

3.8.1 for_all_users

```
--for_all_users={true|false}
```

The parameter is used with the **mount** (p. 47) command when mounting volumes in Windows.

If the value is **true**, the backed-up volumes will be available to all users.

If the value is **false** or if the parameter is not specified, the backed-up volumes will be available to the current user only.

3.8.2 letter

Command: `mount`

```
--letter=<letters>
```

Letters to be assigned to the mounted volumes. The parameter is used with the **mount** (p. 47) command when mounting volumes in Windows.

The letters you specify are assigned to the volumes according to the volume order in the **--volume** (p. 83) 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. 16) 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. 48) 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. 47) 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. 48) command in Linux. If the parameter is not specified, the operation will fail.

3.8.4 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.

3.9 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. 49) 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 maximum (unallocated space plus free space on the volumes selected with the **--volume** (p. 83) parameter) and minimum (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. 114).

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. 83) parameter is ignored.

Command: `resize asz`

In the **resize asz** (p. 50) 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. 83) parameter. Resizing of locked volumes requires a reboot (p. 114). 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. 38) and others).

3.10.1 content_path

The path to the contents inside the backup. The parameter is used with the **list content** (p. 42) command unless the **--content_type** (p. 105) parameter value is **volume**. 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. 77).

Microsoft SQL Server data backups

For detailed information about the value format, see "Specifying SQL data" (p. 77).

3.10.2 content_type

```
--content_type={volume|file|exchange_database|exchange_mailbox|mssql_database}
```

The type of content to display. The parameter is used with the **list content** (p. 42) 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.

Microsoft SQL Server data backups

When viewing the contents of a Microsoft SQL Server data backup, the applicable value of the parameter is **mssql_database**.

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. 25) 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. 41) 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. 35) 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 vms`** (p. 25) 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. 25) 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_machines

```
--filter_machines=<quantities of machines>
```

The parameter is used with the **`list vmservers`** (p. 24) 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.

3.10.9 filter_name

```
--filter_name=<names>
```

Object names for selecting objects to be output.

If the parameter is used with the **list vms** (p. 25) or **list vmservers** (p. 24) command, the software will display objects whose names *coincide* with the values you have specified.

If the parameter is used with the **list mssql_instances** (p. 35) or **list mssql_databases** (p. 35) command, the software will display objects whose names *contain* the values you have specified.

Without this parameter, objects with any name will be displayed.

3.10.10 filter_resource

```
--filter_resource=<resource names>
```

The parameter is used with the **list activities** (p. 63) command. If specified, the command will output only those activities that back up the resources whose names contain the values you have specified.

Specify a disk by a number; a volume by a label; a file, folder, or virtual machine by its name.

Examples:

```
--filter_resource="Disk 2"
--filter_resource="System (C:)"
--filter_resource="My Folder","my_thesis.doc"
--filter_resource=my_vm_1
```

Without this parameter, activities will be displayed regardless of the related resources.

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. 66), **list plans** (p. 64), and **list vms** (p. 25) 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. 25) and **list plans** (p. 64) 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 protection 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. 38) command, you can specify one or more of the following types: **`disk`**, **`file`**, **`exchange_db`**, and **`exchange_doc`**.

In the **`list backups`** (p. 41) command, you can specify one or more of the following types: **`full`**, **`incremental`**, **`differential`**, and **`transaction_log`**.

Command: `list vmservers`

```
--filter_type=<server types>
```

In the **`list vmservers`** (p. 24) 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. 66) and **`list plans`** (p. 64) 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. 35) 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. 54) 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. 54) 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. 53) command.

3.11.3 mode

```
--mode={full|fast}
```

The method of inventorying tapes (p. 54).

Fast inventorying

If the parameter value is **fast** or is not specified, Acronis Cyber Protect 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 Cyber Protect 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. 128).

3.11.4 slots

```
--slots=<GUIDs>
```

GUIDs of tape library slots to be inventoried. The parameter is used with the **inventory tape** (p. 54) command only if the **--libraries** (p. 109) 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. 53) 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. 135).

A command can contain several **--credentials** parameters.

Example

```
acrocmd export archive --loc=\\bkpsrv1\backups --credentials=netuser1,pass1
--arc=my_archive --password=123 --target=\\bkpsrv2\backups
--credentials=netuser2,pass2
```

This command exports a password-protected archive from one network folder to another one. The first credentials are required to access the source network folder **\\bkpsrv1\backups**. The **--password** parameter specifies the password for the archive **my_archive**. The second credentials enable writing to the target network folder **\\bkpsrv2\backups**.

3.12.2 Error handling

retry_count and retry_delay

```
--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**

vmsnapshot_retry_count and vmsnapshot_retry_delay

These parameters are used with the **backup vm** (p. 27) command only when backing up VMware virtual machines by using quiesced virtual machine snapshots (**--vmsnapshot_quiesce=true**).

When taking a virtual machine snapshot fails, the program re-attempts to perform the unsuccessful operation. You can set the time interval and the number of attempts. The attempts will be stopped as soon as the operation succeeds OR the specified number of attempts are performed, depending on which comes first. If all attempts to take a quiesced snapshot fail, the program will try to take a non-quiesced snapshot. If taking a non-quiesced snapshot also fails, the operation will fail.

You need to specify both parameters. The **--vmsnapshot_retry_delay** parameter must directly follow the **--vmsnapshot_retry_count** parameter.

Example: **--vmsnapshot_retry_count=10 --vmsnapshot_retry_delay=20s**

If the parameters are not specified, the number of attempts is 3 and the time interval between attempts is 5 minutes (as if you typed **--vmsnapshot_retry_count=3 --vmsnapshot_retry_delay=5m**). To completely disable re-attempts, specify **--vmsnapshot_retry_count=0**.

The interval may be set in seconds (**s**, by default), minutes (**m**) or hours (**h**).

Examples:

- 10-second interval: **--vmsnapshot_retry_delay=10** or **--vmsnapshot_retry_delay=10s**
- 1-minute interval: **--vmsnapshot_retry_delay=1m**
- 1-hour interval: **--vmsnapshot_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. 6).

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. 21) 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. 115) parameter rather than the **--force_yes** parameter. These parameters are mutually exclusive.

3.12.5 id

```
--id=<GUID>
```

GUID of the activity, task, or protection plan with which the operation is to be performed. The parameter is used with the **get log** (p. 62) command and with the task (p. 66), plan (p. 64), and activity (p. 63) management commands.

To learn the GUID, use the **list activities** (p. 63), **list tasks** (p. 66), or **list plans** (p. 64) command.

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. 112) parameter value.

3.12.7 log_format

```
--log_format={structured|unstructured}
```

The format of the log file specified in the **--log** (p. 112) 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 acrocmd.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. 6) section under "Installation paths".

If the value is **unstructured**, the software will write logs in the Acronis XML format.

3.12.8 oss_numbers

```
--oss_numbers={true|false}
```

The parameter is used in the following cases:

- With the **backup disk** (p. 17), **recover disk** (p. 18), **create asz** (p. 49), **resize asz** (p. 50), and **delete asz** (p. 51) commands. With these commands, the parameter applies to the volumes specified in the **--volume** (p. 83) parameter value.
- With the **list content** (p. 42) command if the **--content_type** parameter value is **volume** or with the **list disks** (p. 16) 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
```

3.12.9 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 protection plan).

3.12.10 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. 49) 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. 135).

3.12.11 process_priority

```
--process_priority={low|normal|high}
```

The priority of a backup or validation process running in a system.

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.

3.12.12 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.

3.12.13 read_speed

```
--read_speed=<speed>{kb|p}
```

The speed of reading the backups being validated. The parameter is used with the **validate archive** (p. 40), **validate backup** (p. 42), and **validate vault** (p. 54) commands.

The parameter is used if the backup location (the **--loc** (p. 78) parameter value) is one of the following:

1. A network folder or Acronis Cloud Storage.

   The parameter defines the amount of the network connection bandwidth allocated for transferring the data. If the parameter is not specified, the software uses all the network bandwidth it can get when transferring the data.
2. A hard disk of the machine where the command is executed.

For other location types, this parameter is ignored.

<speed> should be a positive number.

If the measurement unit is **kb**, the speed is measured in kilobytes per second. For the cloud storage, only the **kb** measurement unit is effective.

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 or of the maximum I/O speed of the hard disk.

Examples:

--read_speed=500kb – the data reading speed will be 500 kilobytes per second
--read_speed=50p or **--read_speed=50** – the data reading speed will be 50% of the estimated maximum speed.

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. 115) 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. 49) and **resize asz** (p. 50) 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 recreate_archive_meta

```
--recreate_archive_meta={true|false}
```

The parameter is used with the **recover disk** (p. 18), **recover vm** (p. 30), **list archives** (p. 38), and **list backups** (p. 41) command.

If the value is **true** or if the parameter is not specified, the archive metadata will be recreated during the command execution. This ensures that the command will not fail even if the metadata is missing or corrupted.

If the value is **false**, the archive metadata will remain intact. This will accelerate the command execution.

3.12.16 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 or DVD).

To prohibit interaction when the software comes across a bad sector during backup, use the **--ignore_bad_sectors** (p. 92) parameter. The **--silent_mode** parameter does not work in this particular case.

The **--silent_mode** and **--force_yes** (p. 111) parameters are mutually exclusive.

3.12.17 use_registry_defaults

```
--use_registry_defaults
```

The parameter is used with the backup and recovery commands, except for **recover mbr** (p. 20). 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 Cyber Protect. 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 Cyber Protect 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.

3.12.18 utc

```
--utc
```

The parameter is used with the **list archives** (p. 38), **list backups** (p. 41), **list content** (p. 42), and **list plans** (p. 64) commands. If specified, the date and time values in the command output will be shown in Coordinated Universal Time (UTC). Otherwise, the values will be shown in the time zone of the machine where you run the command.

4 Usage examples

4.1 Backup and recovery

4.1.1 Disks and volumes

Listing disks (p. 16)

- 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. 17)

- 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. 16) 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. 89) 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 folder. To get the disk numbers, use the **`list disks`** (p. 16) command.

```
acrocmd backup disk --disk=1,2 --compression=high --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 network folder.

```
acrocmd backup disk --volume=C --backuptype=incremental --use_vss=auto
--loc=\\bkpsrv1\backups --credentials=bkpuser,pass --arc=c_archive
```

- Backing up the first (according to the **`list disks`** (p. 16) command output) dynamic volume in Windows or logical volume in Linux. The backup will be saved to a network 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. 133)

- Backing up all dynamic volumes in Windows or all logical volumes in Linux. The backup will be saved to a network folder.

```
acrocmd backup disk --volume=DYN --loc=\\srv1\backups --credentials=netuser1,pass1
--arc=alldyn_arc
```

Recovering disks and volumes (p. 18)

Recovering disks

- Recovering a machine from the latest backup of an archive residing in a network folder. Since neither the **--disk** (p. 82) nor the **--volume** (p. 83) parameter is specified, the command will recover all of the backed-up disks. Since neither the **--target_disk** (p. 101) nor the **--target_volume** (p. 101) 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 in a network folder. Since the **--target_disk** (p. 101) parameter is not specified, the software will automatically map the disks to the target machine's disks.

```
acrocmd recover disk --loc=\\bkpsrv\backups --credentials=netuser,pass
--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. 101) nor the **--target_volume** (p. 101) 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 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=\\bkpsrv\backups --credentials=netuser,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. 101) 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.

```
acrocmd 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.

```
acrocmd recover disk --loc=\\srv1\backups --credentials=netuser1,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.

```
acrocmd 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.

```
acrocmd recover disk --loc=\\srv1\backups --credentials=netuser1,pass1
--arc=alldyn_arc --volume=DYN3 --target_volume=UNALLOCATED-DYN
```

Recovering MBR (p. 20)

- 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.

```
acrocmd recover mbr --loc=atis:///asz --arc=my_archive --disk=1 --target_disk=1
```

Recovering logical volume structure (p. 21)

- 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.

```
acrocmd recover lvm_structure --loc=\\bkpsrv\backups --credentials=netuser1,pass1
--arc=my_archive
```

4.1.2 Files

Backing up files and folders (p. 22)

- Backing up a file. The backup will be saved to a local folder.

```
acrocmd backup file --include=C:\documents\my_thesis.doc
--loc=E:\backups\my_thesis --arc=my_thesis
```

- Creating a backup of network folders. The backup will be saved to a local folder. The archive will be protected by a password and encrypted.

```
acrocmd 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 network folder. The disk snapshot must be taken. If taking a snapshot is not possible, the backup will fail.

```
acrocmd backup file --include=D:\documents --snapshot=always
--loc=\\bkpsrv\backups --credentials=netuser,pass --arc=my_archive
```

- Backing up the user home directory in Linux. The backup will be saved to a SAMBA share.

```
acrocmd 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 Acronis Cloud 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. 23)

- 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. 89) 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 in a network folder 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 in a network folder. 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. 24)

- 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. 25)

- 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
```

Deploying Agent for VMware (Virtual Appliance) (p. 25)

- Deploying Agent for VMware (Virtual Appliance) with default parameters. The agent name will be **AcronisESXAppliance-[N]**, where **[N]** is a sequence number of the appliance deployment attempt.

```
acrocmd deploy vm_agent --vsphere_address=10.200.200.10 --credentials="vsphere
user",pass --host=srv1 --credentials="srv1\AMS user",pass1 --service=ams
```

- Deploying Agent for VMware (Virtual Appliance) with non-default parameters.

```
acrocmd deploy vm_agent --vsphere_address=10.200.200.10 --credentials="vsphere
user",pass --vmhost=10.200.200.100 --vmname=John's_VA --vmstorage=datastore3
--mac_address=00:50:56:8c:00:00 --ip_address=10.200.200.150 --host=srv1
--credentials="srv1\AMS user",pass1 --service=ams
```

Backing up virtual machines (p. 27)

- Backing up a virtual machine. The incremental backup will be saved to a network folder. Changed Block Tracking (CBT) will be used. Progress will be shown.

```
acrocmd backup vm --vmid=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
--loc=\\bkpsrv\vm_backups --credentials=netuser,pass --arc="my vm archive"
--backuptype=incremental --progress --cbt_mode=on --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.

```
acrocmd backup vm
--vmid=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXX1,XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXX
2,XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXX3,XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXX4
--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
```

Backing up an ESXi host configuration (p. 28)

- Backing up an ESXi host configuration to a network folder.

```
acrocmd backup esxi_config --vmserver_name=esx1 --credentials=ssh_pass
--loc=\\srv1\folder1 --credentials=netuser1,pass1 --arc=esxiconfig_arc
--host=srv1 --credentials="srv1\AMS user",pass1 --service=ams
```

Recovering virtual machines (p. 30)

- Recovering all disks from the latest backup of the archive residing in a network folder to an existing virtual machine.

```
acrocmd recover vm --vmid=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
--loc=\\bkpsrv\vm_backups --credentials=netuser,pass --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
```

Deleting a virtual machine (p. 31)

- Deleting a virtual machine.

```
acrocmd delete vm --vmname=my_vm_1 --host=srv1 --credentials="srv1\AMS user",pass1
--service=ams
```

4.1.4 Microsoft Exchange

Listing Exchange storage groups and databases (p. 32)

- 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
```

Backing up Exchange storage groups and databases (p. 32)

- Backing up three databases on a remote Exchange server. The backup will be saved to a network folder.

```
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(1)
```

- Backing up two storage groups (Exchange 2007) on the local Exchange server. The backup will be saved to a network folder.

```
acrocmd backup exchange_database --exchange_credentials=domain1\exch_user1,12345
--items=storage_group_1,storage_group_2 --loc=\\bkpsrv\backups
--credentials=netuser,pass --arc=exchg_db_arc(2)
```

Recovering Exchange storage groups and databases (p. 33)

- Recovering a database from the specified backup. The database will be recovered to its original location on the server.

```
acrocmd recover exchange_database --host=exchange_srv
--credentials=user123,pass123 --exchange_credentials=domain1\exch_user1,12345
--loc=\\bkpsrv\backups --credentials=netuser,pass --arc=exchg_db_arc(2)
--backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX --items=db1 --target=original
```

- Recovering two databases from the latest backup of an archive. The databases and transaction log files will be saved to a network folder.

```
acrocmd 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 --target=disk --disk_location=\\host\share
--credentials=netuser,pass
```

- Recovering a storage group (Exchange 2007) containing two databases from the latest backup of an archive. The storage group will be recovered to a new storage group.

```
acrocmd recover exchange_database --host=exchange_srv
--credentials=user123,pass123 --exchange_credentials=domain1\exch_user1,12345
--loc=\\bkpsrv\backups --credentials=netuser,pass --arc=exchg_db_arc(1)
--items=storage_group_1 --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 mailboxes and public folders (p. 34)

- Recovering a mailbox from the latest backup of an archive. The mailbox will be recovered to the specified Exchange server.

```
acrocmd recover exchange_mailbox --host=exchange_srv
--credentials=user123,pass123 --exchange_credentials=domain1\exch_user1,12345
--loc=\\bkpsrv\backups --credentials=netuser,pass --arc=exchg_mb_arc(1)
--items="storage group 1/mailbox database/John P. Smith"
```

4.1.5 Microsoft SQL

Listing Microsoft SQL Server instances (p. 35)

- Listing Microsoft SQL Server instances on the local machine.

```
acrocmd 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. 35)

- 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 databases (p. 36)

- Backing up two Microsoft SQL databases to a network folder.

```
acrocmd backup mssql_database --host=srv2 --credentials="srv1/AMS User",pass1
--sql_credentials="INSTANCE\Administrator",sqlpass --loc=\\srv1\backups
--arc=sql1 --instance_name=instance1 --database_name=db1,db2 --backuptype=full
--truncate_mssql_log
```

Recovering Microsoft SQL databases (p. 37)

- 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 folder.

```
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=\\bkpsrv\backups --credentials=netuser,pass
--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.

4.2 Operations with archives and backups

4.2.1 Archives

Listing archives (p. 38)

- Listing archives in a network folder. 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=\\bkpsrv\backups --credentials=netuser,pass
```

Exporting archives (p. 39)

- Exporting a password-protected archive stored in a network 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 one network folder to another one.

```
acrocmd export archive --loc=\\bkpsrv1\backups --credentials=netuser1,pass1
--target=\\bkpsrv2\backups --credentials=netuser2,pass2
```

  The first credentials are required to access the source network folder **\\bkpsrv1\backups**. The second credentials enable writing to the target network folder **\\bkpsrv2\backups**.

Validating an archive (p. 40)

- Validating all backups of an archive.

```
acrocmd validate archive --loc=E:\backups\ --arc=my_archive
```

Deleting an archive (p. 40)

- Deleting an archive.

```
acrocmd delete archive --loc=\\bkpsrv\backups --credentials=netuser,pass
--arc=my_archive
```

4.2.2 Backups

Listing backups (p. 41)

- Listing backups of an archive stored in a local folder. The output will be displayed in the raw format (p. 113). 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 network folder 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. 113) is redirected to a text file.

```
acrocmd list backups --loc=\\bkpsrv\backups --credentials=netuser,pass
--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=\\bkpsrv\backups --credentials=netuser,pass
--arc=my_archive --log=c:\log.txt
```

Listing backup content (p. 42)

- 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. 42)

- Validating a backup.

```
acrocmd validate backup --loc=E:\backups\ --arc=my_archive
--backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
```

Exporting backups (p. 43)

- Exporting the selected backups of an archive stored in a network folder to a local folder.

```
acrocmd export backup --loc=\\bkpsrv1\backups --credentials=netuser1,pass1
--arc=my_archive --password=123
--backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXX1,XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXX
XX2 --target=E:\copies --target_arc=my_archive_copy
```

- Exporting the latest backup of an archive from one network folder to another one.

```
acrocmd export backup --loc=\\bkpsrv1\backups --credentials=netuser1,pass1
--arc=my_archive --target=\\bkpsrv2\backups --credentials=netuser2,pass2
--progress
```

  The first credentials are required to access the source network folder **\\bkpsrv1\backups**. The second credentials enable writing to the target network folder **\\bkpsrv2\backups**.

Replicating a backup (p. 44)

- Replicating the latest backup of an archive stored in a local folder to a network folder.

```
acrocmd replicate backup --loc=C:\Backups --arc=my_archive --password=123
--target=\\bkpsrv\backups --credentials=netuser,pass
```

- Replicating the selected backup of an archive from a network folder to Acronis Cloud 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. 45)

- 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-XXXXXXXXXXXX
```

Consolidating backups (p. 46)

- 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-XXXXXXXXXXX1,XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXX
XX2
```

Deleting backups (p. 46)

- Deleting the specified backups from an archive.

```
acrocmd delete backup --loc=C:\Backups --arc=my_archive --password=123
--backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXX1,XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXX
XX2
```

4.2.3 Mounting volumes

Listing mounts (p. 47)

- Listing the volumes mounted from backups.

```
acrocmd list mounts
```

Mounting (p. 47) (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-XXXXXXXXXXXX --volume=1-1 --letter=Z
```

Mounting (p. 47) (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-XXXXXXXXXXXX --volume=1-1 --rw
```

Unmounting (p. 48) (Agent for Windows only)

- Unmounting a volume.

```
acrocmd umount --letter=Z
```

Unmounting (p. 48) (Agent for Linux only)

- Unmounting a device mounted at the mount point.

```
acrocmd umount --mount_point=/mnt/md1
```

4.3 Operations with Acronis Secure Zone

Creating Acronis Secure Zone (p. 49)

- Creating Acronis Secure Zone on disk 2 of the local machine. Since the **--asz_size** (p. 104) parameter is not specified, Acronis Secure Zone will be created with a default size that is the average between the maximum (all the unallocated space) and minimum (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. 50)

- 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. 50)

- 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. 51)

- 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. 51)

- 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. 52)

- 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. 52)

- 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. 53)

- 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. 113). 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 a storage node.

```
acrocmd list tape_libraries --host=storage_node --credentials="ASN user",pass
--service=asn
```

Listing tape slots (p. 53)

- 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. 113). 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-XXXXXXXXXXXX
--output=raw
```

Inventorying tapes (p. 54)

- Inventorying the tapes loaded into two tape devices. Since the **--mode** (p. 109) parameter is not specified, fast inventory will be performed.

```
acrocmd inventory tape
--libraries=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXX1,XXXXXXXX-XXXX-XXXX-XXXX-XXXXXX
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-XXXXXXXXXXX
--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-XXXXXXXXXXX
--slots=YYYYYYYY-YYYY-YYYY-YYYY-YYYYYYYYYYY1,YYYYYYYY-YYYY-YYYY-YYYY-YYYYYYYYYY
Y2,YYYYYYYY-YYYY-YYYY-YYYY-YYYYYYYYYY3
```

- 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-XXXXXXXXXXX
     ```

  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-XXXXXXXXXXX
     --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-XXXXXXXXXXX
     --slots=YYYYYYYY-YYYY-YYYY-YYYY-YYYYYYYYYY1,YYYYYYYY-YYYY-YYYY-YYYY-YYYYYY
     YYYY2
     ```

4.6 Operations with vaults

Validating a vault (p. 54)

- Validating all archives in a network folder except for password-protected ones. To validate a password-protected archive, use the **validate archive** (p. 40) command.

```
acrocmd validate vault --loc=\\srv1\backups --credentials=netuser1,pass1
```

Exporting a vault and importing archives to a vault

These operations are performed by means of the **export archive** (p. 39) command (see examples (p. 124)).

4.7 Operations with disks

Cloning a disk (p. 55)

- Cloning disk 2 of the local machine to disk 3 of the same machine.

```
acrocmd clone disk --source=2 --target=3
```

4.8 Operations with machines

Adding a machine (p. 56)

- Adding a machine to the management server.

```
acrocmd add machine --machine_address=192.168.1.2 --credentials=user,pass
--host=srv1 --credentials="srv1\AMS user",pass1 --service=ams
```

4.9 Advanced operations with virtual machines

4.9.1 Replicating virtual machines

Listing virtual machine replicas (p. 56)

- Listing replicas of a virtual machine.

```
acrocmd list replicas --host=srv1 --credentials="srv1\AMS user",pass1 --service=ams
--vmid=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
```

Replicating a virtual machine (p. 57)

- Creating a replica of a virtual machine.

```
acrocmd replicate vm --host=srv1 --credentials="srv1\AMS user",pass1 --service=ams
--vmserver_name=Server2 --vmname=John_s_vm --vmreplica_name=John_s_vm_replica
```

- Creating a replica of a virtual machine. The virtual disks of the replica will be stored in the thin provisioning format. Changed Block Tracking (CBT) will not be used.

```
acrocmd replicate vm --host=srv1 --credentials="srv1\AMS user",pass1 --service=ams
--vmserver_name=Server2 --vmname=Mary_s_vm --vmreplica_name=Mary_s_vm_copy
--vmresource_pool=vApp1/pool1/sub_pool2 --vmstorage=storage2
--vmprovisioning_mode=thin --cbt_mode=off
```

Failing over to a replica (p. 58)

- Failing over to a virtual machine replica.

```
acrocmd failover vm --host=srv1 --credentials="srv1\AMS user",pass1 --service=ams
--vmname=John_s_vm replica
```

Failing back from a replica (p. 58)

- Failing back from a replica to the original virtual machine.

```
acrocmd fallback vm --host=srv1 --credentials="srv1\AMS user",pass1 --service=ams
--vmname=John_s_vm replica
```

- Failing back from a replica to a new virtual machine. The resulting virtual machine will be powered on after the failback is complete.

```
acrocmd fallback vm --host=srv1 --credentials="srv1\AMS user",pass1 --service=ams
--vmname=Mary_s_vm_copy --vmserver_name=Server2 --target_name=Mary_s_vm
--vmstorage=storage2 --start_after_recovery
```

4.9.2 Running virtual machines from backups

Running a virtual machine from a backup (p. 60)

- Running a virtual machine from the latest backup of an archive stored in a network folder. The resulting virtual machine will be started automatically. Because the target virtual machine name

is not specified, the machine will be named as follows: `<source virtual machine name> (<sequence number>)`. The software will automatically select one of the available networks to connect the machine's network adapter to.

```
acrocmd mount vm --loc=\\bkpsrv\backups --credentials=bkpuser,pass
--arc=disk_archive --vmserver_name=esxi1 --vmstorage=datastore1
```

- Running a virtual machine from a backup stored in a network folder. The resulting virtual machine will not be started automatically and its network adapter will be connected to the specified network.

```
acrocmd mount vm  --loc=\\bkpsrv\backups --credentials=bkpuser,pass
--arc=disk_archive --backup=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
--vmserver_name=esxi1 --vmstorage=datastore1 --target_vmname=John_s_vm_temp
--host=srv1 --credentials=user2,pass2 --vmnetwork="VM Network" --auto_start=false
```

Deleting a virtual machine that is running from a backup (p. 61)

- Deleting a virtual machine that is running from a backup.

```
acrocmd umount vm --vmname=John_s_vm_temp
```

Finalizing a virtual machine that is running from a backup (p. 61)

- Finalizing a virtual machine that is running from a backup.

```
acrocmd finalize_vm_recovery --vmname=John_s_vm_temp --new_vmname=John_s_new
```

4.10 Administration operations

4.10.1 Collecting information

Getting log (p. 62)

- 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
```

Getting system information (p. 62)

- Saving the system information of the local machine to a file.

```
acrocmd sysinfo --loc=c:\logs\sysinfo.zip
```

4.10.2 Activities

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. 113). Therefore, you will be able to see and use complete GUIDs of activities.

```
acrocmd list activities --output=raw
```

- Viewing the running activities of Acronis Cyber Protect Management Server. By reviewing the command output, which displays the time elapsed from an activity start, you can detect hung-up processes on the 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
```

Stopping activities (p. 64)

- Stopping an activity on the local machine.

```
acrocmd stop activity --id=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
```

4.10.3 Plans

Listing plans (p. 64)

- Viewing all protection plans on the local machine. The output will be displayed in the raw format (p. 113). Therefore, you will be able to see and use complete GUIDs of plans.

```
acrocmd list plans --output=raw
```

- Viewing all centralized protection plans existing on Acronis Cyber Protect Management Server.

```
acrocmd list plans --host=srv1 --credentials="srv1\AMS user",pass1 --service=ams
```

- Viewing all protection plans with the **warning** status on the local machine.

```
acrocmd list plans --filter_status=warning
```

Deleting a plan (p. 66)

- Deleting a protection plan on the local machine.

```
acrocmd delete plan --id=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
```

Disabling a plan (p. 65)

- Disabling a protection plan on the local machine.

```
acrocmd disable plan --id=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
```

Enabling a plan (p. 65)

- Enabling a previously disabled protection plan on the local machine.

```
acrocmd enable plan --id=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
```

4.10.4 Tasks

Listing tasks (p. 66)

- Viewing all tasks on the local machine. The output will be displayed in the raw format (p. 113). 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. 67)

- Starting execution of a task on the local machine.

```
acrocmd run task --id=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
```

Stopping a task (p. 67)

- 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. 68)

- Deleting a task on the local machine.

```
acrocmd delete task --id=XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX
```

4.10.5 Licenses

Listing licenses (p. 68)

- Listing the Acronis Cyber Protect licenses assigned to a remote machine.

```
acrocmd list licenses --host=192.168.1.2 --credentials=user1,pass1
```

Assigning licenses (p. 69)

- Assigning Acronis Cyber Protect license to an agent that is not registered on the management server.

```
acrocmd add license --key=<license key>
```

4.11 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.

4.12 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. 16) 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 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 **acrocmd** utility or Acronis Cyber Protect 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 "**XXXYYYZZZ888**".
3. Copy this string and paste it into the necessary command string or script.

Copyright Statement

Acronis patented technologies

Technologies, used in this product, are covered and protected by one or more U.S. Patent Numbers: 7,047,380; 7,246,211; 7,275,139; 7,281,104; 7,318,135; 7,353,355; 7,366,859; 7,383,327; 7,475,282; 7,603,533; 7,636,824; 7,650,473; 7,721,138; 7,779,221; 7,831,789; 7,836,053; 7,886,120; 7,895,403; 7,934,064; 7,937,612; 7,941,510; 7,949,635; 7,953,948; 7,979,690; 8,005,797; 8,051,044; 8,069,320; 8,073,815; 8,074,035; 8,074,276; 8,145,607; 8,180,984; 8,225,133; 8,261,035; 8,296,264; 8,312,259; 8,347,137; 8,484,427; 8,645,748; 8,732,121; 8,850,060; 8,856,927; 8,996,830; 9,213,697; 9,400,886; 9,424,678; 9,436,558; 9,471,441; 9,501,234; and patent pending applications.