NetApp

Dell EMC

Cloud Insights

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DELL EMC Data Domain data collector

This data collector gathers inventory and performance information from DELL EMC Data Domain deduplication storage systems. To configure this data collector, there are specific configuration instructions and usage recommendations you must follow.

Terminology

Cloud Insights acquires the following inventory information from the Data Domain data collector. For each asset type acquired by Cloud Insights, the most common terminology used for this asset is shown. When viewing or troubleshooting this data collector, keep the following terminology in mind:

Vendor/Model Term	Cloud Insights Term
Disk	Disk
Array	Storage
FC Port	Port
File System	Internal Volume
Quota	Quota
NFS and CIFS share	FileShare

Note: These are common terminology mappings only and might not represent every case for this data colletor.

Requirements

You need the following information to configure this data collector:

- IP address of the Data Domain device
- Read-only user name and password to the Data Domain storage
- SSH port 22

Configuration

Field	Description
IP address	The IP address or fully-qualified domain name of the Data Domain storage array
User name	The user name for the Data Domain storage array
Password	The password for the Data Domain storage array

Advanced configuration

Field	Description
Inventory Poll Interval (min)	Interval between inventory polls. The default is 20.
SSH Port	SSH service port

Troubleshooting

Additional information on this Data Collector may be found from the Support page or in the Data Collector Support Matrix.

Configuring the EMC ECS data collector

This data collector acquires inventory and performance data from EMC ECS storage systems. For configuration, the data collector requires an IP address of the ECS server and an administrative level domain account.

> (i) Dell EMC ECS is metered at a different Raw TB to Managed Unit rate. Every 40 TB of unformatted ECS capacity is charged as 1 Managed Unit (MU).

Terminology

Cloud Insights acquires the following inventory information from the ECS data collector. For each asset type acquired, the most common terminology used for this asset is shown. When viewing or troubleshooting this data collector, keep the following terminology in mind:

Vendor/Model Term	Cloud Insights Term
Cluster	Storage
Tenant	Storage Pool
Bucket	Internal Volume
Disk	Disk

Note: These are common terminology mappings only and might not represent every case for this data collector.

Requirements

- An IP address of the ECS Management Console
- Administrative level domain account for the ECS system
- Port 443 (HTTPS). Requires outbound connectivity to TCP port 443 on the ECS system.
- For performance, read-only username and password for ssh/scp access.
- For performance, port 22 is required.

Configuration

Field	Description
ECS Host	IP address or fully-qualified domain name of the ECS system
ECS Host Port	Port used for communication with ECS Host
ECS Vendor ID	Vendor ID for ECS
Password	Password used for ECS

Advanced configuration

Field	Description
Inventory Poll Interval (min)	The default is 360 minutes.

Troubleshooting

Additional information may be found from the Support page or in the Data Collector Support Matrix.

Dell EMC PowerScale data collector

Cloud Insights uses the Dell EMC PowerScale (previously Isilon) SSH data collector to acquire inventory and performance data from PowerScale scale-out NAS storage.

Terminology

Cloud Insights acquires the following inventory information from this data collector. For each asset type acquired by Cloud Insights, the most common terminology used for this asset is shown. When viewing or troubleshooting this data collector, keep the following terminology in mind:

Vendor/Model Term	Cloud Insights Term
Drive	Disk
Cluster	Storage
Node	Storage Node
File System	Internal Volume

Note: These are common terminology mappings only and might not represent every case for this data collector.

Requirements

You need the following information to configure this data collector:

- Administrator permissions to the PowerScale storage
- IP address of the PowerScale cluster
- SSH access to port 22

Configuration

Field	Description
IP address	The IP address or fully-qualified domain name of the PowerScale cluster
User Name	User name for the PowerScale cluster
Password	Password used for the PowerScale cluster

Advanced configuration

Field	Description
Inventory Poll Interval (min)	Interval between inventory polls. The default is 20.
Performance Poll Interval (sec)	Interval between performance polls. The default is 300.
SSH Port	SSH service port. The default is 22.

Troubleshooting

Some things to try if you encounter problems with this data collector:

Inventory

Problem:	Try this:
"Invalid login credentials" with error messages "Commands not enabled for role-based administration require root user access"	* Verify that the user has permissions to run the following commands on the device: > isi version osrelease > isi status -q > isi status -n > isi devices -d %s > isi license * Verify credentials used in the wizard are matching device credentials
"Internal Error" with error messages "Command <Your command> run failed with permission: <Your current permission>. Sudo command run permission issue"	Verify that the user has sudo permissions to run the following command on the device

Additional information may be found from the Support page or in the Data Collector Support Matrix.

Dell EMC PowerStore data collector

The EMC PowerStore data collector gathers inventory information from EMC PowerStore storage. For configuration, the data collector requires the IP address of the storage processors and a read-only user name and password.

The EMC PowerStore data collector gathers the volume-to-volume replication relationships that PowerStore coordinates across other storage arrays. Cloud Insights shows a storage array for each PowerStore cluster,

and collects inventory data for nodes and storage ports on that cluster. No storage pool or volume data is collected.

Terminology

Cloud Insights acquires the following inventory information from this data collector. For each asset type acquired by Cloud Insights, the most common terminology used for this asset is shown. When viewing or troubleshooting this data collector, keep the following terminology in mind:

Vendor/Model Term	Cloud Insights Term
host	host
host_volume_mapping	host_volume_mapping
hardware (it has Drives under "extra_details" object): Drives	Disk
Appliance	StoragePool
Cluster	Storage Array
Node	StorageNode
fc_port	Port
volume	Volume
InternalVolume	file_system

Note: These are common terminology mappings only and might not represent every case for this data collector.

Requirements

The following information is required to configure this data collector:

- IP address or fully-qualified domain name of storage processor
- Read-only user name and password

Configuration

Field	Description
PowerStore gateway(s)	IP addresses or fully-qualified domain names of PowerStore storage
User Name	User name for PowerStore
Password	Password used for PowerStore

Advanced configuration

Field	Description
HTTPS Port	Default is 443

Field	Description
Inventory Poll Interval (minutes)	Interval between inventory polls. The default is 60 minutes.

Cloud Insight's PowerStore performance collection makes use of PowerStore's 5-minute granularity source data. As such, Cloud Insights polls for that data every five minutes, and this is not configurable.

Troubleshooting

Additional information on this Data Collector may be found from the Support page or in the Data Collector Support Matrix.

Dell EMC RecoverPoint data collector

The EMC RecoverPoint data collector's primary use case is to discover volume-to-volume replication relationships that the RecoverPoint storage appliance facilitates. This collector will also discover the Recoverpoint appliance itself. Please note that Dell/EMC sells a VMware backup solution for VMs--"RecoverPoint for VMs"--which is not supported by this collector

For configuration, the data collector requires the IP address of the storage processors and a read-only user name and password.

The EMC RecoverPoint data collector gathers the volume-to-volume replication relationships that RecoverPoint coordinates across other storage arrays. Cloud Insights shows a storage array for each RecoverPoint cluster, and collects inventory data for nodes and storage ports on that cluster. No storage pool or volume data is collected.

Requirements

The following information is required to configure this data collector:

- IP address or fully-qualified domain name of storage processor
- Read-only user name and password
- REST API access via port 443

Configuration

Field	Description
Address of RecoverPoint	IP address or fully-qualified domain name of RecoverPoint cluster
User Name	User name for the RecoverPoint cluster
Password	Password used for the RecoverPoint cluster

Advanced configuration

Field	Description
TCP Port	TCP Port used to connect to Recoverpoint cluster
Inventory Poll Interval (minutes)	Interval between inventory polls. The default is 20 minutes.
Excluded Clusters	Comma-separated list of cluster IDs or names to exclude when polling.

Troubleshooting

Additional information on this Data Collector may be found from the Support page or in the Data Collector Support Matrix.

DELL EMC ScaleIO data collector

The ScaleIO data collector collects inventory information from ScaleIO storage. For configuration, this data collector requires the ScaleIO gateway address and an admin user name and password.

Terminology

Cloud Insights acquires the following inventory information from the ScaleIO data collector. For each asset type acquired by Cloud Insights, the most common terminology used for this asset is shown. When viewing or troubleshooting this data collector, keep the following terminology in mind:

Vendor/Model Term	Cloud Insights Term
MDM (Meta Data Manager) Cluster	Storage
SDS (ScaleIO Data Server)	Storage Node
Storage Pool	Storage Pool
Volume	Volume
Device	Disk

Note: These are common terminology mappings only and might not represent every case for this data collector.

Requirements

- Read-only access to the Admin user account
- Port requirement: HTTPS Port 443

Configuration

Field	Description
ScaleIO Gateway(s)	IP addresses or FQDNs of ScaleIO gateways, separated by comma (,) or semicolon (;)

Field	Description
User Name	Admin user name used to log in to the ScaleIO device
Password	Password used to log in to the ScaleIO device

Advanced configuration

Click the Inventory check box to enable inventory collection.

Field	Description
HTTPS port	443
Inventory poll interval (min)	The default is 60.
Connection Timeout (sec)	The default is 60.

Troubleshooting

Additional information may be found from the Support page or in the Data Collector Support Matrix.

Configuring the EMC Unity data collector

The DELL EMC Unity (formerly VNXe) data collector provides inventory support for VNXe unified storage arrays. Cloud Insights currently supports iSCSI and NAS protocols.

Requirements

- The Unity data collector is CLI based; you must install the Unisphere for Unity CLI, (uemcli.exe) onto the acquisition unit where your VNXe data collector resides.
- uemcli.exe uses HTTPS as the transport protocol, so the acquisition unit will need to be able to initiate HTTPS connections to the Unity.
- IP address or fully-qualified domain name of the Unity device
- You must have at least a read-only user for use by the data collector.
- HTTPS on Port 443 is required
- The EMC Unity data collector provides NAS and iSCSI support for inventory; fibre channel volumes will be discovered, but Cloud Insights does not report on FC mapping, masking, or storage ports.

Terminology

Cloud Insights acquires the following inventory information from the Unity data collector. For each asset type acquired by Cloud Insights, the most common terminology used for this asset is shown. When viewing or troubleshooting this data collector, keep the following terminology in mind:

Vendor/Model Term	Cloud Insights Term
Disk	Disk
Storage Array	Storage
Processor	Storage Node

Vendor/Model Term	Cloud Insights Term
Storage Pool	Storage Pool
General iSCSI Block info, VMWare VMFS	Share
Replication Remote System	Synchronization
iSCSI Node	iSCSI Target Node
iSCSI Initiator	iSCSI Target Initiator

Note: These are common terminology mappings only and might not represent every case for this data source.

Configuration

Field	Description
Unity Storage	IP address or fully-qualified domain name of the Unity device
User Name	User name for the Unity device
Password	Password for the Unity device
Full Path to the Executable UEMCLI	Full path to the folder containing the *uemcli.exe* executable

Advanced configuration

Field	Description
Inventory Poll Interval (min)	Interval between inventory polls. The default is 40 minutes
Unity CLI Port	Port used for the Unity CLI
Performance poll interval (sec)	The default is 300.

Troubleshooting

Some things to try if you encounter problems with this data collector:

Inventory

Problem:	Try this:
"Failed to execute external utility" with error messages "Failed to find Unisphere executable uemcli"	* Verify correct IP address, username, and password * Confirm that Unisphere CLI is installed on the Cloud Insights Acquisition Unit * Confirm that Unisphere CLI installation directory is correct in the datasource configuration * Confirm that the IP of the VNXe is correct in the configuration of the datasource. From the Cloud Insights Acquisition Unit, open a CMD and change to to the configured installation directory: ${INSTALLDIR. Try to make a connection with the VNXe device by typing: uemcli -d <Your IP> -u <Your ID> /sys/general show

Additional information may be found from the Support page or in the Data Collector Support Matrix.

Dell EMC VMAX and PowerMax Family of Devices data collector

Cloud Insights discovers EMC VMAX and PowerMax storage arrays by using Solutions Enabler symcli commands in conjunction with an existing Solutions Enabler server in your environment. The existing Solutions Enabler server has connectivity to the VMAX/PowerMax storage array through access to gatekeeper volumes.

Requirements

Before configuring this data collector, you should ensure that Cloud Insights has TCP connectivity to port 2707 on the existing Solutions Enabler server. Cloud Insights discovers all the Symmetrix arrays that are "Local" to this server, as seen in "symcfg list" output from that server.

- The EMC Solutions Enabler (CLI) with SMI-S provider application must be installed on the Acquisition Unit server and the version must match or be earlier than the version running on the Solutions Enabler Server.

- A properly configured {installdir}\EMC\SYMAPI\config\netcnfg file is required. This file defines service names for Solutions Enabler servers, as well as the access method (SECURE / NOSECURE /ANY).

- If you require read/write latency at the storage node level, the SMI-S Provider must communicate with a running instance of the UNISPHERE for VMAX application.

- IP address of the managing Solutions Enabler server

- Administrator permissions on the Solutions Enabler (SE) Server

- Read-only user name and password to the SE software

- The UNISPHERE for VMAX application must be running and collecting statistics for the EMC VMAX and PowerMax sstorage arrays that are managed by the SMI-S Provider installation

- Access validation for performance: In a web browser on your Acquisition Unit, go to *https://<SMI-S Hostname or IP>:5989/ecomconfig* where "SMI-S Hostname or IP" is the IP address or hostname of your SMI-S server. This URL is for an administrative portal for the EMC SMI-S (aka "ECOM") service - you will receive a login popup.

Terminology

Cloud Insights acquires the following inventory information from the EMC VMAX/PowerMax data source. For each asset type acquired, the most common terminology used for this asset is shown. When viewing or troubleshooting this data collector, keep the following terminology in mind:

Vendor/Model Term	Cloud Insights Term
Disk	Disk
Disk Group	Disk Group
Storage	Array Storage
Director	Storage Node
Device Pool, Storage Resource Pool (SRP)	Storage Pool
Device TDev	Volume

Note: These are common terminology mappings only and might not represent every case for this data collector.

Configuration

Note: If SMI-S user authentication is not enabled, the default values in the Cloud Insights data collector are ignored.

Field	Description
Service Name	Service name as specified in *netcnfg* file
Full path to CLI	Full path to the folder containing the Symmetrix CLI
SMI-S Host IP Address	IP address of the SMI-S host

Advanced Configuration

Field	Description
Inventory Poll Interval (min)	Interval between inventory polls. The default is 40 minutes.
Choose 'Exclude' or 'Include' to specify a list	Specify whether to include or exclude the array list below when collecting data.
Inventory Filter Device List	Comma-separated list of device IDs to include or exclude

Field	Description
Connection Caching	Choose connection caching method: * LOCAL means that the Cloud Insights Acquisition service is running on the Solutions Enabler server, which has Fibre Channel connectivity to the Symmetrix arrays you seek to discover, and has access to gatekeeper volumes. This might be seen in some Remote Acquisition Unit (RAU) configurations. * REMOTE_CACHED is the default and should be used in most cases. This uses the NETCNFG file settings to connect using IP to the Solutions Enabler server, which must have Fibre Channel connectivity to the Symmetrix arrays you seek to discover, and has access to Gatekeeper volumes. * In the event that REMOTE_CACHED options make CLI commands fail, use the REMOTE option. Keep in mind that it will slow down the acquisition process (possibly to hours or even days in extreme cases). The NETCNFG file settings are still used for an IP connection to the Solutions Enabler server that has Fibre Channel connectivity to the Symmetrix arrays being discovered. **Note:** This setting does not change Cloud Insights behavior with respect to the arrays listed as REMOTE by the "symcfg list" output. Cloud Insights gathers data only on devices shown as LOCAL by this command.
SMI-S Protocol	Protocol used to connect to the SMI-S provider. Also displays the default port used.
Override SMIS-Port	If blank, use the default port in the Connection Type field, otherwise enter the connection port to use
SMI-S User Name	User name for the SMI-S Provider Host
SMI-S Password	User name for the SMI-S Provider Host
Performance Polling Interval (sec)	Interval between performance polls (default 1000 seconds)
hoose 'Exclude' or 'Include' to specify a list	Specify whether to include or exclude the array list below when collecting performance data
Performance Filter Device List	Comma-separated list of device IDs to include or exclude

Troubleshooting

Some things to try if you encounter problems with this data collector:

Inventory

Problem:	Try this:
Error: The feature being requested is not currently licensed	Install the SYMAPI server license.
Error: No devices were found	Make sure Symmetrix devices are configured to be managed by the the Solutions Enabler server: - Run symcfg list -v to see the list of configured Symmetrix devices.
Error: A requested network service was not found in the service file	Make sure the Solutions Enabler Service Name is defined the netcnfg file for Solutions Enabler. This file is usually located under SYMAPI\config\ in the Solutions Enabler client installation.
Error: The remote client/server handshake failed	Check the most recent storsrvd.log* files on the Solutions Enabler host we are trying to discover.
Error: Common name in client certificate not valid	Edit the *hosts* file on the Solutions Enabler server so that the Acquisition Unit's hostname resolves to the IP address as reported in the storsrvd.log on the Solutions Enabler server.
Error: The function could not obtain memory	Make sure there is enough free memory available in the system to execute Solutions Enabler
Error: Solutions Enabler was unable to serve all data required.	Investigate the health status and load profile of Solutions Enabler
Error: • The "symcfg list -tdev" CLI command may return incorrect data when collected with Solutions Enabler 7.x from a Solutions Enabler server 8.x. • The "symcfg list -srp" CLI command may return incorrect data when collected with Solutions Enabler 8.1.0 or earlier from a Solutions Enabler server 8.3 or later.	Be sure you are using the same Solutions Enabler major release

Additional information may be found from the Support page or in the Data Collector Support Matrix.

Dell EMC VNX Block Storage (NaviCLI) data collector

Cloud Insights uses the Dell EMC VNX Block Storage (NaviSec) data collector (formerly CLARiiON) to acquire inventory and performance data.

Terminology

Cloud Insights acquires the following inventory information from the EMC VNX Block Storage data collector. For each asset type acquired by Cloud Insights, the most common terminology used for this asset is shown. When viewing or troubleshooting this data collector, keep the following terminology in mind:

Vendor/Model Term	Cloud Insights Term
Disk	Disk

Vendor/Model Term	Cloud Insights Term
Storage	Storage
Storage Processor	Storage Node
This Pool, RAID Group	Storage Pool
LUN	Volume

Note: These are common terminology mappings only and might not represent every case for this data source.

Requirements

The following requirements must be met in order to collect data:

- An IP address of each VNX block storage processor
- Read-only Navisphere username and password to the VNX block storage arrays
- NaviSecCli must be installed on the Cloud Insights AU
- Access validation: Run NaviSecCLI from the Cloud Insights AU to each array using the username and password.
- Port requirements: 80, 443
- NaviSecCLI version should correspond with the newest FLARE code on your array
- For performance, statistics logging must be enabled.

NaviSphere command line interface syntax

naviseccli.exe -h <IP address> -user <user> -password <password> -scope
<scope,use 0 for global scope> -port <use 443 by default> command

Configuration

Field	Description
VNX Block Storage IP Address	IP address or fully-qualified domain name of the VNX block storage
User Name	Name used to log into the VNX block storage device.
Password	Password used to log into the VNX block storage device.
CLI Path to naviseccli.exe	Full path to the folder containing the *naviseccli.exe* executable

Advanced Configuration

Field	Description
Inventory Poll Interval (min)	Interval between inventory polls. Default is 40 minutes.
Scope	The secure client scope. The default is Global.

Field	Description
Performance Poll Interval (sec)	Interval between performance polls. The default is 300 seconds.

Troubleshooting

Some things to try if you encounter problems with this data collector:

Inventory

Problem:	Try this:
Error: • Agent Not Running • Failed to find naviseccli • Failed to execute any command	• Confirm that NaviSphere CLI is installed on the Cloud Insight Acquisition Unit • You have not selected the "Use secure client" option in the data collector configuration wizard and do not have a non-secure version of Naviphere CLI installed. • Confirm that NaviSphere CLI installation directory is correct in the data collector configuration • Confirm that the IP of the VNX block storage is correct in the data collector configuration: • From the Cloud Insights Acquisition Unit: - Open a CMD. - Change the directory to the configured installation directory - Try to make a connection with the VNX block storage device by typing "navicli -h {ip} getagent" (replace the {ip} with the actual IP)
Error: 4.29 emc235848 emc241018 getall Failed to parse host alias info	This is likely caused by a FLARE 29 corruption issue of the host initiator database on the array itself. See EMC knowledge base articles: emc235848, emc241018. You can also check https://now.netapp.com/Knowledgebase/ solutionarea.asp?id=kb58128
Error: Unable to retrieve Meta LUNs. Error Executing java -jar navicli.jar	• Modify the data collector configuration to use the secure client (recommended) • Install navicli.jar in the CLI path to navicli.exe OR naviseccli.exe • Note: navicli.jar is deprecated as of EMC Navisphere version 6.26 • The navicli.jar may be available on http://powerlink.emc.com
Error: Storage Pools not reporting disks on Service Processor at configured IP address	Configure the data collector with both Service Processor IPs, separated by a comma

Problem:	Try this:
Error: Revision mismatch error	• This is usually caused by updating the firmware on the VNX block storage device, but not updating the installation of NaviCLI.exe. This also might be caused by having different devices with different firmwares, but only one CLI installed (with a different firmware version). • Verify that the device and the host are both running identical versions of the software: - From the Cloud Insights Acquisition Unit, open a command line window - Change the directory to the configured installation directory - Make a connection with the CLARiiON device by typing "navicli -h ${ip} getagent" - Look for the version number on the first couple of lines. Example: "Agent Rev: 6.16.2 (0.1)" - Look for and compare the version on the first line. Example: "Navisphere CLI Revision 6.07.00.04.07"
Error: Unsupported Configuration - No Fibre Channel Ports	The device is not configured with any Fibre Channel ports. Currently, only FC configurations are supported. Verify this version/firmware is supported.

Additional information may be found from the Support page or in the Data Collector Support Matrix.

DELL EMC VNX File (formerly Celerra Unified Storage System) data collector

This data collector acquires inventory information from the VNX File Storage System. For configuration, this data collector requires the IP address of the storage processors and a read-only user name and password.

Terminology

Cloud Insights acquires the following inventory information from the VNX File data collector. For each asset type acquired by Cloud Insights, the most common terminology used for this asset is shown. When viewing or troubleshooting this data collector, keep the following terminology in mind:

Vendor/Model Term	Cloud Insights Term
Celerra Network Server/Celerra Storage Pool	Storage Pool
File System	Internal Volume
Data Mover	Controller
File System mounted on a data mover	File Share
CIFS and NFS Exports	Share
Disk Volume	Backend LUN

Note: These are common terminology mappings only and might not represent every case for this data

collector.

Requirements

You need the following to configure this data collector:

- The IP address of the storage processor
- Read-only user name and password
- SSH port 22

Configuration

Field	Description
VNX File IP Address	IP address or fully-qualified domain name of the VNX File device
User Name	Name used to log in to the VNX File device
Password	Password used to log in to the VNX File device

Advanced configuration

Field	Description
Inventory Poll Interval (minutes)	Interval between inventory polls. The default is 20 minutes.

Troubleshooting

Some things to try if you encounter problems with this data collector:

Inventory

Problem:	Try this:
Error: Unable to proceed while DART update in progress	Possible solution: Pause the data collector and wait for the DART upgrade to complete before attempting another acquisition request.

Additional information may be found from the Support page or in the Data Collector Support Matrix.

Configuring the Dell EMC VNX Unified data collector

For configuration, the Dell EMC VNX Unified (SSH) data collector requires the IP address of the Control Station and a read-only username and password.

Terminology

Cloud Insights acquires the following inventory information from this data collector. For each asset type acquired by Cloud Insights, the most common terminology used for this asset is shown. When viewing or troubleshooting this data collector, keep the following terminology in mind:

Vendor/Model Term	Cloud Insights Term
Disk	Disk
Disk Folder	Disk Group
File system	Internal Volume
Storage	Storage
Storage Processor	Storage Node
Storage Pool, RAID Group	Storage Pool
LUN	Volume
Data Mover	Controller
File System mounted on a data mover	File Share
CIFS and NFS Exports	Share
Disk Volume	Backend LUN

Requirements

You need the following to configure the VNX (SSH) data collector:

- VNX IP address & Credentials to the Celerra Control Station.
- Read-only username and password.
- The data collector is able to run NaviCLI/NaviSecCLI commands against the backend array utilizing the DART OS NAS heads

Configuration

Field	Description
VNX IP Address	IP address or fully-qualified domain name of the VNX Control Station
User Name	User name for the VNX Control Station
Password	Password for the VNX Control Station

Advanced configiration

Field	Description
Inventory Poll Interval (min)	Interval between inventory polls. The default is 40 minutes.
Performance Poll Interval (sec).	Interval between performance polls. The default is 300 seconds.

Troubleshooting

Additional information on this Data Collector may be found from the Support page or in the Data Collector

Configuring the EMC VPLEX data collector

This data collector acquires inventory and performance data from EMC VPLEX storage systems. For configuration, the data collector requires an IP address of the VPLEX server and an administrative level domain account.

ⓘ   Cloud Insights' performance collection from Vplex clusters requires that the performance archive service be operational, in order to populate the .CSV files and logs that Cloud Insights retrieves via SCP-based file copies. NetApp has observed that many Vplex firmware upgrade/management station updates will leave this functionality non-operational. Customers planning such upgrades may want to proactively ask Dell/EMC if their planned upgrade will leave this functionality inoperable, and if so, how can they re-enable it to minimize gaps in performance visibility? Cloud Insight's Vplex performance code will assess on each poll whether all the expected files exist, and if they are being properly updated; if they are missing or stale, Cloud Insights will log performance collection failures.

Terminology

Cloud Insightst acquires the following inventory information from the VPLEX data collector. For each asset type acquired, the most common terminology used for this asset is shown. When viewing or troubleshooting this data collector, keep the following terminology in mind:

Vendor/Model Term	Cloud Insights Term
Cluster	Storage
Engine	Storage Node
Device, System Extent	Backend Storage Pool
Virtual Volume	Volume
Front-End Port, Back-End Port	Port
Distributed Device	Storage Synchronization
Storage View	Volume Map, Volume Mask
Storage Volume	Backend LUN
ITLs	Backend Path

Note: These are common terminology mappings only and might not represent every case for this data collector.

Requirements

- An IP address of the VPLEX Management Console
- Administrative level domain account for the VPLEX server
- Port 443 (HTTPS). Requires outbound connectivity to TCP port 443 on the VPLEX management station.
- For performance, read-only username and password for ssh/scp access.

- For performance, port 22 is required.

Configuration

Field	Description
IP address of VPLEX Management Console	IP address or fully-qualified domain name of the VPLEX Management Console
User Name	User name for VPLEX CLI
Password	Password used for VPLEX CLI
Performance Remote IP Address	Performance Remote IP address of the VPLEX Management Console
Performance Remote User Name	Performance Remote user name of VPLEX Management Console
Performance Remote Password	Performance Remote Password of VPLEX Management Console

Advanced configuration

Field	Description
Communication Port	Port used for VPLEX CLI. The default is 443.
Inventory Poll Interval (min)	The default is 20 minutes.
Number of connection retries	The default is 3.
Performance Poll Interval (sec)	Interval between performance polls. The default is 600 seconds.
Number of Retries	The default is 2.

Troubleshooting

Some things to try if you encounter problems with this data collector:

Inventory

Problem:	Try this:
Error: User authentication failed.	Make sure your credentials for this device are correct.

Performance

Problem:	Try this:
Error: VPLEX performance for version below 5.3 is not supported.	Upgrade VPLEX to 5.3 or above
Error: No enough data collected.	• Check collection timestamp in log file and modify polling interval accordingly • Wait for longer time

Problem:	Try this:
Error: Perpetual Log files not being updated.	Please contact EMC support to enable updating the perpetual log files
Error: Performance polling interval is too big.	Check collection timestamp in log file ${logfile} and modify polling interval accordingly
Error: Performance Remote IP address of VPLEX Management Console is not configured.	Edit the data source to set Performance Remote IP address of VPLEX Management Console.
Error: No performance data reported from director	• Check that the system performance monitors are running correctly • Please contact EMC support to enable updating the system performance monitor log files

Additional information may be found from the Support page or in the Data Collector Support Matrix.

Dell EMC XtremeIO data collector

The EMC XtremIO data collector acquires inventory and performance data from the EMC XtremIO storage system.

Requirements

To configure the EMC XtremIO (HTTP) data collector, you must have:

- The XtremIO Management Server (XMS) Host address
- An account with administrator privileges
- Access to port 443 (HTTPS)

Terminology

Cloud Insights acquires the following inventory information from the EMC XtremIO data collector. For each asset type acquired by Cloud Insights, the most common terminology used for this asset is shown. When viewing or troubleshooting this data source, keep the following terminology in mind:

Vendor/Model Term	Cloud Insights Term
Disk (SSD)	Disk
Cluster	Storage
Controller	Storage Node
Volume	Volume
LUN Map	Volume Map
Target FC Initiator	Volume Mask

Note: These are common terminology mappings only and might not represent every case for this data source.

Requirements

- The XtremIO Management Server (XMS) Host IP address
- Administrator user name and password for the XtremIO

Configuration

Field	Description
XMS Host	IP address or fully-qualified domain name of the XtremIO Management Server
User name	User name for the XtremIO Management Server
Password	Password for the XtremIO Management Server

Advanced configuration

Field	Description
TCP port	TCP Port used to connect to XTremIO Management Server. The default is 443.
Inventory poll interval (min)	Interval between inventory polls. The default is 60 minutes.
Performance poll interval (sec)	Interval between performance polls. The default is 300 seconds.

Troubleshooting

Additional information on this Data Collector may be found from the Support page or in the Data Collector Support Matrix.