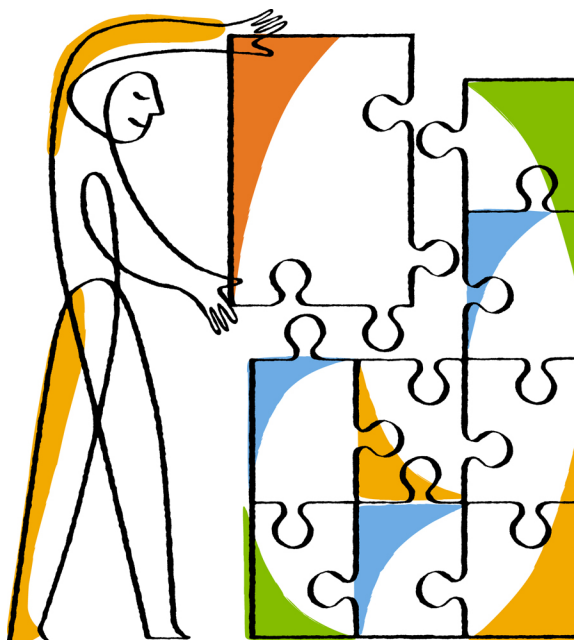




Data ONTAP SMI-S Agent 5.0

Release Notes



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Uses of Data ONTAP SMI-S Agent

You can use Data ONTAP SMI-S Agent to perform the following tasks:

- Add a storage system to manage and monitor devices
- Delete a storage system
- Monitor logical unit numbers (LUNs), volumes, and disks of storage systems
- Provision LUNs and volumes for storage systems
- Manage the CIM server and its users
- Manage CIMOM configuration settings
- Set log levels for system messages sent from the CIMOM server
- Manage clustered Data ONTAP for iSCSI, FCP, and CIFS

New and changed features in SMI-S Agent 5.0

SMI-S Agent 5.0 introduces new features and enhancements, such as CTP 1.6 compliance and support for clustered Data ONTAP.

SMI-S Agent 5.0 includes the following new features and enhancements:

- Support for SMI-S 1.5 and 1.6 via Conformance Testing Program (CTP) 1.5 and 1.6 compliance
- Support for thin provisioning for clustered Data ONTAP 8.2 (monitor, manage, and provision)
- Support for clustered Data ONTAP 8.2 for iSCSI, FCP and CIFS
 - CIFS support: monitor and manipulate file systems, file shares, and file share ACLs
- Support for SMB 3.0 (continuous availability support)
- Support for both indications and storage pools in Windows 8
- Support for AutoSupport (ASUP) reporting

SMI-S Agent 5.0 contains the following changed features:

- Users are no longer required to enter cimuser and cimpassword for every command

System requirements

You must ensure that your agent host meet at least the minimum requirements to properly install and run Data ONTAP SMI-S Agent.

Hardware requirements

You must verify that Windows and Linux hosts meet minimum hardware requirements before installing Data ONTAP SMI-S Agent.

Hardware	Requirements
Memory	You must always meet the minimum memory requirements for the host operating system. • 4 GB RAM (minimum) • 8 GB RAM (recommended)
Disk space	• 1 GB (minimum) • 4 GB (recommended)
CPU	• Dual-core 2.0 GHz (minimum) • Quad-core 2.0 GHz (recommended)

Note: Enabling logging and tracing requires additional disk space of up to 1 GB, depending on the log and trace file rotation settings.

Client software requirements

Before you install Data ONTAP SMI-S Agent, you must first install required software.

Operating system	Required client software
Linux	• Install the <code>uncompress</code> utility in the <code>/usr/bin</code> directory.

Operating system	Required client software
Windows	Microsoft Visual C++ 2010 runtime libraries are automatically installed during the Data ONTAP SMI-S Agent installation. To avoid potential issues related to runtime libraries, install the following software package: Microsoft Visual C++ 2010 Redistributable Package (x86), available at http://www.microsoft.com.

Supported platforms

SMI-S Agent supports platforms running Data ONTAP 7.3.5+, 8.0.x, and 8.1.x (operating in 7-Mode only), and Data ONTAP 8.2.x.

For SMI-S Agent to create clones of storage volumes (LUNs), you must have installed a FlexClone license on the storage system.

SMI-S Agent supports the following platforms:

- FAS series systems
- V-Series storage systems

Supported operating systems

Before installing SMI-S Agent, you must verify that the Windows and Linux hosts are running supported operating systems.

Operating system	Supported versions
Linux	• Red Hat Enterprise Linux 5 Advanced Platform for x86 (32-bit and 64-bit) • Red Hat Enterprise Linux v6 (32-bit and 64-bit) • For 64-bit, install 32-bit libraries: gcc, libc, and libz • SUSE Linux Enterprise Server, version 10 (32-bit) • SUSE Linux Enterprise Server, version 11 with SP1 (64-bit) • Install 32-bit libraries: gcc, libc, and libz

Operating system	Supported versions
Windows	• Microsoft Windows Server 2008 R2 • Microsoft Windows Server 2012

Any operating system that is supported by your hypervisor system will function.

Note: If you need to operate on a 32-bit Windows system, install the agent normally, and it will run in 32-bit.

To run SMI-S Agent, the agent host machine must meet certain specifications:

- The agent host machine cannot be used to host a Hyper-V node.
- System Center Virtual Machine Manager (SCVMM) must not be running on the agent host machine.
- The agent host machine must not run other programs that are memory-intensive.
- The agent host machine must not run SMI-S providers from any other vendor.

Data ONTAP SMI-S Agent sizing and performance

The maximum number of systems managed by Data ONTAP SMI-S Agent helps you understand its performance capabilities.

Data ONTAP operating in 7-mode

Data ONTAP SMI-S Agent 5.0 can manage up to the following numbers of objects:

- 30 storage systems (without indications)
- 20 storage systems (with indications)
- 1,500 LUNs (per FlexVol or traditional volume)

Clustered Data ONTAP

Data ONTAP SMI-S Agent 5.0 can manage up to the following numbers of objects:

- 30 Virtual Storage Servers (without indications)
- 20 Virtual Storage Servers (with indications)
- 1,500 LUNs (per FlexVol volume)
- 200 CIFS file shares (per FlexVol volume)

For the latest information on sizing and performance, check the Interoperability Matrix Tool (IMT).

Related information

[Interoperability Matrix Tool \(IMT\)](#)

Known issues

Data ONTAP SMI-S Agent has some known issues that you should consider before you install and configure the software.

Known issues, limitations, and feature gaps for this release

You should be aware of some known issues and limitations in this release of Data ONTAP SMI-S Agent.

Known issues

The following are known issues in this release of SMI-S Agent:

Provider might not respond if the client host is not configured to receive indications

If the client host is not configured to receive indications, the provider might become unresponsive. As a workaround, you can configure the client host to receive indications or disable indications. This issue occurs only when the indications port 5990 is blocked on the client host machine.

Some features are not exposed

In this release, SMI-S Agent does not expose root volumes, file shares in root volumes, or shares that are mounted to an entire volume.

Limitations

The following are limitations in this release of SMI-S Agent:

cimcli client commands not supported

Unless explicitly mentioned in the *Data ONTAP SMI-S Agent Installation and Configuration Guide*, cimcli client commands (such as **cimcli -n root/ontap niall**) are not fully supported and might cause unexpected behavior.

No support for NAS performance statistics

NAS performance statistics are not supported in this release.

Limited support for concurrent clone operations

This release of SMI-S Agent does not support more than 24 concurrent clone operations. This applies only to thick provisioning.

Alert indications in clustered Data ONTAP

Alert Indications are disabled for clustered Data ONTAP 8.2.

Filesystem profiles support

NAS-related workflows of SCVMM 2012 SP1 are only supported in clustered Data ONTAP 8.2 and SCVMM 2012 SP1.

IPv6 not supported

IPv6 is not supported; therefore, even if the storage system or Vserver is registered with IPv4, but has other IPv6 addresses, registration fails.

Virtual machine manager fails to map LUNs

Issue	The virtual machine manager silently fails to map LUNs when an initiator ID is part of more than one storage group.
Cause	This problem occurs because the virtual machine manager has no way to choose among redundant storage groups created on the storage system, which causes the mapping operation to fail.
Corrective action	Remap LUNs from individual storage groups to aggregated storage groups, as follows: 1. Unmap LUNs from their individual storage groups. 2. Map these LUNs into another, aggregated storage group. 3. Destroy the original individual storage groups. 4. Restart Data ONTAP SMI-S Agent to refresh the changes on the array. 5. Refresh the storage provider using your virtual machine manager.

Example

Consider the following example:

igroup 1: WWN1, Boot LUN (LUN-0) mapped

igroup 2: WWN2, Boot LUN (LUN-1) mapped

igroup 3: WWN1 and WWN2, CSV1 (LUN-2) and CSV2 (LUN-3) mapped

WWN1 and WWN2 are initiators corresponding to hosts of a cluster.

Remapping LUNs from the individual storage groups (igroup 1 and igroup 2) to the aggregated storage group (igroup 3) should be a quick operation that avoids loss of data from the initiator host.

Note: This issue has been observed with System Center Virtual Machine Manager 2012 (SCVMM 2012).

Commands do not terminate properly during uninstall process

Issue	The commands <code>smis cimserver</code> or <code>smis slpd</code> might not terminate properly during uninstallation.
Cause	This issue occurs due to subscriptions from clients that are no longer managing the SMI-S provider.
Corrective action	Use Task Manager to terminate <code>smis cimserver</code> or <code>smis slpd</code> manually before uninstallation and manually delete the <code>C:\Program Files (x86)\ontap\smis</code> directory.

Documentation updates and additions

You should be aware of some updates and additions to the Installation and Configuration Guide that have occurred since the time of publication.

smis config show

The `smis config show` command lists the current CIM server configuration information.

Syntax

```
smis config show
```

Location

- Linux: *installation_directory*/ontap/smis/pegasus/bin
- Windows: *installation_directory*\ontap\smis\pegasus\bin

Privilege level

Root or sudo (Linux) or Administrator (Windows)

Example

The following example shows `smis config show` output:

```
[root@smis-rhel5x64-07 ~]# smis config show
slp:
Current value: true

tracelevel:
Current value: 4

traceComponents:
Current value: XmlIO,Thread, IndicationGeneration, DiscardedData,
CMPIProvider, LogMessages, ProviderManager, SSL, Authentication,
Authorization

traceFilePath:
Current value: traces/cimserver.trc

enableAuditLog:
Current value: true

logLevel:
```

```
Current value: WARNING

sslKeyFilePath:
Current value: cimom.key

sslCertificateFilePath:
Current value: cimom.cert

passwordFilePath:
Current value: cimserver.passwd

enableHttpConnection:
Current value: true

enableHttpsConnection:
Current value: true

httpPort:
Current value: 5988

httpsPort:
Current value: 5989

enableAuthentication:
Current value: true
```

Enabling authentication for SMI-S Agent

By default, authentication is enabled for SMI-S Agent. You can optionally disable authentication.

Before you begin

You must have login credentials as root (Linux) or Administrator (Windows). Any client, including System Center Virtual Machine Manager (SCVMM), should connect to the agent using cimuser and cimpassword.

Steps

1. Log in as root (Linux) or Administrator (Windows).
2. Navigate to the bin directory in the directory in which SMI-S Agent was installed.
3. At a command prompt, verify that SMI-S Agent is running by entering the following command:
smis cimserver status
4. Enable authentication by entering the following command:
cimconfig -p -s enableAuthentication=true
CIMOM does not use Windows authentication.
5. Restart SMI-S Agent with the following commands:

```
smis cimserver stop
```

```
smis cimserver start
```

On Windows systems, the following commands also work:

```
net stop cimserver
```

```
net start cimserver
```

6. Add a CIM server user by entering the following command:

```
cimuser -a -u Administrator -w password
```

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