Installing the Sightline Power Agent for Windows 2008 and Windows 2012 Systems

For additional monitoring of a Windows 2008 or Windows 2012 system, a Sightline Power Agent must be installed. The installation kit is available through the Assure user interface; simply follow the installation instructions here. If you will be monitoring an EMC VNXe storage array, see *Installing the SMI-S Interface Agent* on page 3 for details.

First, copy the AccessKey from your Assure implementation

During the installation of the Power Agent, an AccessKey will be requested. There are three places you might refer to for the AccessKey string. Even if the strings are different, they should all be valid.

- If you received an email with the Assure AccessKey, then it will include the AccessKey string for the Power Agent.

- If you are running Assure in trial mode, then the AccessKey string will be shown in the **Additional Monitoring** dialog box; simply copy this string and use it during the Power Agent installation.

- If you have entered an AccessKey string into your Assure implementation, the **Monitored Servers** section of the AccessKey string should be used for the Power Agent. Select **Settings | Update AccessKey** and make a note of the AccessKey string to the right of the **Monitored Servers** entry.
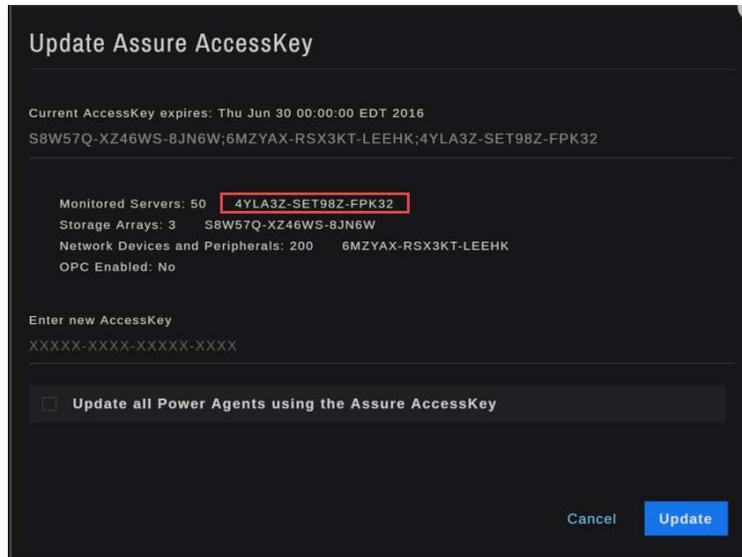
Download the Power Agent Installation Kit

From **Settings | Additional Monitoring** in the Assure interface, download the Windows Power Agent installation kit. This will be a file called **WindowsPA.exe**.

Transfer the Power Agent Installation Kit to the target system

Copy the WindowsPA.exe file to a temporary directory on the system to be monitored.

Run the WindowsPA.EXE file

From the Windows Explorer, right-click on WindowsPA.exe and select **Run as Administrator**.

Supply the requested information

The installation will walk you through a few configuration screens. You can accept the default settings during the installation process for most items.

- ◆ When the AccessKey is requested, supply the AccessKey. If you type the AccessKey string, enter it exactly as it appears, including capitalization and dashes.
- ◆ For the hostname, enter the DNS name for the system being monitored.
- ◆ For the collection interval, enter 20 seconds.

To monitor an EMC VNXe storage array, a Windows Power Agent with the SMI-S Interface Agent must be installed on a Windows system with access to the array. See *Installing the SMI-S Interface Agent* on page 3 for details.

Start the Power Agent

The Power Agent will start automatically when the system is restarted, but must be started manually the first time. There are two ways to start the Power Agent:

From the **Start | Programs** menu:
> Navigate to **Sightline | Power Agents | Start SLAA Listener**
> Right-click and select **Run as Administrator**
> Navigate to **Sightline | Power Agents | Start Power Agent**
> Right-click and select **Run as Administrator**

From a command window:
> Open the command window using **Run as Adminstrator**
> Execute the batch script at
>> `c:\Program Files\Sightline\Power Agent\bin\SlaaListenerStart.bat`
> Execute the batch script at
>> `c:\Program Files\Sightline\Power Agent\bin\SlagentStart.bat`
> Close the command window.

Add the system to Assure

In Assure, select **Settings | Add System** and supply the name of the new system. It will be added to the Assure dashboard as a monitored system.

Installing the SMI-S Interface Agent (for Storage Array monitoring)

The Sightline Power Agent for Windows Systems includes an SMI-S Interface Agent that provides data collection from SMI-S compliant storage arrays such EMC's VNXe array. If you will be monitoring a VNXe array, then you must:

- ◆ Configure the SMI-S Solutions Enabler for the array to be monitored (see below for instructions), and then verify that logging is enabled on the storage arrays
- ◆ Include the SMI-S Interface Agent when installing the Windows Power Agent on a system with access to the storage array.

Configuring the SMI-S Provider for VNX storage arrays

The SMI-S Provider offers an interface that allows management applications to discover CLARiiON or VNX storage arrays out of band. This discovery method requires only the IP connection to the storage array; the CLARiiON or VNX LUN does not need to be visible to the host on which the SMI-S Provider is running.

To enable this interface, you must provide the following information:

- The IP address of SPA and SPB of the CLARiiON or VNX array to be managed
- The username and password of the CLARiiON or VNX array that has administrator-level privileges with global scope.

EMC offers the *TestSmiProvider* tool for adding CLARiiON and VNX arrays to the SMI-S Provider.

- On Windows platforms, the `TestSmiProvider.exe` resides in `c:\program files\emc\ecim\ecom\bin`.
- On Linux platforms, TestSmiProvider resides in `/opt/emc/ECIM/ECOM/bin`.

For more information, see the *SMI-S Provider Release Notes.*

Configuring SMI-S collection for the EMC array

There are four steps to configure SMI-S collection for the EMC array:

- Set up theSMI Provider
- Test the Provider to ensure that it's working
- Add the storage arrays that you want to monitor to the Provider
- Verify that logging is enabled on the storage arrays to be monitored.

Setting up the SMI Provider

The *testsmiprovider* program is interactive and you can accept most of the default settings. Press **Enter** to accept the defaults (shown in brackets); you may need to change the password.

```
C:\Program Files\EMC\ECIM\ECOM\bin>testsmiprovider
Connection Type (ssl,no_ssl,native) [no_ssl]\:
Host [localhost]:
Port [5988]:
Username [admin]:
Password [#1Password]:
Log output to console [y|n (default y)]:
Log output to file [y|n (default y)]:
Logfile path [Testsmiprovider.log]:
(OUTPUT)
Connecting to localhost:5988
Using user account 'admin' with password '#1Password'
#####################################################################
##                                                                 ##
## EMC SMI Provider Tester                                         ##
## This program is intended for use by EMC Support personnel only. ##
## At any time and without warning this program may be revised     ##
## without regard to backwards compatibility or be                 ##
## removed entirely from the kit.                                  ##
#####################################################################
slp - slp urls slpv - slp attributes
cn - Connect dc - Disconnect
```

```
rc - RepeatCount st - Set timeout value
ns - NameSpace ens - EnumerateNamespaces
ec - EnumerateClasses ecn - EnumerateClassNames
ei - EnumerateInstances ein - EnumerateInstanceNames
a - Associators an - AssociatorNames
r - References rn - ReferenceNames
gi - GetInstance gc - GetClass
lc - Log control dv - Display version info
ind - Indications menu sl - Start listener
addsys - EMC AddSystem refsys - EMC RefreshSystem
disco - EMC Discover remsys - EMC RemoveSystem
im - InvokeMethod tms - TotalManagedSpace
q - Quit h - Help
###################################################################
Namespace: root/emc
repeat count: 1
(localhost:5988) ?
```

Testing the provider to ensure that it's working

If you can successfully connect to the SMI-S Provider, issue the **dv** command to show basic information about the provider and the storage arrays that are attached to it.

```
(localhost:5988) ? dv
++++ Display version information ++++
CIM ObjectManager Name: EMC:10.247.73.48
CIMOM Version: EMC CIM Server Version 2.6.6.1.0.3
SMI-S spec version: 1.4.0
SMI-S Provider version: V4.6.1.0
SMI-S Provider Location: Proxy
SMI-S Provider Server:
Windows_NT l2se0048 6.1.7600 x86_64 (64bit Libraries)
Solutions Enabler version: V7.3-1300 1.0
Retrieve and Display data – 1 Iteration(s) In 0.109006 Seconds
```

> Press the **Enter** key to continue. Note that in the above listing there are no storage arrays attached to the SMI-S Provider.

Adding storage arrays to the provider
Use the **addsys** command to attach a CLARiiON or VNX array to SMI-S Provider (this command does not apply to Symmetrix arrays). Below is an example attaching an VNX array to the SMI-S Provider:

```
(localhost:5988) ? addsys
Add System {y|n} [n]: y
ArrayType (1=Clar, 2=Symm) [1]:
One or more IP address or Hostname or Array ID
```

```
Elements for Addresses
IP address or hostname or array id 0 (blank to quit): 10.247.73.78
IP address or hostname or array id 1 (blank to quit): 10.247.73.79
IP address or hostname or array id 2 (blank to quit):
Address types corresponding to addresses specified above.
(1=URL, 2=IP/Nodename, 3=Array ID)
Address Type (0) [default=2]:
Address Type (1) [default=2]:
User [null]: clariion
Password [null]: clariion
(OUTPUT)
++++ EMCAddSystem ++++
OUTPUT : 0
Legend:0=Success, 1=Not Supported, 2=Unknown, 3=Timeout, 4=Failed
5=Invalid Parameter, 4096=Job Queued, 4097=Size Not Supported
System :
//10.247.73.48/root/emc:Clar_StorageSystem.CreationClassName="Clar_Stor
ageSystem",Name="CLARiiON+FNM00104500227"
```

In this example, the first SPA and the SPB of the VNX array is provided. The username/password combination must be administrator level and global scope.

By issuing the following **dv** command, you can see the VNX array (which displays as CLARiiON array FNM00104500227) is now present in the provider:

```
(localhost:5988) ? dv
++++ Display version information ++++
CIM ObjectManager Name: EMC:
CIMOM Version: EMC CIM Server Version 2.6.6.1.0.3
SMI-S spec version: 1.4.0
SMI-S Provider version: V4.6.1.0
SMI-S Provider Location: Proxy
SMI-S Provider Server:
Windows_NT l2se0048 6.1.7600 x86_64 (64bit Libraries)
Solutions Enabler version: V7.3-1300 1.0
Firmware version information:
(Remote) CLARiiON Array FNM00104500227 (Rack Mounted VNX7500):
5.31.0.5.006
Retrieve and Display data - 1 Iteration(s) In 0.155009 Seconds
```

Press the **Enter** key to continue. Note that in the above listing there are no storage arrays attached to the SMI-S Provider.

Verify that logging is enabled on the storage arrays

The data for the VNXe array must be made available to Sightline for it to be included in the data collection. In the **EMC Unisphere** configuration screen, select **Properties** for the array.
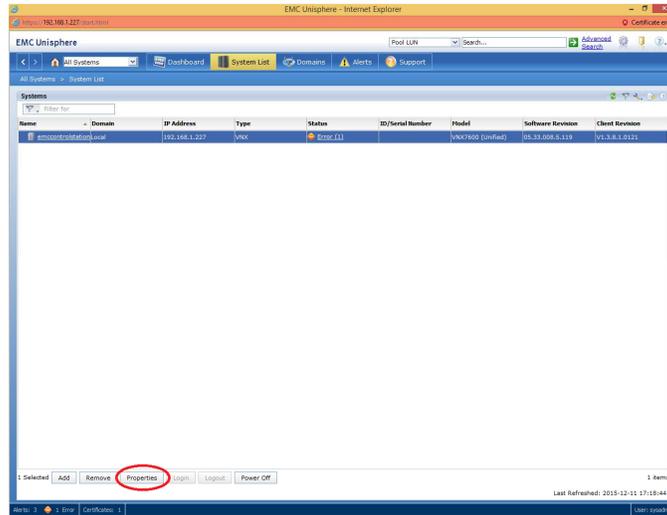
On the **General** tab of the **Storage System Properties**, confirm that **Statistics Logging** is enabled.
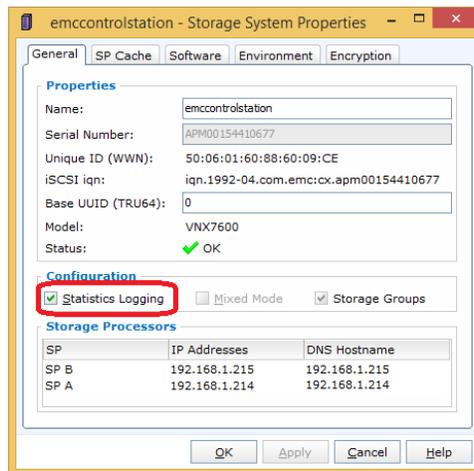
Post-installation task – Create a CIM user

Authentication is required to query the EMC CIM Server, so a CIM user is required. To create a CIM user on the EMC CIM Server:

1. Go to the URL `https://<ipaddress>:5989/ecomconfig`,
2. Log in with username `admin` and password #`1Password`. Or, use the password you created.
3. Click **Add User** and create a user with role **Administrator**. This newly created user can be used to obtain access to the SMI-S Provider.**Including the SMI-S Interface Agent with the Power Agent installation**

When installing the Windows Power Agent, the setup screen will display a list of possible Interface Agents to be installed. Click the drop-down beside the **SMI-S Interface Agent** (see below) and select "This feature will be installed on the local hard drive."
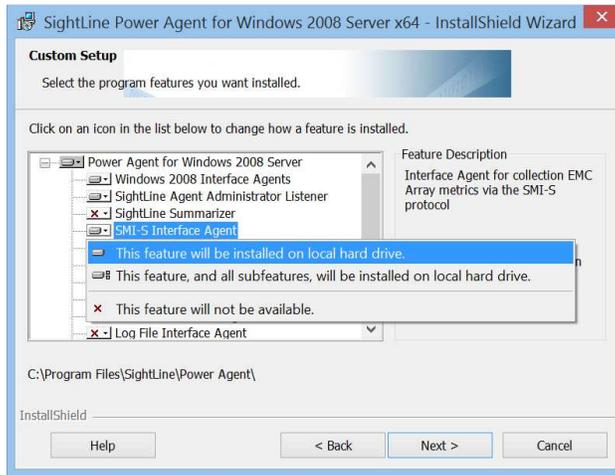
Click **Next**, and then **Configure**. You will see the **SMI-S Solutions Enabler Connection Settings** screen. This information is required for Sightline to connection to the SMI-S provider and obtain information about the storage array.
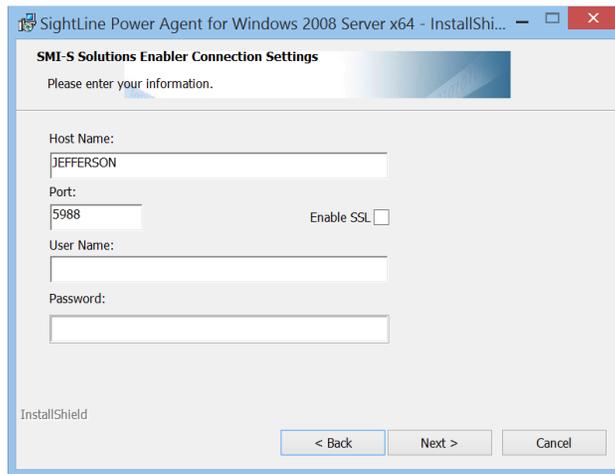
Host Name is the name of the system where the Power Agent is being installed. It may be pre-populated; if not, enter the name or IP address of the system.

Port is the port that Sightline will use to communicate with the SMI-S provider. The default is 5988 but you may need to confirm this setting with your storage administrator.

User Name and **Password** are the credentials used to communicate with the with the SMI-S provider; you will need to obtain these settings from your storage administrator. The password that you supply will be encrypted when stored in Sightline's XML-based configuration file.

Click **Next** to continue the configuration. The **Array Type** selection screen will be displayed.
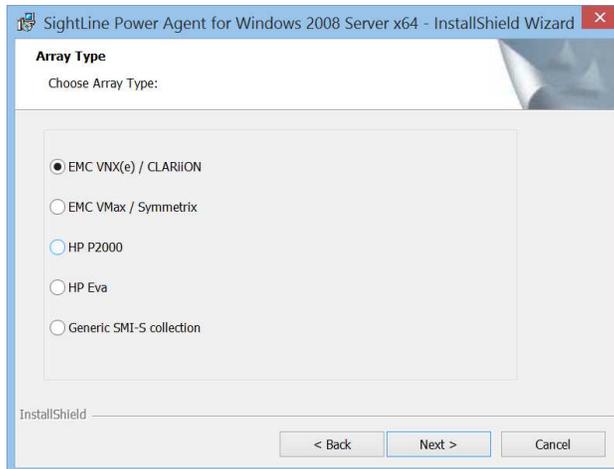
Select **EMC VNXe / CLARiiON** and click **Next**.
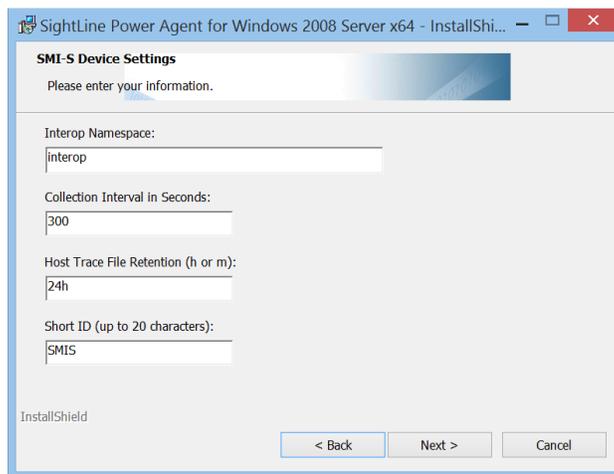
The **SMI-S Device Settings** screen will be displayed. Take the default settings and click **Next**. Continue the installation process by accepting all configuration defaults and then starting the actual installation process.

When the installation is complete, start the Power Agent as described in the *Start the Power Agent* section (page 3). The SMI-S connection to the storage array will be started automatically.

You will need to start the Power Agent twice when collecting storage array data using the SMI-S Interface Agent.

Note that the collection interval for the storage array data is 5 minutes.

If the Power Agent becomes unavailable or the server is restarted, confirm that the storage array data is being delivered to Assure. If the Power Agent starts bfore the EMC Solutions Enabler is ready, then the connection will not be made and no storage array data will be delivered. In this case, restart the Power Agent.