

Acronis

Acronis Cyber Infrastructure 3.0

Backup Gateway Quick Start Guide

July 26, 2019

Copyright Statement

Copyright ©Acronis International GmbH, 2002-2019. All rights reserved.

"Acronis" and "Acronis Secure Zone" are registered trademarks of Acronis International GmbH.

"Acronis Compute with Confidence", "Acronis Startup Recovery Manager", "Acronis Instant Restore", and the Acronis logo are trademarks of Acronis International GmbH.

Linux is a registered trademark of Linus Torvalds.

VMware and VMware Ready are trademarks and/or registered trademarks of VMware, Inc. in the United States and/or other jurisdictions.

Windows and MS-DOS are registered trademarks of Microsoft Corporation.

All other trademarks and copyrights referred to are the property of their respective owners.

Distribution of substantively modified versions of this document is prohibited without the explicit permission of the copyright holder.

Distribution of this work or derivative work in any standard (paper) book form for commercial purposes is prohibited unless prior permission is obtained from the copyright holder.

DOCUMENTATION IS PROVIDED "AS IS" AND ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT, ARE DISCLAIMED, EXCEPT TO THE EXTENT THAT SUCH DISCLAIMERS ARE HELD TO BE LEGALLY INVALID.

Third party code may be provided with the Software and/or Service. The license terms for such third-parties are detailed in the license.txt file located in the root installation directory. You can always find the latest up-to-date list of the third party code and the associated license terms used with the Software and/or Service at <http://kb.acronis.com/content/7696>

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.

Contents

- 1. Introduction 1**
 - 1.1 About This Guide 1
 - 1.2 Hardware Requirements for ABGW-only Installations 1
- 2. Installing Acronis Cyber Infrastructure 3**
- 3. Creating the Storage Cluster 5**
- 4. Connecting Acronis Backup Software to Storage Backends via Backup Gateway 7**
 - 4.1 Connecting to the Local Storage Cluster via Backup Gateway 8
 - 4.2 Connecting to External NFS Shares via Backup Gateway 10
 - 4.3 Connecting to Public Cloud Storage via Backup Gateway 13
 - 4.3.1 Important Requirements and Restrictions 14
 - 4.3.2 Setting Up Backup Gateway 15
- 5. Updating certificate for Backup Gateway 17**
- 6. Re-registering Backup Gateway in a New Acronis Backup Advanced 19**
- 7. Migrating Backups from Older Solutions 20**
 - 7.1 Migrating Backups from Acronis Storage 1.5 21
 - 7.2 Migrating Backups from Acronis Storage Gateway 1.6 and 1.7 (NFS) 25
- 8. Monitoring Backup Gateway 29**
- 9. Releasing Nodes from Backup Gateway 31**

CHAPTER 1

Introduction

1.1 About This Guide

This guide describes how to deploy Acronis Cyber Infrastructure on a single node with the sole purpose of creating Backup Gateway endpoints.

1.2 Hardware Requirements for ABGW-only Installations

Normally, Acronis Cyber Infrastructure is installed on at least five nodes to fully utilize its built-in high availability and data redundancy capabilities. However, if you only want to use the ABGW feature, you can deploy a very basic installation on a single virtual or physical node. Although in this case you may need to provide data redundancy by other means or risk losing user data. You can do the following:

- Use a virtual machine (VM) with at least two virtual HDDs (three are recommended). In this case, only one HDD will be used for data storage and you may need to make sure that the VM is made redundant by the virtualization solution it runs on.
- Use a physical server with at least two disks (three are recommended). Have in mind that you will need to use more disks for storage to enable data redundancy. For more details on how to plan your server configuration, see the [Installation Guide](#).

Other minimal requirements are:

- 120 GB or higher capacity of each HDD/SSD;

Note: If you plan to use Backup Gateway to store backups in the cloud, make sure the local storage cluster has plenty of logical space for staging (keeping backups locally before sending them to the cloud). For example, if you perform backups daily, provide enough space for at least 1.5 days' worth of backups. For more details, see the [Administrator's Guide](#).

- 4 logical CPUs*;
- 4GB RAM**;
- 1GbE network interface with a static IP address. You can also use the same network interface for both internal and external traffic (but you are advised to configure secure networking later).

* A logical CPU is a core (thread) in a multicore (multithreading) processor.

** Each CS, e.g., storage disk, requires 1 GB of RAM (0.5 GB anonymous memory + 0.5 GB page cache). The total page cache limit is 12 GB. In addition, each MDS requires 0.2 GB of RAM + 0.1 GB per 100TB of physical storage space.

CHAPTER 2

Installing Acronis Cyber Infrastructure

To install Acronis Cyber Infrastructure, do the following:

1. Prepare bootable media using the distribution ISO image (mount it to an IPMI virtual drive, create a bootable USB drive, or set up a PXE server).
2. Boot the server from the chosen media.
3. On the welcome screen, choose **Install Acronis Cyber Infrastructure**.
4. On step 1, please carefully read the End-User License Agreement. Accept it by ticking the **I accept the End-User License Agreement** checkbox and click **Next**.
5. On step 2, configure a static IP address for the NIC and provide a hostname: either a fully qualified domain name (hostname, domainname) or a short name (hostname).
6. On step 3, choose your time zone. Date and time will be set via NTP. You will need an Internet connection for synchronization to complete.
7. On step 4, specify what type of node you are installing. First deploy one primary node, then deploy as many secondary nodes as you need.
 - If you chose to deploy the primary node, select a network interface for internal management and configuration purposes as well as one that will provide access to the admin panel. In addition, create a password for the superadmin account of the admin panel and confirm it in the corresponding fields.
 - If you chose to deploy a secondary node, provide the IP address of the management node and the token. Both are obtained from the admin panel. Log in to the admin panel on port 8888. Panel's IP

address is shown in the console after deploying the primary node. Use the default user name shown on the login screen and the primary node's root password. In the admin panel, open **INFRASTRUCTURE > Nodes** and click **ADD NODE** to invoke a screen with the management node address and the token.

The node may appear on the **INFRASTRUCTURE > Nodes** screen in the **UNASSIGNED** list as soon as token is validated. However, you will be able to join it to the storage cluster only after the installation is complete.

8. On step 5, choose a disk for the operating system. This disk will have the supplementary role **System**, although you will still be able to set it up for data storage in the admin panel. You can also create software RAID1 for the system disk to ensure its high performance and availability.
9. On step 6, enter and confirm the password for the root account and click **Start installation**.

Once the installation is complete, the node will reboot automatically and you will see a welcome prompt with the address of the admin panel.

CHAPTER 3

Creating the Storage Cluster

To create the storage cluster, do the following:



1. Open the **INFRASTRUCTURE > Nodes** screen and click a node in the **UNASSIGNED** list.
2. On the node overview screen, click **Create cluster**.
3. In the **Cluster** field, type a name for the cluster. The name may only contain Latin letters (a-z, A-Z), numbers (0-9), underscores ("_") and hyphens ("-").



X New cluster

Create cluster on node **node001**

Cluster

Storage interface

 Encryption 

NEW CLUSTER **ADVANCED CONFIGURATION**

4. Click **New cluster**.

You can monitor cluster creation progress in the **HEALTHY** list of the **INFRASTRUCTURE > Nodes** screen.

The creation might take some time depending on the number of disks to be configured. Once the automatic configuration is complete, the cluster is created.

CHAPTER 4

Connecting Acronis Backup Software to Storage Backends via Backup Gateway

Note: If you are going to migrate your Acronis Storage Gateway, skip the steps described in this chapter and proceed to *Migrating Backups from Older Solutions* (page 20).

The Backup Gateway storage access point (also called “gateway”) is intended for service providers who use Acronis Backup Cloud and/or Acronis Backup Advanced and want to organize an on-premise storage for their clients’ backed-up data.

Backup Gateway enables a service provider to easily configure storage for the proprietary deduplication-friendly data format used by Acronis.

Backup Gateway supports the following storage backends:

- storage clusters with software redundancy by means of erasure coding,
- NFS shares,
- public clouds, including a number of S3 solutions as well as Microsoft Azure, OpenStack Swift, and Google Cloud Platform.

While your choice should depend on scenario and requirements, it is recommended to keep Acronis backup data in the local storage cluster. In this case, you can have the best performance due to WAN optimizations and data locality. Keeping backups in an NFS share or a public cloud implies the unavoidable data transfer

and other overhead, which reduces overall performance.

Take note of the following:

- When configuring Backup Gateway, you will need to provide the credentials of your administrator account in the Acronis backup software.
- In cases when not local but external storage (e.g., NFS) is used with Backup Gateway, redundancy has to be provided by said external storage. Backup Gateway does not provide data redundancy or perform data deduplication itself.

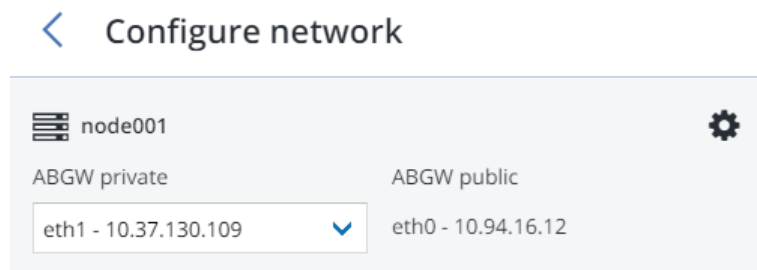
4.1 Connecting to the Local Storage Cluster via Backup Gateway

Before you proceed, make sure that the destination storage has enough space for both existing and new backups.

To set up Backup Gateway, do the following:

1. On the **INFRASTRUCTURE > Networks** screen, make sure that the **ABGW private** and **ABGW public** traffic types are added to your networks.
2. In the left menu, click **STORAGE SERVICES > Backup**.
3. Select the node(s) to run the gateway services on and click **Create gateway** in the right menu.
4. Select **This Acronis cluster** as storage type.
5. Make sure the correct network interface is selected in the corresponding drop-down list. Click **NEXT**.

If necessary, click the cogwheel icon and configure node's network interfaces on the **Network Configuration** screen.



6. On the **Volume Parameters** tab, select the desired tier, failure domain, and data redundancy mode.

< Volume parameters

Tier:
Tier 0

Data redundancy:
 Erasure coding

Failure domain:
Host

Encoding 1+0	0% overhead
Encoding 1+2	200% overhead
Encoding 3+2	67% overhead

BACK NEXT

Redundancy by replication is not supported for Backup Gateway.

You can later change the erasure coding mode on the **Backup > Parameters** panel.

7. On the **DNS Configuration** tab, specify the external DNS name for this gateway, e.g, `backupgateway.example.com`. Make sure that each node running the gateway service has a port open for outgoing Internet connections and incoming connections from your Acronis backup software. Backup agents will use this address and port to upload the backup data.

Important: Configure your DNS server according to the example suggested in the admin panel.

Important: Each time you change nodes in the Backup Gateway cluster, adjust the DNS settings accordingly.

← DNS configuration

DNS name

This may require changing the DNS server configuration, which may look as follows:

```
$TTL 1h
@ IN SOA ns1.myhoster.com. root.backup.example.com. (
2018120313 ;serial
1h ;refresh
30m ;retry
7d ;expiration
1h ) ;minimum
```

BACK NEXT

Click **Next**.

8. On the **Register in backup software** pane, specify the following information for your Acronis product:
 - In **Address**, specify the address of the Acronis Backup Cloud management portal (e.g., <https://cloud.acronis.com/>) or the hostname/IP address and port of the Acronis Backup Advanced management server (e.g., <http://192.168.1.2:9877>).
 - In **Account**, specify the credentials of a partner account in the cloud or of an organization administrator on the local management server.
9. Finally, click **DONE**.

4.2 Connecting to External NFS Shares via Backup Gateway

Take note of these limitations:

- Acronis Cyber Infrastructure does not provide data redundancy on top of NFS volumes. Depending on the implementation, NFS shares may use their own hardware or software redundancy.
- In the current version of Acronis Cyber Infrastructure, only one cluster node may store backups on an

NFS volume.

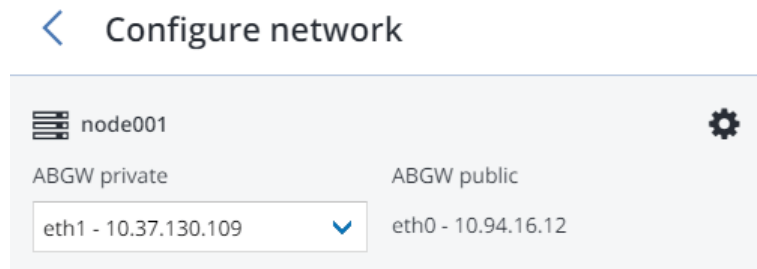
Before you proceed, make sure that:

1. The NFS share has enough space for backups.
2. Each NFS export is used by only one gateway. In particular, do not configure two Acronis Cyber Infrastructure installations to use the same NFS export for backup storage.

To set up Backup Gateway, do the following:

1. On the **INFRASTRUCTURE > Networks** screen, make sure that the **ABGW private** and **ABGW public** traffic types are added to your networks.
2. In the left menu, click **STORAGE SERVICES > Backup**.
3. Select the node(s) to run the gateway services on and click **Create gateway** in the right menu.
4. Select **Network File System** as storage type.
5. Make sure the correct network interface is selected in the corresponding drop-down list. Click **NEXT**.

If necessary, click the cogwheel icon and configure node's network interfaces on the **Network Configuration** screen.



6. On the **Volume Parameters** tab, specify the hostname or IP address of the NFS share as well as the export name. Click **NEXT**.

< Volume parameters

NFS hostname or IP

Export name

NFS3 (no clustering)
 NFS4

7. On the **DNS Configuration** tab, specify the external DNS name for this gateway, e.g, `backupgateway.example.com`. Make sure that each node running the gateway service has a port open for outgoing Internet connections and incoming connections from your Acronis backup software. Backup agents will use this address and port to upload the backup data.

Important: Configure your DNS server according to the example suggested in the admin panel.

Important: Each time you change nodes in the Backup Gateway cluster, adjust the DNS settings accordingly.

← DNS configuration

DNS name

This may require changing the DNS server configuration, which may look as follows:

```
$TTL 1h
@ IN SOA ns1.myhoster.com. root.backup.example.com. (
2018120313 ;serial
1h ;refresh
30m ;retry
7d ;expiration
1h ) ;minimum
```

BACK NEXT

Click **Next**.

8. On the **Register in backup software** pane, specify the following information for your Acronis product:
 - In **Address**, specify the address of the Acronis Backup Cloud management portal (e.g., <https://cloud.acronis.com/>) or the hostname/IP address and port of the Acronis Backup Advanced management server (e.g., <http://192.168.1.2:9877>).
 - In **Account**, specify the credentials of a partner account in the cloud or of an organization administrator on the local management server.
9. Finally, click **DONE**.

4.3 Connecting to Public Cloud Storage via Backup Gateway

With Backup Gateway, you can have Acronis Backup Cloud or Acronis Backup Advanced store backups in a number of public clouds: Amazon S3, IBM Cloud, Alibaba Cloud, IJ, Cleversafe, Microsoft Azure, Swift object storage, Softlayer (Swift), Google Cloud Platform, as well as solutions using S3 with the older AuthV2-compatible authentication methods. However, compared to the local storage cluster, storing backup data in a public cloud increases the latency of all I/O requests to backups and reduces performance. For this

reason, it is recommended to use the local storage cluster as storage backend.

Since backups are cold data with specific access rights, it is cost-efficient to use storage classes that are intended for long-term storage of infrequently accessed data. The recommended storage classes include the following:

- Infrequent Access for Amazon S3,
- Cool Blob Storage for Microsoft Azure,
- Nearline and Coldline Storage for Google Cloud Platform.

Note that real data storage costs may be 10-20% higher due to additional fees for operations like data retrieval and early deletion.

4.3.1 Important Requirements and Restrictions

1. When working with public clouds, Backup Gateway uses the local storage as the staging area as well as to keep service information. It means that the data to be uploaded to a public cloud is first stored locally and only then sent to the destination. For this reason, it is vital that the local storage is persistent and redundant so the data does not get lost. There are multiple ways to ensure the persistence and redundancy of local storage. You can deploy Backup Gateway on multiple cluster nodes and select a good redundancy mode. If Acronis Cyber Infrastructure with the gateway is deployed on a single physical node, you can make the local storage redundant by replicating it among local disks. If Acronis Cyber Infrastructure with the gateway is deployed in a virtual machine, make sure it is made redundant by the virtualization solution it runs on.
2. Make sure the local storage cluster has plenty of logical space for staging. For example, if you perform backup daily, provide enough space for at least 1.5 days' worth of backups. If the daily backup total is 2TB, provide at least 3TB of logical space. The corresponding raw storage required will vary depending on the encoding mode: 9TB (3TB per node) in the 1+2 mode, 5TB (1TB per node) in the 3+2 mode, etc.
3. You must update Acronis Backup Agents to version 12.0.4492 (Windows/Mac) or 12.0.4470 (Linux). Otherwise agents' attempts to place backups in the new storage backend will result in "Backup failed" errors.
4. If you are to store backups in an Amazon S3 cloud, keep in mind that Backup Gateway may sometimes block access to such backups due to the eventual consistency of Amazon S3. It means that Amazon S3 may occasionally return stale data as it needs time to render the most recent version of the data accessible. Backup Gateway detects such delays and protects backup integrity by blocking access until

the cloud updates.

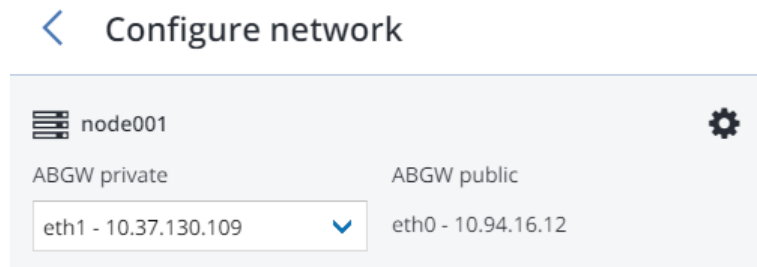
4.3.2 Setting Up Backup Gateway

Before you proceed, make sure that the destination storage has enough space for backups.

To set up Backup Gateway, do the following:

1. On the **INFRASTRUCTURE > Networks** screen, make sure that the **ABGW private** and **ABGW public** traffic types are added to your networks.
2. In the left menu, click **STORAGE SERVICES > Backup**.
3. Select the node(s) to run the gateway services on and click **Create gateway** in the right menu.
4. Select **Public Cloud** as storage type.
5. Make sure the correct network interface is selected in the corresponding drop-down list. Click **NEXT**.

If necessary, click the cogwheel icon and configure node's network interfaces on the **Network Configuration** screen.



6. On the **Public cloud parameters** pane, do the following:
 1. Select a public cloud provider. If your provider is S3-compatible but not in the list, try **AuthV2 compatible**.
 2. Depending on the provider, specify **Region**, **Authentication (keystone) URL**, or **Endpoint URL**.
 3. In case of Swift object storage, specify the authentication protocol version and attributes required by it.
 4. Specify user credentials. In case of Google Cloud, select a JSON file with keys to upload.
 5. Specify the folder (bucket, container) to store backups in. The folder must be writeable.

Click **NEXT**.

7. On the **Register in backup software** pane, specify the following information for your Acronis product:
 - In **Address**, specify the address of the Acronis Backup Cloud management portal (e.g., <https://cloud.acronis.com/>) or the hostname/IP address and port of the Acronis Backup Advanced management server (e.g., <http://192.168.1.2:9877>).
 - In **Account**, specify the credentials of a partner account in the cloud or of an organization administrator on the local management server.
8. Finally, click **DONE**.

CHAPTER 5

Updating certificate for Backup Gateway

When you register a Backup Gateway in Acronis Backup Cloud or Acronis Backup Advanced, they exchange certificates that are valid for one year. One and a half months before expiration, you will be alerted about the expiring certificate in the admin panel. To update the certificate, you need to connect to your backup software and renew the certificate. Do the following:

1. On the **STORAGE SERVICES > Backup** screen, click **Update certificate**.
2. On the **Connect to backup software** pane, specify the following information for your Acronis product:
 - In **Address**, specify the address of the Acronis Backup Cloud management portal (e.g., <https://cloud.acronis.com/>) or the hostname/IP address and port of the Acronis Backup Advanced management server (e.g., <http://192.168.1.2:9877>).
 - In **Account**, specify the credentials of a partner account in the cloud or of an organization administrator on the local management server.

✕ Connect to backup software

Connect to backup software where this storage is registered.

Address

Enter the URL of the cloud management portal or <name/IP address;port> of the local management server.

Account

Enter the credentials of a partner account in the cloud or of an organization administrator on the local management server.

3. Click **NEXT**.
4. On all nodes included into the ABGW cluster, restart the service:

```
# systemctl restart vstorage-abgw
```

CHAPTER 6

Re-registering Backup Gateway in a New Acronis Backup Advanced

To switch a configured Backup Gateway to a different Acronis Backup Advanced instance, re-register the gateway with that instance. To do this:

1. On the **STORAGE SERVICES > Backup** screen, click **Re-register**.
2. On the **Re-registration in Acronis Backup** tab, specify the following:
 - In **Address**, specify the hostname/IP address of the target management server and the port 9877 (e.g., `http://192.168.1.2:9877`). Note that the address must be provided using the HTTP protocol, not HTTPS.
 - In **Account**, specify the credentials of the management server administrator account.
3. Click **DONE**.

CHAPTER 7

Migrating Backups from Older Solutions

By means of Backup Gateway, you can migrate backups from Acronis Storage 1.5 and Acronis Storage Gateway 1.6 and 1.7 to a storage backend of your choice: the local storage cluster, external NFS, or public cloud.

Migration to NFS backends is not available, however, if multiple nodes are selected as Backup Gateway.

Important: Before you proceed, make sure that the destination storage has enough space for both existing and new backups.

The migration procedure can be described as follows:

1. Root credentials for SSH access to the chosen source storage are provided to Backup Gateway.
2. Backup Gateway sets up a proxy on the source storage that starts redirecting requests incoming from Acronis Backup Agents from the source storage to Backup Gateway.
3. Backup Gateway starts relocating backups to the chosen storage backend. The data that remains to be migrated is shown in the **Migration Backlog** section on the Backup Gateway **Overview** screen. When the backlog empties, all data has been migrated.

After the migration has started, the data of new and incremental backups is stored on the destination storage. Backups from the source storage are pulled in the background. The entire process is transparent to backup agents, which continue working uninterrupted.

4. To be able to dispose of the source storage after migration completes, requests from Acronis Backup

Agents are directed straight to Backup Gateway, bypassing the proxy on the source storage. Steps that you need to take depend on how the source storage is registered in Acronis Backup Cloud: under the IP address or DNS name.

- If the source storage is already registered under the DNS name, you need to change the IP address behind it to those of the Backup Gateway nodes.
- If the source storage is registered under the IP address, it is strongly recommended to re-register Backup Gateway in Acronis Backup Cloud under a DNS name that resolves into the IP addresses of Backup Gateway nodes. Using a DNS name will provide a smoother transition and you will not need to reconfigure Acronis Backup Cloud even if you change nodes in the Backup Gateway (you will still need to adjust the IP addresses behind the DNS name accordingly).

Alternatively, if you do not want to use a DNS name, you need to wait for the migration to complete, shut down both the source and destination machines, and reconfigure your network so that the public interface of the destination machine gets the IP address of the source machine.

The concrete steps that you need to perform in the admin panel to initiate backup migration are described in the next subsections.

7.1 Migrating Backups from Acronis Storage 1.5

1. Update all Acronis Storage 1.5 nodes to version 1.5.65665 or newer as earlier versions are not eligible for migration. To do this, log in to the Acronis Storage web console, proceed to **SETTINGS > Software Update**, upload the [latest ISO image](#), and click **Update**.
2. Log in to the new storage cluster and on the **STORAGE SERVICES > Backup > NODES** screen, select one or more nodes and click **Migrate**.
3. Select **Acronis Storage 1.5** and click **NEXT**.
4. Specify the DNS name of the source storage registered in Acronis Backup Cloud and click **NEXT**.

< Enter source storage DNS (2/9)

Specify the DNS name of the source storage registered in Acronis Backup Cloud.

DNS name

5. Provide the credentials for the cloud management portal of the Acronis Backup Cloud installation that the source storage is registered in and click **NEXT**.
6. Enable SSH access on all FES nodes of Acronis Storage 1.5 as instructed and click **NEXT**.
7. Map the public IP addresses of FES nodes accessible via SSH to their private IP addresses and click **NEXT**. This step is required to access FES nodes via SSH through tunnels.

< Set up IP mapping for FES nodes (5/9)

Listed below are public IP addresses of the FES nodes in the source storage. For each FES node, specify its private IP address open for SSH connections.

Public IP address (FES)

Private IP address (SSH)

10.28.74.3

10.28.74.9

8. Choose a destination storage type to create a gateway to:
 - local storage cluster,

- external NFS, or
- public cloud.

9. Make sure the correct network interface is selected in the corresponding drop-down list. Click **NEXT**.

If necessary, click the cogwheel icon and configure node's network interfaces on the **Network Configuration** screen.

10. Configure the destination storage backend:

- For a storage cluster, select the desired tier, failure domain, and redundancy mode.
- For NFS, specify a hostname or IP address, an export name and path, and choose the NFS version.

< Volume parameters

NFS hostname or IP
nfs.example.com

Export name
/path/to/volume

NFS3 (no clustering)

NFS4

BACK NEXT

- For public cloud, select a public cloud provider, specify credentials, and the name of the folder (bucket, container).

Important: You must update Acronis Backup Agents to version 12.0.4492 (Windows/Mac) or 12.0.4470 (Linux). Otherwise agents' attempts to place backups in the new storage backend will result in "Backup failed" errors.

< Public cloud parameters

Select the object storage type

Amazon S3

Region

us-east-1

Access key ID

Secret Access key

Bucket

acronis-us-west-gateway-files

Click **NEXT**.

11. Review the source and destination storages and click **PROCEED**.
12. On the next panel, follow the instructions to point the source storage DNS name to the IP addresses of your new storage cluster. Having updated the DNS configuration, wait for 24 hours for all backup agents to cache the new IP addresses. Until this happens, the **START MIGRATION** button will be disabled. After all backup agents have been rerouted to the new cluster, the button will become enabled and you can click it to start migration.

Reconfigure DNS

Before migration can start, all traffic between backup agents and source storage must be rerouted via a TCP proxy that has been set up in this cluster. For this, you will need to reconfigure your DNS server as suggested below to map source storage's DNS name `source.example.com` to this storage cluster's IP address(es). After that, all backup agents must cache the new IP address(es), which may take about a day.

Suggested DNS configuration

[Copy to clipboard](#)

```
$TTL 1h

@   IN   SOA  ns1.myhoster.com. source.example.com (
      2018042013   ; serial
      1h   ; refresh
      30m  ; retry
      7d   ; expiration
      1h ) ; minimum

; primary name server
NS ns1.myhoster.com.

; secondary name server
NS ns2.myhoster.com.

A 10.248.64.99
```

[✖ Cancel migration and reset settings](#)

START MIGRATION

Depending on data size, migration may take as long as several days.

7.2 Migrating Backups from Acronis Storage Gateway 1.6 and 1.7 (NFS)

1. Disable the firewall or explicitly open TCP port 44446 on the source Acronis Storage Gateway.
 - To disable the firewall, run

```
# systemctl stop firewalld
```

- To open TCP port 44446 in the firewall, do the following:
 1. Find out the zone where port 44445 is open:

```
# firewall-cmd --list-all-zones | grep active
mix_eth0 (active)
```

2. Add the required port to the same zone:

```
# firewall-cmd --zone=mix_eth0 --permanent --add-port=44446/tcp
# firewall-cmd --reload
```

2. In the admin panel of the ABGW node, proceed to **STORAGE SERVICES > Backup > NODES**, select the node(s) to run the gateway services on, and click **Migrate**.
3. Select the source storage version and click **NEXT**.
4. Specify the connection details for the source storage and click **NEXT**.

◀ Connect to source (2/7)

Specify the address of the source storage (as registered in Backup Cloud) and the root password to that machine.

Hostname or IP address

Password

Make sure the SSH service is running and port 22 is open for incoming connections.

5. Provide the credentials for the cloud management portal of the Acronis Backup Cloud installation that the source storage is registered in and click **NEXT**.
6. If the source storage is registered in Acronis Backup Cloud under an IP address, you will see the DNS configuration screen. On it, click **RE-REGISTER WITH DNS** and specify the source storage DNS name (recommended, see above). Or, if you want to keep using the IP address, click **PROCEED WITH IP**.

If you specified a DNS name, configure your DNS server according to the suggested example.

Important: Each time you change nodes in the Backup Gateway cluster, adjust the DNS settings accordingly.

7. Choose a destination storage type to create a gateway to:

- local storage cluster,
- external NFS, or
- public cloud.

8. Make sure the correct network interface is selected in the corresponding drop-down list. Click **NEXT**.

If necessary, click the cogwheel icon and configure node's network interfaces on the **Network Configuration** screen.

9. Configure the destination storage backend:

- For a storage cluster, select the desired tier, failure domain, and redundancy mode.
- For NFS, specify a hostname or IP address, an export name and path, and choose the NFS version.

< Volume parameters

NFS hostname or IP

Export name

NFS3 (no clustering)
 NFS4

- For public cloud, select a public cloud provider, specify credentials, and the name of the folder (bucket, container).

Important: You must update Acronis Backup Agents to version 12.0.4492 (Windows/Mac) or 12.0.4470 (Linux). Otherwise agents' attempts to place backups in the new storage backend will

result in “Backup failed” errors.

< Public cloud parameters

Select the object storage type

Amazon S3

Region

us-east-1

Access key ID

Secret Access key

Bucket

acronis-us-west-gateway-files

Click **NEXT**.

10. Review the source and destination storages and click **START MIGRATION**.

Depending on data size, migration may take as long as several days.

CHAPTER 8

Monitoring Backup Gateway

After you create a Backup Gateway, you can monitor it on the **STORAGE SERVICES > Backup > OVERVIEW** screen. The charts show the following information:

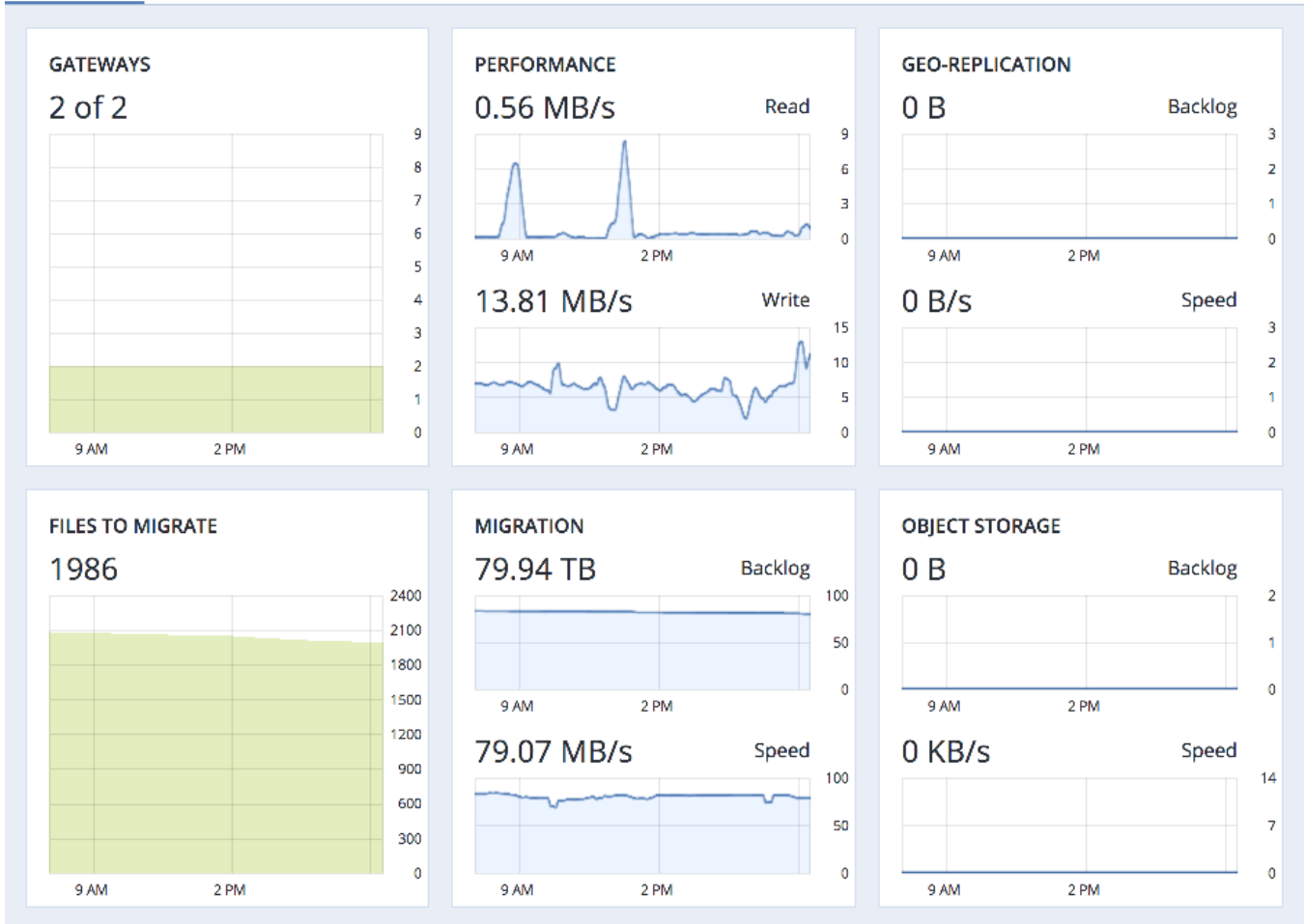
- the performance of Backup Gateway services,
- the geo-replication speed and backlog (the amount of data waiting to be replicated),
- object storage speed and backlog (the amount of data waiting to be uploaded to public cloud),
- migration speed and backlog (the amount of data waiting to be migrated),
- how many files are left in migration queue.

If you migrate backups from Acronis Storage 1.5 or 1.7, migration backlog will be larger than the amount of data on the source storage. The reason is that Acronis Storage versions prior to 2.x use the old backup (FES) protocol that sends more data over network. The difference between source data size and backlog also very much depends on the retention policy utilized by the backup solution. Despite this, the resulting space occupied by migrated data on the destination will be similar to that on the source.

If backlogs do not decrease over time, it means the data cannot be replicated, migrated, or uploaded fast enough. The reason may be insufficient network transfer speed, and you may need to check or upgrade your network.

Acronis Backup Gateway

OVERVIEW **NODES** GEO-REPLICATION



CHAPTER 9

Releasing Nodes from Backup Gateway

Backup Gateway is meant to provide access to one specific storage backend. If you need to switch the backend, e.g., from a public cloud to a local storage cluster or one public cloud bucket to another, you need to delete the Backup Gateway by releasing all its nodes and create a new one.

When the Backup Gateway is deleted, it is also unregistered from your Acronis backup software, which loses access to the storage backend.

Do the following to release the last node in the gateway:

1. On the **STORAGE SERVICES > Backup > NODES** screen, select the node and click **Release**.
2. On the **Unregister from backup software** panel, choose one of the following:
 - **Graceful release** (recommended, see note below). Releases the node, deletes the Backup Gateway and unregisters it from your Acronis backup software.
 - **Force release**. Releases the node, deletes the Backup Gateway but does not unregister it from your Acronis backup software.

Important: Choose this option only if you are sure that the gateway has already been unregistered from your Acronis backup software. Otherwise, you will need to register a new gateway in your Acronis backup software and for that you will need to delete and recreate not just the Backup Gateway but also the entire storage cluster.

✕ Unregister from backup software

Graceful release **i**

Forced release **i**

Unregister this storage from backup software.

Administrator account

Enter the credentials of a partner account in the cloud or of an organization administrator on the local management server.

NEXT

3. Specify the credentials of your administrator account in your Acronis backup software and click **NEXT**. In case the release is forced, simply click **NEXT**.