

# Hitachi Content Platform Anywhere Enterprise

v7.6

Edge Filer Installation Guide for ESXi

This document describes how to install and configure the HCP Anywhere Enterprise Edge Filer in a VMware ESXi environment.

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## **Contents**

Preface	. 4
About this document	
Document conventions	
Intended audience	
Accessing product downloadsGetting Help	
Chapter 1. The HCP Anywhere Enterprise Edge Filer	. 5
Technical Specifications Port Requirements Browser Requirements License Types	6 7
Chapter 2. HCP Anywhere Enterprise Edge Filer Planning	
Chapter 3. Installing the HCP Anywhere Enterprise Edge Filer on	40
ESXi	10
Chapter 4. Initial HCP Anywhere Enterprise Edge Filer Configuration	13
Configuring the HCP Anywhere Enterprise Portal as a Precondition to Setting Up the HCP Anywhere Enterprise Edge Filer	13
Initial HCP Ánywhere Enterprise Edge Filer SetupLoading a Trusted CA Certificate to a HCP Anywhere Enterprise Edge Filer	16
Chapter 5. Migrating a File Server	23
Discovering Shares	
The Discovery Report	
The Discovery Report	
Preparing the HCP Anywhere Enterprise Portal to Migrate WORM Compliant	01
Shares	
Migration Procedure	
Completing a Migration and Performing a Delta Migration	-38

## **Preface**

#### About this document

Hitachi Content Platform Anywhere Enterprise Edge Filers (HCP Anywhere Enterprise Edge Filers) seamlessly combine collaboration capabilities, local storage, cloud storage, and data protection functionality in a single, cost-effective package. This document describes how to install and perform the initial setup of HCP Anywhere Enterprise Edge Filer on an ESXi platform.

#### **Document conventions**

This document uses the following typographic convention:

Convention	Description		
Bold	<ul> <li>Indicates text in a window, including window titles, menus, menu options, buttons, fields, and labels. Example: Click <b>OK</b>.</li> <li>Indicates emphasized words in list items.</li> </ul>		
Italic	Indicates a document title or emphasized words in text.		
Monospace	Indicates text that is displayed on screen or entered by the user.  Example: pairdisplay -g oradb		

### Intended audience

This document is intended for HCP Anywhere Enterprise users from a Windows or macOS PC.

## **Accessing product downloads**

Product software, drivers, and firmware downloads are available on Hitachi Vantara Support Connect: https://support.hitachivantara.com/.

Log in and select Product Downloads to access the most current downloads, including updates that may have been made after the release of the product.

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Preface

## Chapter 1. The HCP Anywhere Enterprise Edge Filer

HCP Anywhere Enterprise Edge Filers seamlessly combine collaboration capabilities, local storage, cloud storage, and data protection functionality in a single, cost-effective package. HCP Anywhere Enterprise Edge Filers are available as virtual appliances: V Series HCP Anywhere Enterprise Edge Filers are software-based gateways running on a hypervisor, such as ESXi or KVM, or in a cloud, such as AWS.

HCP Anywhere Enterprise Edge Filers replace file servers and other traditional file storage solutions with a single, cloud-integrated and cost-effective solution.

#### HCP Anywhere Enterprise Edge Filers:

- Incorporate Intelligent caching technology.
   Dynamically cache files from a secure HCP Anywhere Enterprise Portal to the HCP Anywhere Enterprise Edge Filer.
- Deliver unlimited file access to office users, with visibility to all organizational files centralized in the cloud, either private or public.
- Share files across your network and provide users with collaboration across offices and endpoints with no local storage restraints.
- Synchronize folders across your network and the cloud, including keeping the main storage on the cloud with stubs saved on the edge filer. A stub is a file with a tiny footprint that contains the metadata about the file, such as the file name, size, and modification date. Only the folder and file metadata and not the actual file content is saved locally.

The HCP Anywhere Enterprise Edge Filer is managed using a web-based interface or centrally through the HCP Anywhere Enterprise Portal. The HCP Anywhere Enterprise Portal also allows users to sync content between the HCP Anywhere Enterprise Portal and the HCP Anywhere Enterprise Edge Filer, as well as between HCP Anywhere Enterprise Edge Filers located in different branch offices.

The HCP Anywhere Enterprise Edge Filer connects to a HCP Anywhere Enterprise Portal to provide users with LAN speed access to all their home folders and shared folders on the HCP Anywhere Enterprise Portal. Local user accounts are mapped to the equivalent user accounts in the cloud, so that each user sees only his or her personal view of the cloud files. Users can access locally stored, synced copies of the folders they are allowed to access on the HCP Anywhere Enterprise Portal.

The main storage is on the HCP Anywhere Enterprise Portal in the cloud with stubs saved on the HCP Anywhere Enterprise Edge Filer. A stub is a file with a tiny footprint that contains the metadata about the file, such as the file name, size, and modification date. Only the folder and file metadata and not the actual file content is saved locally. This results in the cost of storage being significantly lower. Also, systems with many file changes, where only some of the files are required locally, don't over use bandwidth between the cloud and HCP Anywhere Enterprise Edge Filer. Only the required files are passed across the wire.

When a user accesses a file stub, the file is downloaded and opened without delay, and where possible, large files are streamed from the cloud so they can be accessed faster. After the download has completed, the file is unstubbed. Any changes to the file are synced back to the HCP Anywhere

Enterprise Portal. Folders that are always required can be pinned, in which case the files in the folders, and not the stubs, are stored on the HCP Anywhere Enterprise Edge Filer.

## **Technical Specifications**

#### **Port Requirements**

Firewall ports opened for managing the HCP Anywhere Enterprise Edge Filer user interface:

Port	Protocol	Direction	Notes
443	TCP	Inbound	HTTPS. This port should be behind the firewall.

• Firewall ports opened to the HCP Anywhere Enterprise Portal:

Port	Protocol	Direction	Notes
443	TCP	Inbound	HTTPS. This port should only be open to the specific HCP Anywhere Enterprise Portal IP addresses.
995	TCP	outbound	CTTP. Communications with HCP Anywhere Enterprise Portals.
8443	TCP	outbound	_

Firewall ports opened to the HCP Anywhere Enterprise Portal backend storage when Direct
 Mode is set for the storage node in the HCP Anywhere Enterprise Portal:

Port	Protocol	Direction	Notes
443	TCP	Outbound	HTTPS

· Firewall ports opened for Active Directory:

Port	Protocol	Direction	Notes
88	TCP/UDP	Outbound	If Kerberos is used
389/3268	TCP/UDP	Outbound	LDAP protocol/LDAP GC (Global Catalog) protocol
445	TCP	Outbound	SMB when joining to a domain as a Computer account

• Firewall ports opened for antivirus updates:

Port	Protocol	Direction	Notes
80	TCP	Outbound	НТТР

Firewall ports opened for SMTP:

Port	Protocol	Direction	Notes
25	TCP	Outbound	The port is configurable in the HCP Anywhere Enterprise Edge Filer user interface (in the <b>Configuration</b> view, select <b>Alerts &gt; Mail Server</b> in the navigation pane).

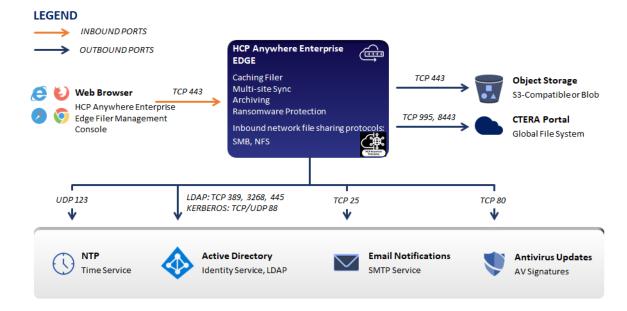
· Firewall ports opened for NTP updates:

Port	Protocol	Direction	Notes
123	UDP	Outbound	_

Warning: HCP Anywhere Enterprise Edge Filers operate behind a firewall, and it is important to leave all other ports closed.

• Internal network file sharing protocols (not requiring any port configuration):

Port	Protocol	Direction	Notes
111, 2049	TCP	Inbound	NFS
445	TCP	Inbound	SMB



#### **Browser Requirements**

The latest two releases of Google Chrome, Apple Safari, Mozilla Firefox, and Microsoft Edge.

### **License Types**

		License			
	EV16	EV32	EV64	EV128	EV256
Maximum RAM	8GB	16GB	32GB	64GB	128GB
Maximum Storage	16TB	32TB	64TB	128TB	256TB
Recommended vCPUs	4	8	16	32	64
Maximum recommended users	500	1000	3000	5000	5000

**Note:** The normal HCP Anywhere Enterprise Edge Filer usage is memory and network intensive and not CPU intensive. The number of vCPUs allocated for the HCP Anywhere Enterprise Edge Filer should take this in to account.

#### **Software Features**

Feature	Description
Supported File Sharing Protocols	SMB 2.x/3.x (Windows File Sharing), NFS, FTP, WebDAV
Monitoring	SNMP

#### **Cloud Service Features**

Feature	Description
Protocol Security	TLS (Transport Level Security).
Efficiency	Incremental updates, data compression, block level deduplication, simultaneous synchronization.
Versioning	Retention of previous file versions.
Additional Services	Centralized management, centralized monitoring, Cloud Drive caching and synchronization, reporting, logging, remote access.

# Chapter 2. HCP Anywhere Enterprise Edge Filer Planning

During the planning stage for the HCP Anywhere Enterprise Edge Filer, contact support regardless of whether the installation is a new installation or an upgrade from an existing installation.

End users who are familiar with a given folder structure and shares, as well as a given permission scheme, continue to see the same folder structure, shares, and permission scheme after migration to the HCP Anywhere Enterprise Edge Filer. This enables the migration from a current file system to a HCP Anywhere Enterprise Edge Filer without the need to apply any structural changes such as flattening the folder structure or simplifying the permissions scheme.

File and folder access continue to be available following the migration in the same way they were in the original file system. Access, after the migration, is through SMB, provided by the HCP Anywhere Enterprise Edge Filer. Users continue to access the files and folders through standard client computers; for example, using Windows File Explorer or macOS Finder.

The following file server features are fully supported by HCP Anywhere Enterprise Edge Filer and are copied to HCP Anywhere Enterprise Edge Filer as part of the migration:

- ACL files/folder share permissions.
- · Nested sharing.
- ACL emulation to allow files and folders management via standard SMB protocol.
- Shares can be mounted to users via standard administrator tools:
  - DFS Management
  - Group Policy (GPO)
  - · Other tools based on Net use

Use HCP Anywhere Enterprise Migrate, which is accessed from the HCP Anywhere Enterprise Edge Filer user interface, to create the corresponding shares in the HCP Anywhere Enterprise Portal and sync them down to the HCP Anywhere Enterprise Edge Filer.

# Chapter 3. Installing the HCP Anywhere Enterprise Edge Filer on ESXi

Installing the HCP Anywhere Enterprise Edge Filer involves creating and configuring a virtual machine and then performing an initial configuration, described in <u>Initial HCP Anywhere Enterprise Edge Filer Configuration</u>.

The HCP Anywhere Enterprise Edge Filer can be installed in a VMware vSphere environment, with the following:

- VMware ESXi 6.7U1 or later. Hitachi Vantara recommends VMware ESXi 7.x or later.
- Access to the HCP Anywhere Enterprise Edge Filer ova image file from the vSphere Host Client or Client console.
- The HCP Anywhere Enterprise Edge Filer can be managed in VMware vCenter and in VMware vCloud Director.

The latest HCP Anywhere Enterprise Edge Filer ova file is available from Hitachi Vantara support.

Warning: The HCP Anywhere Enterprise Edge Filer installation must be done using the ova file and not by cloning an existing HCP Anywhere Enterprise Edge Filer.

**Note:** The following procedure uses the vSphere Client.

#### To install the HCP Anywhere Enterprise Edge Filer using the vSphere Client:

- 1. In the vSphere Client, create a virtual machine by deploying an OVF template.
- 2. In the wizard, click **Choose Files**, and browse to the HCP Anywhere Enterprise Edge Filer ova file.
- 3. Click NEXT.
- **4.** Continue through the wizard specifying the following information, as required for your configuration:
  - A name to identify the HCP Anywhere Enterprise Edge Filer in vCenter.
  - The location for the HCP Anywhere Enterprise Edge Filer: either a datacenter or a folder in a datacenter.
  - The host or cluster to run the HCP Anywhere Enterprise Edge Filer.
  - The virtual disk format for the HCP Anywhere Enterprise Portal software and the storage
    to use for this software. Refer to VMware documentation for a full explanation of the disk
    provisioning formats. Select either Thick Provision Lazy Zeroed or Thick Provision
    Eager Zeroed according to your preference.

**Thick Provision Lazy Zeroed** – Creates a virtual disk in a default thick format. Space required for the virtual disk is allocated when the virtual disk is created. Data remaining on the device is not erased during creation but is zeroed out on demand at a later time on first write from the virtual machine. Using the default flat virtual disk format does not zero out or eliminate the possibility of recovering deleted files or restoring old data that might be present on this allocated space.

**Thick Provision Eager Zeroed** – Creates a virtual disk that supports clustering features such as Fault Tolerance. Space required for the virtual disk is allocated at creation time. In contrast to the flat format, the data remaining on the device is zeroed out when the virtual disk is created. It might take much longer to create disks in this format than to create lazy zeroed disks.

Installing the HCP Anywhere Enterprise Edge Filer on ESXi

- The network that the HCP Anywhere Enterprise Edge Filer will use.
- 5. Review the configuration details and click **FINISH**.

The HCP Anywhere Enterprise Edge Filer is created.

**6.** Right-click the HCP Anywhere Enterprise Edge Filer and select **Edit Settings**.

The configuration is displayed for the HCP Anywhere Enterprise Edge Filer.

**a)** Change the CPU, Memory and other virtual machine settings, based on the company policy and the HCP Anywhere Enterprise Edge Filer license.

For an EV16 license, the maximum number of CPUs is 4 and the maximum RAM is 8GB.

For an EV32 license, the maximum number of CPUs is 8 and the maximum RAM is 16GB.

For an EV64 license, the maximum number of CPUs is 16 and the maximum RAM is 32GB.

For an EV128 license, the maximum number of CPUs is 32 and the maximum RAM is 64GB

For an EV256 license, the maximum number of CPUs is 64 and the maximum RAM is 128GB.

- b) Click ADD NEW DEVICE and select Hard Disk from the drop-down menu.
- c) Specify the disk size. Hitachi Vantara recommends storage of at least 20% of the HCP Anywhere Enterprise Portal Global Name Space. Whenever possible, Hitachi Vantara recommends that the maximum storage is defined as a single disk. The maximum storage is dependent on the license.

For an EV16 license, the maximum is 16TB.

For an EV32 license, the maximum is 32TB.

For an EV64 license, the maximum is 64TB.

For an EV128 license, the maximum is 128TB.

For an EV256 license, the maximum is 256TB.

**Note:** A VMware ESXi host limits disks to a maximum of 62TB. To support storage greater than 62TB, you need to create multiple disks, each less than 62TB, and then create a volume combining the disks in the HCP Anywhere Enterprise Edge Filer user interface.

d) Expand the New Hard disk item and set Disk Provisioning.

**Note:** Refer to VMware documentation for an explanation of the disk provisioning formats.

- e) Click OK.
- 7. Power on the virtual machine.

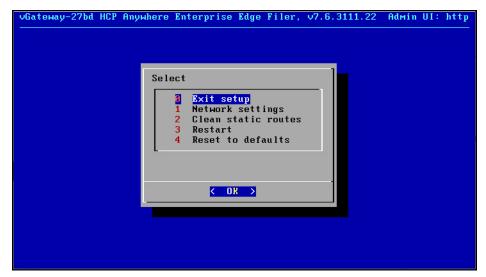
Using DHCP, after a few seconds, the IP address to access the HCP Anywhere Enterprise Edge Filer is displayed in the vSphere Client.

#### To set the virtual machine IP address:

**1.** Access the virtual machine. The following login screen is displayed:

```
HCP Anywhere Enterprise Edge Filer (v7.6.3111.22)
Login as 'setup' ∕ no password to configure networking/factory reset the device
EdgeFiler-27bd login: _
```

- **2.** Login in with the username setup and no password, as instructed. The console is displayed.
- **3.** Click in the console to transfer the keyboard control to the console and, if necessary, use the arrow keys to scroll to **Network settings**.
- 4. Press Enter.



- 5. Select Static IP mode and press OK.
- **6.** Complete the configuration for static mode by entering the static IP, netmask, default HCP Anywhere Enterprise Edge Filer IP, and the primary and secondary DNS server IPs.
- 7. Press OK.

## Chapter 4. Initial HCP Anywhere Enterprise Edge Filer Configuration

After installing the HCP Anywhere Enterprise Edge Filer you perform an initial configuration.

#### In this chapter

- Configuring the HCP Anywhere Enterprise Portal as a Precondition to Setting Up the HCP Anywhere Enterprise Edge Filer
- Initial HCP Anywhere Enterprise Edge Filer Setup
- Loading a Trusted CA Certificate to a HCP Anywhere Enterprise Edge Filer

# Configuring the HCP Anywhere Enterprise Portal as a Precondition to Setting Up the HCP Anywhere Enterprise Edge Filer

Before setting up the HCP Anywhere Enterprise Edge Filer, the HCP Anywhere Enterprise Portal administrator has to configure the HCP Anywhere Enterprise Portal to which the HCP Anywhere Enterprise Edge Filer will connect.

#### To configure the HCP Anywhere Enterprise Portal:

- 1. Sign in to the HCP Anywhere Enterprise Portal as a team administrator.
  - a) In a Web browser open

 $\label{lem:name} \begin{tabular}{ll} http://<virtualportal_name>.<DNS_Suffix>/ServicesPortal.\\ where, <virtualportal_name> is the name of the portal, and <DNS_Suffix> is the DNS suffix for the HCP Anywhere Enterprise Portal installation.\\ This opens the interface to the portal.\\ \end{tabular}$ 

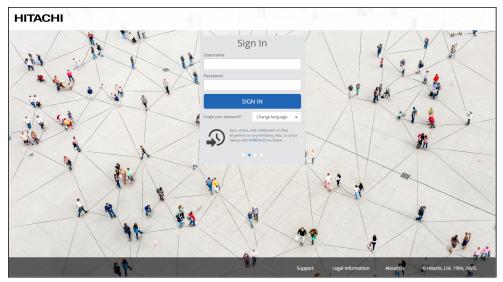
**Note:** If the HCP Anywhere Enterprise Portal is set to redirect HTTP requests to HTTPS, HCP Anywhere Enterprise Portal redirects the browser to the HTTPS page. It is also possible to set the HTTPS access port to be different from the standard 443. In this case, the address is:

https://<virtualportal\_name>.<DNS\_Suffix>:<HTTPS\_port>/Services
Portal, where <HTTPS port> is a customized port.

For example, to connect to Acme's administration HCP Anywhere Enterprise Portal using HTTPS port 2222, use the following address:

https://acme.example.com:2222/ServicesPortal.

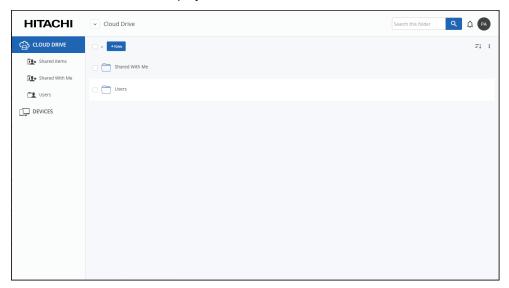
The HCP Anywhere Enterprise Portal opens, displaying the sign in page.



**Note:** If SAML Single Sign On (SSO) is enabled, you are redirected to the SAML identity provider's login page. If CAC, Common Access Card, is implemented at the site, the login page is skipped if the card access is authorized.

**b)** Enter your administrator user name and password and click **SIGN IN**. If you are redirected to an identity provider's login page, enter your credentials there. The identity provider processes your authentication.

The end user interface is displayed.



**c)** To access the full administrator interface, click the avatar at the top right, or your initials, if you have not configured an avatar, and select **Administration**.



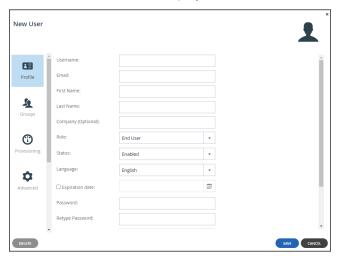
The administration interface opens in a new tab.

2. Create a designated user as an owner of the cloud folders and data. Hitachi Vantara recommends creating the owner as a local service account with administrator read/write privileges and not a real user. This account must have read and write administrator permissions to enable syncing folders between the HCP Anywhere Enterprise Edge Filer and the HCP Anywhere Enterprise Portal global file system.

Once the data is uploaded to the HCP Anywhere Enterprise Portal global file system there is an owner for the data who can get elevated rights.

- Select Users > Users in the navigation pane.
   The USERS page is displayed.
- b) Click New User.

The **New User** window is displayed.



c) Complete the following fields in the **Profile** option.

**Username** – A name for the user's HCP Anywhere Enterprise Portal account.

Email - An email address.

First Name – A first name for the service account.

**Last Name** – A last name for the service account.

Role - Select Read/Write Administrator.

**Password/Retype Password** – A password for the account.

- d) Click SAVE.
- 3. Select **Settings > User Roles** in the navigation pane.

The **Roles** window is displayed.

4. Click Read/Write Administrator and in the Edit Roles window make sure that Access End

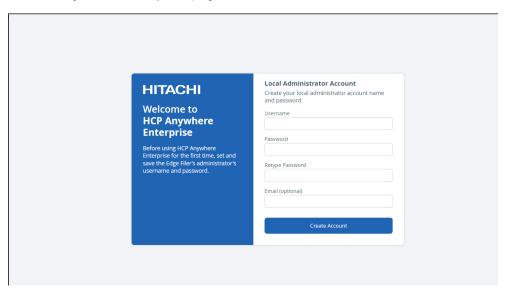
## Initial HCP Anywhere Enterprise Edge Filer Setup

Before setting up the HCP Anywhere Enterprise Edge Filer, you have to configure the HCP Anywhere Enterprise Portal to which the HCP Anywhere Enterprise Edge Filer will connect, as described in Configuring the HCP Anywhere Enterprise Portal as a Precondition to Setting Up the HCP Anywhere Enterprise Edge Filer. After configuring the HCP Anywhere Enterprise Portal and installing the HCP Anywhere Enterprise Edge Filer, you need to perform an initial HCP Anywhere Enterprise Edge Filer setup. On first access to the HCP Anywhere Enterprise Edge Filer, you set up a HCP Anywhere Enterprise Edge Filer administrator and then a wizard guides you through connecting to a HCP Anywhere Enterprise Portal and storage and user setup. You can skip any of the wizard steps and perform them later, as described in the Hitachi Content Platform Anywhere Enterprise Edge Filer Administration Guide.

After this initial HCP Anywhere Enterprise Edge Filer setup, the file server structure is synced from the HCP Anywhere Enterprise Portal to the HCP Anywhere Enterprise Edge Filer.

#### To access the HCP Anywhere Enterprise Edge Filer and initial setup:

- 1. Open any web browser.
- 2. Enter the HCP Anywhere Enterprise Edge Filer's IP address to navigate to the device. When you connect to the web interface for the first time, your browser displays the **Welcome to HCP Anywhere Enterprise** page.

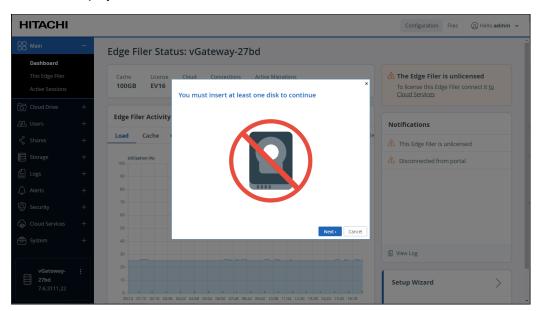


3. Choose a user name and password for the administrator. The password must be at least eight characters and must include at least a letter, digit and special character, such as  $\sim$ , @, #, \$, %, ^, &, (.

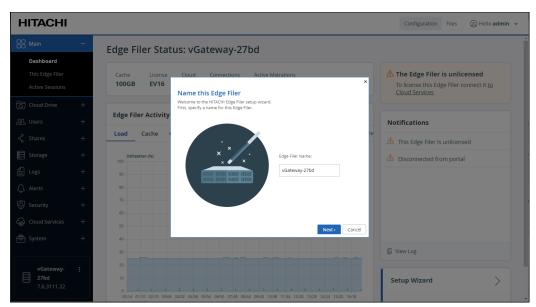
**Note:** You can keep the default user name, admin. Other administrators are defined in the HCP Anywhere Enterprise Edge Filer from Active Directory.

- **4.** Optionally, enter an email for receiving notifications regarding the HCP Anywhere Enterprise Edge Filer.
- 5. Click Save.

If the HCP Anywhere Enterprise Edge Filer does not have a disk, the following message window is displayed.



Add a disk to the HCP Anywhere Enterprise Edge Filer virtual machine. Otherwise, the **Name this Edge Filer** window is displayed.



**6.** Either keep the HCP Anywhere Enterprise Edge Filer default name or enter a new name to identify the HCP Anywhere Enterprise Edge Filer and click **Next**.

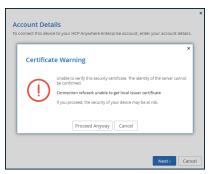
The administration user interface is displayed to set up the HCP Anywhere Enterprise Edge Filer, starting with the **Account Details** window.



**Note:** You can also change the HCP Anywhere Enterprise Edge Filer name after the initial setup, as described in the *Hitachi Content Platform Anywhere Enterprise Edge Filer Administration Guide*.

 Enter the DNS name of the HCP Anywhere Enterprise Portal to which you have an account and want to connect the HCP Anywhere Enterprise Edge Filer to, in the **Portal Address** field and click **Next**.

**Note:** If the HCP Anywhere Enterprise Portal does not have a valid certificate installed, a warning is displayed to the end user when logging a device into the portal, offering the option to proceed anyway.



This warning is presented every time a user connects a device to the portal, until a valid certificate is installed.

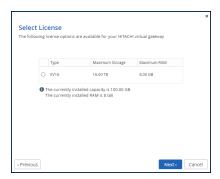
The **Sign in** window is displayed.



**Note:** If single sign-on has been set up to the portal, click **Sign In** and then **Allow** in a new browser window that is displayed, when prompted. The **Select License** screen is displayed. Go to step **9**.

**8.** Enter the HCP Anywhere Enterprise Portal designated user username and password, set in Configuring the HCP Anywhere Enterprise Portal as a Precondition to Setting Up the HCP

<u>Anywhere Enterprise Edge Filer</u> to access the HCP Anywhere Enterprise Portal and click **Next**. The **Select License** window is displayed with the available licenses.



The available storage and RAM are displayed.

9. Select the license for the HCP Anywhere Enterprise Edge Filer and click Next.

The Gateway Mode window is displayed.



CACHING – Provides users with LAN speed access to all the shared cloud folders on the HCP Anywhere Enterprise Portal. Shared storage is on the HCP Anywhere Enterprise Portal with stubs saved on the HCP Anywhere Enterprise Edge Filer. A stub is a file with a tiny footprint that contains the metadata about the file, such as the file name, size, and modification date. Only the folder and file metadata and not the actual file content is saved locally. Thus, the HCP Anywhere Enterprise Edge Filer can have much less physical storage than is made available to users, who have access to both the local HCP Anywhere Enterprise Edge Filer storage and the HCP Anywhere Enterprise Portal storage. Systems with many file changes, where only some of the files are required locally, don't over use bandwidth between the cloud and HCP Anywhere Enterprise Edge Filer. Only the required files are passed across the wire. When a user accesses a file stub, the file is opened without delay, by streaming the file content from the cloud. After the download has completed, the file is unstubbed. Any changes to the file are synced back to the HCP Anywhere Enterprise Portal. Folders that are always required can be pinned, in which case the files in the folders, and not the stubs, are stored on the HCP Anywhere Enterprise Edge Filer.

10. Click Next.

The Easy Storage Setup window is displayed, showing the number of virtual disks.



The maximum storage allowed for the selected HCP Anywhere Enterprise Edge Filer license is also displayed.

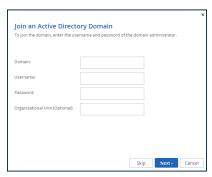
#### 11. Click Next.

If there are options to configure the disks, for example, when more than one disk is defined, the **Proposed Actions** window is displayed with the recommended configuration.

Hitachi Vantara recommends accepting the proposed actions and click **Next** and **not** clicking **Skip**.

#### 12. Click Next.

The Join an Active Directory Domain window is displayed.

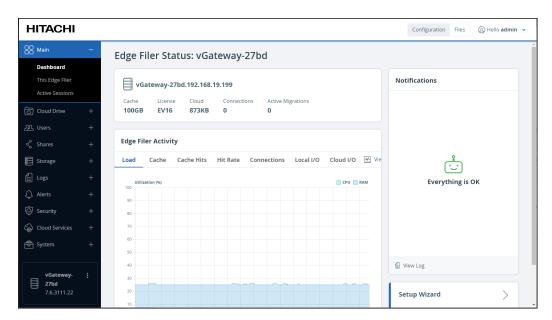


**13.** Specify the domain details so that the HCP Anywhere Enterprise Edge Filer is populated with the users from your Active Directory domain and click **Next** or, if you want to set up Active Directory later, click **Skip**.

The Wizard Completed window is displayed.

14. Click Finish.

The Configuration view Main > Dashboard page is displayed.



Note: You can rerun the wizard by selecting Main > Dashboard and click Setup Wizard.

You can migrate a file server to HCP Anywhere Enterprise Edge Filer so that end users who are familiar with a given folder structure and share, while using the file server, continue to see the same folder structure and shares after migration to the HCP Anywhere Enterprise Edge Filer. If you are replacing an existing file server with the HCP Anywhere Enterprise Edge Filer, continue with Migrating a File Server.

When more than one DNS server is in use at the site, you can define the primary and secondary DNS servers, described in the *Hitachi Content Platform Anywhere Enterprise Edge Filer Administration Guide*, under *Managing Network Settings*.

For full details about managing the HCP Anywhere Enterprise Edge Filer, see the *Hitachi Content Platform Anywhere Enterprise Edge Filer Administration Guide*.

## Loading a Trusted CA Certificate to a HCP Anywhere Enterprise Edge Filer

When the object storage used by theHCP Anywhere Enterprise Portal uses a X.509 Certificate signed by a private Certification Authority (a self-signed certificate) and not a public trusted certificate, this certificate must be uploaded to the HCP Anywhere Enterprise Edge Filer. You upload the certificate using the following procedure that requires a REST client tool such as Postman or HTTPie.

#### To upload a self-signed certificate to the HCP Anywhere Enterprise Edge Filer:

- 1. Get the certificate used by the object storage.
- 2. Launch the REST client.
- 3. Log in to the HCP Anywhere Enterprise Edge Filer with the following REST API, using HTTPS:

https://edgefiler IP/admingui/api/login with the following:

HTTP Method	POST	
Request Content-Type	application/x-www-form-urlencoded	
Request Body	Key	Value
	username password	username password
Expected Response Status	200 OK and an HTTP session cookie which is then used for the duration of the session.  The session times out after 30 minutes of inactivity.  If a response such as 403 Forbidden is returned, check the user name and password provided.	

#### Where:

**edgefiler\_IP** – The IP address of the HCP Anywhere Enterprise Edge Filer.

**username** – Mandatory: The name of a user with administrative rights to the gateway. This is the username set in the procedure <u>Initial HCP Anywhere Enterprise Edge Filer Setup</u>.

**password** – Mandatory: The password for the user. The login is over HTTPS to ensure that the password is encrypted. This is the password set in the procedure <a href="Initial HCP Anywhere">Initial HCP Anywhere</a> <a href="Enterprise Edge Filer Setup">Enterprise Edge Filer Setup</a>.

Upon receiving a successful login reply, the server sets HTTP session cookies. The client must return these cookies to the server in the next request.

**Note:** To ensure that the session cookie returned by the API login is automatically returned in subsequent requests to the server, the same HttpClient object must be used for all future requests.

- 4. Copy to your clipboard the contents of the certificate.
- **5.** Upload the certificate using the following REST API:

http://edgefiler\_IP/admingui/api/config/extStorageTrustedCA?put with the following:

HTTP Method	POST		
Request Content-Type	application/xml		
Request Body	<pre><obj class="ExtStorageTrustedCA"></obj></pre>		
Expected Response status	200 OK		

#### Where:

**edgefiler\_IP** – The IP address of the HCP Anywhere Enterprise Edge Filer. **Certificate Content** – The content that was copied to the clipboard.

## Chapter 5. Migrating a File Server

You can migrate a file server to the HCP Anywhere Enterprise Edge Filer. After the migration has completed, end users who are familiar with a given folder structure and shares, as well as a given permission scheme continue to see the same folder structure, shares, and permission scheme. This enables the migration from a current file system to the HCP Anywhere Enterprise Edge Filer without the need to apply any structural changes such as flattening the folder structure or simplifying the permissions scheme.

You can from the following migrate file servers:

- Azure StorSimple
- HCP Gateway
- Hitachi Data Ingestor
- Isilon OneFS
- · Microsoft Azure Files
- Nasuni Edge Appliance
- NetApp ONTAP
- NetAPP StorageGRID 9 (SMB)
- NetAPP StorageGRID 11 (SMB)
- Panzura Freedom Filer
- Windows Server

Another option, **Other**, is available to attempt to migrate from a file server that is not listed.

In addition you can discover all the shares on the current edge filer by specifying the source as **This Edge Filer**.

Access to files and folders after the migration is through SMB provided by the HCP Anywhere Enterprise Edge Filer so that users continue to access the files and folders in the same way as with the old system. You can migrate more storage than is physically available on the HCP Anywhere Enterprise Edge Filer and the user has access to the global namespace, even when this is much larger than the storage available on the HCP Anywhere Enterprise Edge Filer.

You can migrate files that are defined as WORM compliant. The files are migrated with the source compliance settings including the time remaining that they are WORM compliant.

**Note:** To migrate WORM compliant files, you have to prepare the prepare the HCP Anywhere Enterprise Portal before starting the migration.

Migrating a file server to a HCP Anywhere Enterprise Edge Filer can be performed while the current file server remains in production.

Run from Edge File Server ist Potentia . Nigrating from Create Migration Job Shares? For WORM: Mark Worn Yes Migration, Include/ Exclude Run Discovery pattern (if nclude/Exclu there is Policy? one), migration destination Exclude Patterr (HCP Gateway Sync Cloud Folder fron Portal to Edge Filer Performed in background Migrate during the Share to migration Edge Filer oes Clou Folder for Sync to Portal? Portal Yes 2. Rerun the migration to copy any delta

The flow when performing a migration is as follows:

Before migrating the file server to the HCP Anywhere Enterprise Edge Filer, the HCP Anywhere Enterprise Edge Filer must be connected to the HCP Anywhere Enterprise Portal. After finishing the initial setup, make sure that syncing between the HCP Anywhere Enterprise Edge Filer and HCP Anywhere Enterprise Portal is not suspended.

To migrate a single file server to the HCP Anywhere Enterprise Edge Filer involves the following procedures:

- <u>Discovering Shares</u> Optionally, survey the current file server to discover which shares to migrate.
- Migrating Shares Migrate shares to the HCP Anywhere Enterprise Edge Filer.

changes

After the migration, the cloud folder will start with the C: path as it represents a single server with all the shares/nested shares as cloud folders under this cloud folder. You can change the cloud folder under which all the shares are migrated as part of the migration job specification.

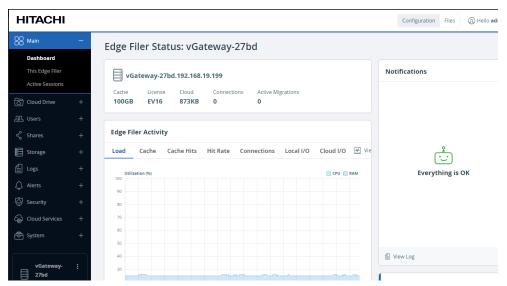
**Note:** Special characters in share names are not supported by the HCP Anywhere Enterprise Migrate. When such characters are used, the share contents are not migrated. This condition is reported, and the job is *Completed with errors*.

## **Discovering Shares**

Optionally, survey the current file server to discover which shares to migrate

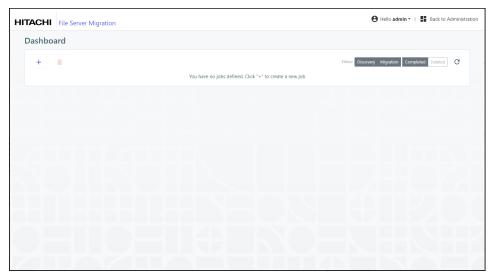
#### To discover the shares to migrate:

1. In the **Configuration view**, select **Main > Dashboard** in the navigation pane. The **Dashboard** page is displayed.



2. Click File Server Migration.

The File Server Migration page is displayed.



3. Click + to create a new job.

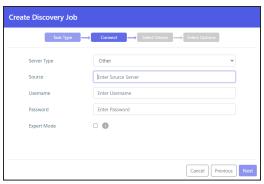
The Create Discovery Job wizard is displayed showing the Task Type step.



The default job is a **Discovery** job. This job analyzes the file server that is being replaced to identify what data should be migrated.

4. Click Next.

The Connect step is displayed.



- **5.** Select the server type to connect to from the drop-down box. You can connect to one of the following:
  - Azure StorSimple
  - HCP Gateway
  - · Hitachi Data Ingestor

- Isilon OneFS
- Microsoft Azure Files
- Nasuni Edge Appliance
- NetApp ONTAP
- NetAPP StorageGRID 9 (SMB)
- NetAPP StorageGRID 11 (SMB)
- Panzura Freedom Filer
- · Windows Server

Another option, **Other**, is available to attempt to migrate from a file server that is not listed. In addition, you can discover all the shares on the current edge filer by specifying the source as **This Edge Filer**. When **This Edge Filer** is selected, no other **Connect** parameters are displayed.

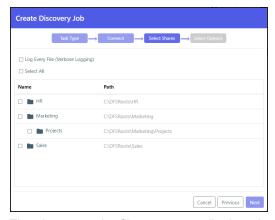


**6.** For all server types except **This Edge Filer**, enter the IP address or DNS name for the source file server and an administrator user name and password to access this server.

**Note:** The administrator used must have access to the files to migrate.

- **7.** For **Microsoft Azure Files**, the shares cannot be presented and have to be added manually. Select **Expert Mode** to enable specifying the shares in the next step.
- 8. Click Next.

The **Select Shares** step is displayed.



The shares on the file server are displayed, and you can select the shares that you want to migrate to the HCP Anywhere Enterprise Edge Filer.

**Note:** When **Expert Mode** was selected, the following window is displayed where you enter the shares to migrate.



**9.** Select the shares to migrate and click **Next**.



- **10.** Optionally, provide a different name for the job and any specific notes about the job.
- 11. Click Create.

The discovery job runs and the results are displayed in the Dashboard.

#### The Dashboard After a Discovery Run

After analyzing the file server, the job completes and you get a report as well as a full analysis of each share in the filer server that you selected.



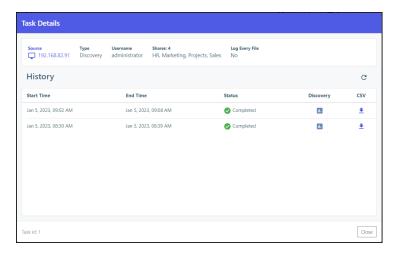
Log files and discovery file lists generated by the migration are compressed if they are greater than 100MB.

Click the icon to edit the discovery job name and notes.

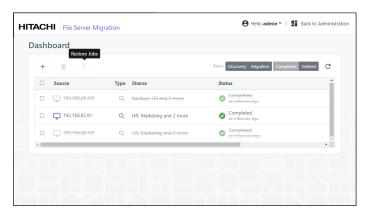


- Click the report icon to display the discovery report.
- Click the icon to display the list of every time this job was run and rerun with the results of each run.

The Task Details can also be accessed by clicking Details in the The Discovery Report.



- Click the icon to rerun the discovery.
   The discovery job reruns.
- Optionally, in the dashboard, you can select a job and click the icon to delete the job. After deleting a job, you can display all the jobs, including the deleted jobs, by clicking the **Deleted** filter in the dashboard.

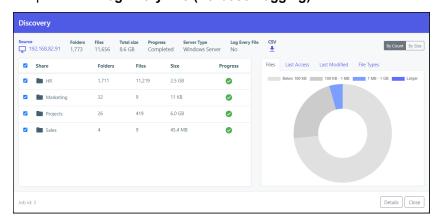


You can restore deleted jobs by selecting the deleted jobs to restore and clicking the 💆 icon.

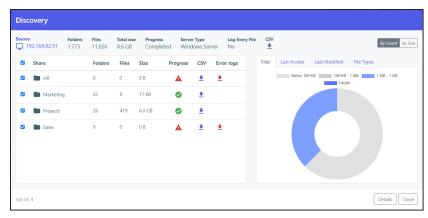
#### **The Discovery Report**

Clicking the icon displays the discovery report.

A report when Log Every File (Verbose Logging) was not checked.



A report when Log Every File (Verbose Logging) was checked.



At the top of the report the sum of the information for the migrated shares is displayed. Optionally,

click the icon to download the discovery report as a .csv file.

The first pane in the discovery report shows the list of shares with details of each share:

- The number of folders in the selected shares.
- · The number of files in the selected shares.
- · The size of the selected shares.
- The status of the migration for the selected shares.
- If Log Every File (Verbose Logging) was checked, optionally for each share, click the icon to download the discovery report for the share as a .csv file.
- Any errors in the discovery job are written to a separate log, under /errorlog. Each share

Migrating a File Server

with an error has a separate log file. Clicking the 🛂 icon downloads the log file as a .csv file.

The second pane in the discovery report has tabs showing the following:

- **Files** A pie chart with the sizes of the files in the selected shares.
- Last Access A bar chart showing when the files in the selected shares were last accessed.
- Last Modified A bar chart showing when the files in the selected shares were last modified.
- **File Types** The list of the file types in the selected shares. You can display this information either **By Count**, for example, the number of each file type, or **By Size**, for example, the size of each file type.
- Click **Details** to display the list of every time this job was run and rerun with the results of each run.
- Click Close to return to the Dashboard.

## **Migrating Shares**

Migrate shares to the HCP Anywhere Enterprise Edge Filer.

#### **Preparing the HCP Anywhere Enterprise Portal to Migrate WORM Compliant Shares**

When migrating a WORM compliant share, there must be a WORM Compliant Cloud Folder on the HCP Anywhere Enterprise Portal for the files to be synced from the HCP Anywhere Enterprise Edge Filer. This cloud folder must, therefore, be created before the migration is performed. Use the retention settings from the source file system when defining the WORM Compliance settings for the cloud folder. For details about creating a WORM Compliant cloud folder, see the section Folder (WORM) Compliance: HCP Anywhere Enterprise Vault in the Managing Folders and Folder Groups chapter in the Hitachi Content Platform Anywhere Enterprise Portal Team Administration Guide.

The cloud folder is specified in the migration job as the destination for the WORM compliant share from the source file system. You define a separate WORM compliant cloud folder for every WORM compliant share on the source file system and run the migration for each share, one share at a time.

When migrating a WORM compliant share together with non-WORM compliant shares, you have to run a migration job that migrates the WORM compliant share and a separate migration job that migrates the non-WORM complaint shares.

**Note:** If you are migrating from Hitachi Content Platform Gateway (HCP Gateway), in the HCP Gateway Policy page note any include and exclude policies that you will specify when setting up the migration job.

#### **Commands to Run Before and After the Migration**

Before starting a migration of a WORM compliant share you must run the following command on the HCP Anywhere Enterprise Portal: calculateRetentionFromCreationTime portals/
/cportal\_name>/cloudDrives/Users/<owner\_name>/<cloudfolder\_name>
BACK DATE BIT

#### where:

**portal\_name** – The name of the team portal where the WORM compliant cloud folder is

Migrating a File Server

defined.

**owner\_name** – The name of the team portal admin user who owns the WORM compliant cloud folder.

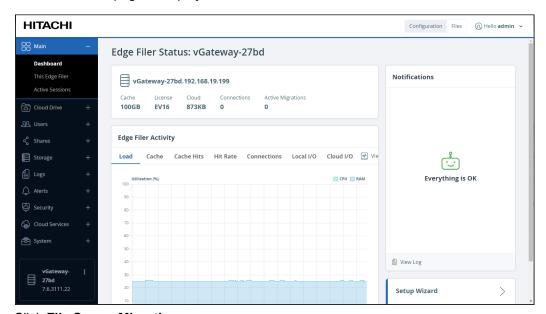
**cloudfolder\_name** – The name of the WORM compliant cloud folder.

After the migration of the WORM compliant share completes, you must run the following command on the HCP Anywhere Enterprise Portal: calculateRetentionFromCreationTime portals/ $<portal_name>/cloudDrives/Users/<owner_name>/<cloudfolder_name> NONE$ 

#### **Migration Procedure**

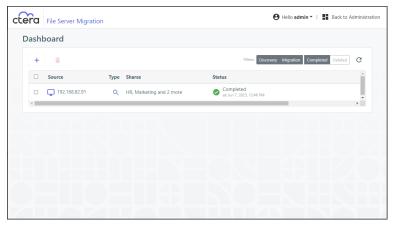
#### To migrate shares to the HCP Anywhere Enterprise Edge Filer:

1. In the Configuration view, select Main > Dashboard in the navigation pane. The Dashboard page is displayed.



2. Click File Server Migration.

The File Server Migration page is displayed.



3. Click + to create a new job.

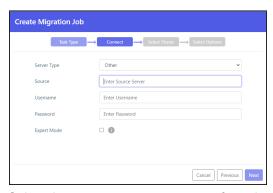
The Create Discovery Job wizard is displayed, showing the Task Type step.



The default job is a discovery job.

- 4. Click the Migration job to change the job to migrate a file server.
- 5. Click Next.

The Connect step is displayed.



- **6.** Select the server type to connect to from the drop-down box. You can connect to one of the following:
  - · Azure StorSimple
  - HCP Gateway
  - Hitachi Data Ingestor
  - Isilon OneFS
  - · Microsoft Azure Files
  - Nasuni Edge Appliance

- NetApp ONTAP
- NetAPP StorageGRID 9 (SMB)
- NetAPP StorageGRID 11 (SMB)
- Panzura Freedom Filer
- Windows Server

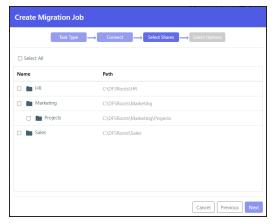
Another option, **Other**, is available to attempt to migrate from a file server that is not listed.

**7.** Enter the IP address or DNS name for the source file server and an administrator user name and password to access the filer server.

**Note:** The administrator used must have access to the files to migrate.

- **8.** For **Microsoft Azure Files**, the shares cannot be presented and have to be added manually. Select **Expert Mode** to enable specifying the shares in the next step.
- 9. Click Next.

The **Select Shares** step is displayed.



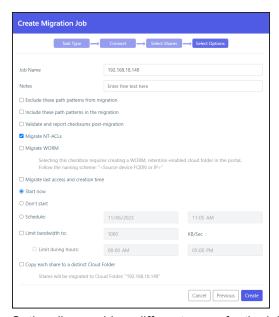
When migrating WORM compliant shares, select the relevant shares. You also check **Migrate WORM**.

**Note:** When **Expert Mode** was selected, a window is displayed where you enter the shares to migrate.



10. Select the shares to migrate and click Next.

The **Select Options** step is displayed.



- **11.** Optionally, provide a different name for the job and any specific notes about the job.
- **12.** You can specify patterns that you do not want to migrate, or that you do want to migrate, separating each pattern with a colon (:). You can include the asterisk (\*) as a wildcard in the pattern. To specify the pattern, check the relevant box.
  - Exclude these path patterns from the migration (use the colon character (':') as a separator)
  - Include these path patterns in the migration (use the colon character (':') as a separator)



**Note:** Using the option to migrate specific folders can cause a migration to fail, depending on the size of the folders being migrated and the amount of RAM available to the HCP Anywhere Enterprise Edge Filer.

#### To migrate WORM compliant folders in a share instead of all the folders in the share:

- If you are migrating from HCP Gateway, specify the shares to include and the shares to exclude that you noted in the HCP Gateway policy page. You also check **Migrate WORM**.
- **13.** Check **Validate and report checksums post-migration** to include an MD5 hash checksum for every file being migrated to verify that the migration was successful when the hash is compared with the checksum of the file in the source file server.

Note: The checksum validation is performed after all the files are migrated. Depending on the number of files to check, the validation can take some time. You should not allow users to access the migrated files until the actual migration job finishes, after the validation completes, in case there is a checksum discrepancy for one or more of the migrated files that needs resolving.

14. Check Migrate NT-ACLs to migrate the data from the file server with the ACLs.

Migrating a File Server

**15.** Check **Migrate WORM** to migrate WORM data from the file server.

Note: When Migrate WORM is checked, Migrate NT-ACLs must also be checked.

- **16.** Check **Migrate last access and creation time** to include in the migration the last access time and the creation time for each item being migrated.
  - Note: When Migrate WORM is checked, Migrate last access and creation time is checked by default and cannot be unchecked. These times are used to calculate the remaining retention period for each file in the share. If the retention time was changed in the source file system, this is not reflected in the destination and the migration calculated the remaining retention for all the files in the share based on the last retention defined for the source file server and used in the definition of the WORM compliant cloud folder on the HCP Anywhere Enterprise Portal.
- 17. You can specify when to start the migration:
  - Start now to start the migration immediately.
  - **Don't start** to save the job configuration for later use.
  - Schedule to schedule the date and time to start the migration.
- **18.** You can throttle the bandwidth used for the migration with the time range to apply this throttling so as not to adversely impact ongoing work by bandwidth and time.
- **19.** Check **Copy each share to a distinct Cloud Folder** if you want to specify that each share is migrated to a distinct cloud folder.

**Note:** When migrating WORM compliant shares, **Migrate WORM** is checked, specify the name of the cloud folder that was defined as WORM compliant on the HCP Anywhere Enterprise Portal as the destination.

The cloud folder where the cloud folders are migrated is displayed under the **Copy each share** to a distinct Cloud Folder checkbox.

When Copy each share to a distinct Cloud Folder is checked:

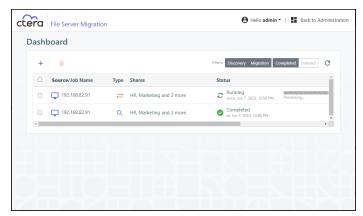
- Jobs that were created in a previous version will continue to migrate into the cloud folder root directory.
- New jobs will create a redundant directory with the name of the source share into the cloud folder root directory, and migrate into it instead.

When Copy each share to a distinct Cloud Folder is not checked:

• Depending on the source exposing the data, either the full path in the original server is recreated and no files are migrated into the cloud folder root, or the share name is used under the cloud folder root as was the case in previous versions.

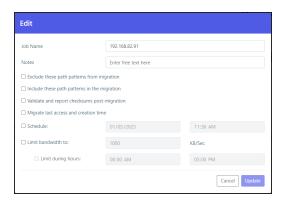
#### 20. Click Create.

During the migration, the progress bar in the **Dashboard** shows the percentage completed and what is currently being processed.

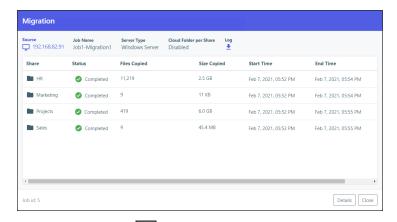


After migrating all the shares, the job completes and an email alert is sent with the job summary.

**21.** Click the icon to edit the migration job name, notes, include and exclude paths, migration checksum, whether to migrate access and creation times, schedule and throttling.



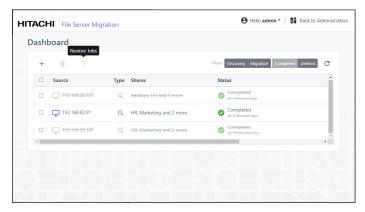
22. Click the icon to display the migration report.



- 23. Optionally, click the icon to download the migration log file to a .log text file.
- **24.** Click the to conto display the list of every time this job was run with the results of each run, including the start and end times for the job, the number of files migrated and the total size of the migration, access to the report and the ability to download the log, which provides information about the migration and any errors that occurred during the migration.

Migrating a File Server

**25.** Optionally, in the dashboard, you can select a job and click the ■ icon to delete the job. After deleting a job, you can display all the jobs including the deleted jobs by clicking the **Deleted** filter in the dashboard.



You can restore deleted jobs by selecting the deleted jobs to restore and clicking the 💆 icon.

The share structure from the source is recreated on the HCP Anywhere Enterprise Edge Filer, including nested shares and their permissions. If there are any recoverable errors during the copy process, retry the migration for the failed shares.

**Note:** Only ACLs are migrated with the files. Extended attributes are not migrated. In the HCP Anywhere Enterprise Edge Filer, the shares are defined with Windows ACL Emulation Mode.

Direct all the users to the HCP Anywhere Enterprise Edge Filer.

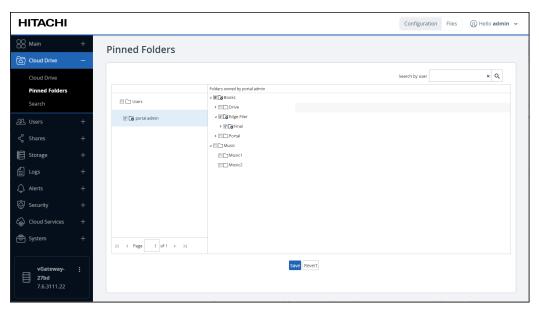
Users can now access and work on the HCP Anywhere Enterprise Edge Filer.

#### **Completing a Migration and Performing a Delta Migration**

After completing the migration, there may well be a number of new or changed files on the original file server that require migrating. Complete the migration process using the following procedure.

#### To complete a migration:

- 1. During off-peak hours, disconnect the filer server.
- 2. In the HCP Anywhere Enterprise Edge Filer user interface, pin the folders that you want to remain local to the HCP Anywhere Enterprise Edge Filer.
  - a) In the Configuration view, select Cloud Drive > Pinned Folders in the navigation pane. The Pinned Folders page is displayed.



The **Pinned Folders** area is separated into a users pane and folders pane, with paging in the users pane. This makes it easier to page through the users and select the folders to pin.

b) Select a user to display the folders owned by the user and then select the folders that you want pinned for this user, so that the folder content is always available on the HCP Anywhere Enterprise Edge Filer.

In addition, you can use the search field to jump to a specific user.

**Note:** You can select a a user to select all the folders and subfolders owned by the user. You can also select a higher level folder to select all the subfolders under it and then uncheck specific folders to unpin them. If you check a cloud folder, all the subfolders under the cloud folder are pinned, and any folders added later under the cloud folder will be pinned automatically.

c) Click Save.

The checked folders are pinned.

- 3. In the Configuration view's Main > Dashboard page, click File Server Migration.
  - The **File Server Migration** page is displayed, showing the discover and migration jobs previously run.
- **4.** Select the migration job to rerun and click the icon.

The migration job reruns, migrating the deltas from the last migration.









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