

Syncplicity Panorama with Isilon Storage

Technote

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CHAPTER 1

Syncplicity Panorama with Isilon Storage Technote

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Overview

Syncplicity Panorama by EMC enables mobile users, whether inside or outside the corporate firewall, to access data securely from an Isilon cluster.

This technote provides information about implementing Syncplicity Panorama with Isilon storage. For complete installation and setup instructions, see the *Syncplicity Panorama Connector Installation and Configuration Guide*.

EMC provides free Syncplicity applications for supported mobile devices. Mobile users can launch the Syncplicity app, provide their login credentials and network information, and access data from files shares and home directories.

To enable mobile users to access data from the corporate network, you can deploy a Syncplicity Panorama Connector. The Connector acts as an intermediary between remote users and Isilon back-end storage, providing secure data access without requiring users to have a VPN connection. The Connector runs on a Windows 2012 R2-based server, which is typically located in the semi-private tier of your network. The Connector uses the HTTP and HTTPS protocols to pass data to and from mobile users.

A Syncplicity Panorama Connector can be deployed with or without a Syncplicity Enterprise Edition account. Without an account, you can configure security policies using the administrator console to control access, and your mobile users can still access file shares and home directories from their mobile devices.

With a Syncplicity Enterprise Edition account, you can use policies to further control access to content, and monitor actions performed by users through the Connector.

Audience

This guide targets system administrators and other IT networking professionals, particularly those tasked with management and security of an EMC Isilon cluster.

Because a full deployment of Syncplicity Panorama with Isilon storage also requires Active Directory and Internet Information Services (IIS), knowledge of those Microsoft tools is also expected.

Using Syncplicity Panorama with Isilon storage

Syncplicity Panorama with Isilon storage supports two primary uses: mobile access to home directories and mobile access to file shares.

Home directories

With the deployment of home directories, users access files stored on an Isilon cluster from their personal computers. With Syncplicity Panorama, users can access those same files from their mobile devices, even when not connected to their corporate network.

The primary mechanism for linking to home directories on an Isilon cluster is Active Directory. An administrator provisioning a new user through Active Directory can automatically trigger the creation of a home directory on the Isilon cluster and map that share to the user's My Documents folder on their personal computer. To users, the process is transparent, as files appear local, but are read from, and saved to, an Isilon cluster.

Deploying Syncplicity Panorama offers mobile users access to home directories, even while users are traveling or otherwise disconnected from the corporate network. When

users edit and save documents on their mobile devices, the file data is written back to their home directories on an Isilon cluster.

File shares

With a Syncplicity Panorama Connector deployed on a corporate network, mobile users with an Internet connection can access file shares that reside on an Isilon cluster.

With a Syncplicity Enterprise Edition account, mobile users can log into Syncplicity, and view and select from a list of bookmarks associated with OneFS file shares. Without an account, users can launch the Syncplicity app to log in directly by specifying a URL, username, and password provided by their administrator.

The Syncplicity Panorama Connector supports connecting to Isilon file shares through the HTTP or HTTPS protocol.

System requirements

System requirements to implement Syncplicity Panorama with Isilon storage are described in the following table.

Component	Requirement/Supported	Notes
EMC Isilon cluster	OneFS 7.1.1 or later	Home directories and file shares on the Isilon cluster can be accessed by mobile users
Network Share Connector host	<ul style="list-style-type: none"> Windows Server 2012 R2 or later (64-bit) .NET Framework 4.5 IIS 7.5 or later SSL certificate (recommended) 	<p>The Connector requires IIS optional components, ASP, .NET, and Windows Authentication to be installed and enabled.</p> <p>Only local administrators on the server, or members of the Domain Admins group, can access the Syncplicity Panorama management console.</p>
Active Directory	Active Directory account with query privileges	The Connector requires an Active Directory (AD) account with query privileges. The Connector uses the AD account to find users and groups, and the ACLs associated with those users and groups. If the policy is enabled, the file shares and home directories are bookmarked for mobile users.
Mobile devices	See the <i>Syncplicity Panorama Connector Installation and Configuration Guide</i> for the latest list of supported mobile devices.	
Syncplicity Enterprise Edition account	Syncplicity Enterprise Edition is optional for use with the Network Share Connector.	

Related documentation

Syncplicity Panorama offers a full set of administration and end-user documents that you can access from the Syncplicity website. You can also access Isilon OneFS documentation on the EMC support site.

In addition to this technote, related documentation includes:

- *Syncplicity Panorama Connector Installation and Configuration Guide*
- *Isilon OneFS 7.1.1 Web Administration Guide*
- *Isilon OneFS 7.1.1 CLI Administration Guide*
- *Microsoft Read Only Domain Controller Planning and Deployment Guide*

The latest versions of Syncplicity documentation are located at the following URL:

<https://syncplicity.zendesk.com/hc/en-us/categories/200050849>

Isilon OneFS documentation is located at the following URL:

https://support.emc.com/products/15209_Isilon-OneFS/Documentation/

The Microsoft document is located at the following URL:

<http://technet.microsoft.com/en-us/library/cc771744%28WS.10%29.aspx>

Deployment and best practices

To deploy Syncplicity Panorama with Isilon storage, follow guidelines and best practices regarding the Connector, Active Directory, security, and general administration.

Syncplicity Panorama Network Share Connector

Syncplicity Panorama provides secure communications between mobile users and repositories of data behind the corporate firewall. In an Isilon deployment, the Network Share Connector is required to enable mobile access to file shares and home directories.

Syncplicity Enterprise Edition account

You can deploy a Network Share Connector without an Enterprise Edition account. With an Enterprise Edition account, an organization has access to the full Syncplicity administrative tool set, and support of on-premise storage, known as StorageVaults. EMC Isilon storage is one of the supported StorageVaults.

The Enterprise Edition account enables the administrator to control policies, users and groups, reports, device management, and file sharing.

Without an Enterprise Edition account, users can log in directly to file shares from the Syncplicity mobile app. However, in this mode, administrators do not have access to all Syncplicity features.

The following table provides a summary of functional differences with and without an Enterprise Edition account.

Function	With an Enterprise Edition account	Without an Enterprise Edition account
Policies	Yes	Yes

Function	With an Enterprise Edition account	Without an Enterprise Edition account
Users and groups	Yes	Yes
Remote wipe	Yes	Yes
Bookmarks	Yes	Yes
Access permissions	Yes	Yes
StorageVaults	Yes	No
Reports	Yes	No
Device management	Yes	No

About policies

Without a Syncplicity Enterprise Edition account, you can use the administrator console to configure security policies that govern access to home directories and file shares. With a Syncplicity account, you can define additional policies that further control access to content and to monitor user actions in the system.

With or without a Syncplicity account, users can still navigate through file shares and home directories, and perform various actions on files, such as edit, rename, copy and delete, if their permissions allow. Users can access only those files that they would be able to access directly on the network share.

Active Directory user management

The Syncplicity Panorama Network Share Connector requires an Active Directory (AD) account that can be queried for users and groups.

When a new user is added, Active Directory can be set up to provision the user in the corporate network automatically, which includes creating a home directory and providing access to file shares. In Syncplicity Panorama, if the policy is enabled, the home directory is then bookmarked for the user in the Syncplicity mobile app.

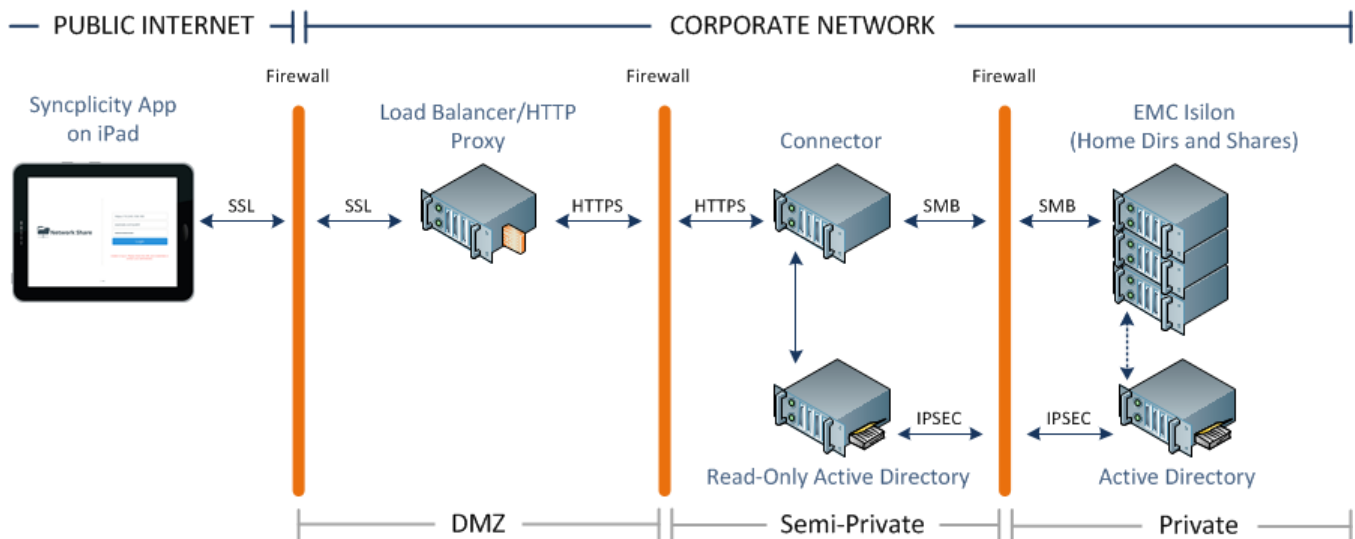
On an ongoing basis, Active Directory can be used for identity management, provisioning new users and removing users who leave the company.

Because of the link between the Connector and Active Directory, when users are removed, they are prevented from accessing home directories and file shares through the Syncplicity app.

Security considerations

Deploying Syncplicity Panorama securely in your corporate network requires a combination of network, hardware, and software best practices.

The following diagram illustrates a secure deployment of the Syncplicity Panorama system in your corporate network.

Figure 1 Syncplicity Panorama system deployment

Because the Network Share Connector provides the conduit for secure data communications between mobile users and back-end Isilon clusters, the Connector should be installed behind a firewall in the semi-private tier of your network. An optional load balancer and proxy server can be deployed in the DMZ to serve as a gateway to the Connector.

The best practices deployment of Syncplicity Panorama with Isilon storage uses the following communication protocols and ports:

Protocol	Port
SSL	TCP 443
HTTP	TCP 80
SMB	TCP 8080
IPSEC	UDP 500 IP Protocol 50, 51

For complete information about Syncplicity Panorama deployment, see the *Syncplicity Panorama Installation and Configuration Guide*.

Scalability and performance limits

Performance of Syncplicity Panorama with Isilon storage depends on the number of Network Share Connectors that are deployed in the system and on the hardware the Connectors run on.

For scalability guidelines, the following physical hardware for a single Connector was tested in an environment running 50 concurrent requests:

- Processor: Intel Xeon CPU E5-26151 v2@1.80GHz
- Memory: 8GB
- Hard Disk Size: 500GB
- LAN capacity: 1Gbps

The concurrency figure of 50 requests is approximately equivalent to 10,000 mobile users. To increase scale, you can add multiple Connectors to the system configuration.

Note

It is recommended that only one instance of a Network Share Connector be installed and configured on one physical computer. For each additional Connector, you should plan to add an additional physical server computer to your Syncplicity Panorama deployment.

Installation

After you deploy Connector hardware in your data center, you can download and install the Syncplicity Panorama Connector.

The Syncplicity Panorama Connector software can be downloaded from the following location:

<https://www.syncplicity.com/xPanoramaConnectorDownload>

To perform the installation, you must be a Windows local or domain administrator. The installation involves running the MSI installer.

Any errors that are encountered during installation are written to a setup log stored in the Windows Temp folder (%TEMP%) in a log file generated by the MSI installer. Other events are logged to the Windows event logs.

For full installation and configuration instructions, see the *Syncplicity Panorama Connector Installation and Configuration Guide*.

Connector administration

During Syncplicity Panorama installation, you can configure home directories and file shares. At any time after installation, you can access the administrator console to edit those settings.

The URL for the administrator console home page appears at the end of the installation process, and should be bookmarked or noted for future reference.

For instructions to edit home directory and file share configuration settings, see the *Syncplicity Panorama Connector Installation and Configuration Guide*.

