Prerequisites for adding hosts and installing SnapCenter Custom Plug-ins

SnapCenter Software

NetApp
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Prerequisites for adding hosts and installing SnapCenter Custom Plug-ins

Before you add a host and install the plug-ins packages, you must complete all the requirements. The Custom Plug-ins can be used in both Windows and Linux environments.

- You must have created a custom plug-in. For details, see the developer information.

  Develop a plug-in for your application

- If you want to manage MySQL or DB2 applications, you must have downloaded the MySQL and DB2 Custom Plug-ins that are provided by NetApp.
- You must have installed Java 1.8, 64-bit on your Linux or Windows host.
- When installing a plug-in on a Windows host, if you specify a credential that is not built-in, or if the user belongs to a local workgroup user, you must disable UAC on the host.
- The Custom Plug-ins must be available on the client host from where the add host operation is performed.

General

If you are using iSCSI, the iSCSI service must be running.

Windows hosts

- You must have a domain user with local administrator privileges with local login permissions on the remote host.
- If you manage cluster nodes in SnapCenter, you must have a user with administrative privileges to all the nodes in the cluster.

Linux hosts

- You must have enabled the password-based SSH connection for the root or non-root user.
- You must have installed Java 1.8 64-bit, on your Linux host.

  If you are using Windows 2016 for the SnapCenter Server host, you must install Java 1.8, 64-bit. The Interoperability Matrix Tool (IMT) contains the latest information about requirements.

  Java Downloads for All Operating Systems

  NetApp Interoperability Matrix Tool

- You must configure sudo privileges for the non-root user to provide access to several paths. Add the following lines to the /etc/sudoers file by using the visudo Linux utility. For example,

```
Cmnd_Alias SCCMD = /opt/NetApp/snapcenter/scc/bin/scc <non_root_user>
ALL=(ALL) NOPASSWD:SETENV: SCCMD
```

non_root_user is the name of the non-root user that you created.

Host requirements to install SnapCenter Plug-ins Package for Windows

Before you install the SnapCenter Plug-ins Package for Windows, you should be familiar with some basic host system space requirements and sizing requirements.

Item	Requirements
Operating Systems	Microsoft Windows You must enable the Cluster Shared Volumes (CSV) feature in Windows Server 2008 R2 SP1 if you want to create CSV-type disks. For the latest information about supported versions, see the NetApp Interoperability Matrix Tool.
Minimum RAM for the SnapCenter plug-in on host	1 GB
Minimum install and log space for the SnapCenter plug-in on host	5 GB You should allocate sufficient disk space and monitor the storage consumption by the logs folder. The log space required varies depending on the number of the entities to be protected and the frequency of data protection operations. If there is no sufficient disk space, the logs will not be created for the recently run operations.
Required software packages	• Microsoft .NET Framework 4.5.2 or later • Windows Management Framework (WMF) 4.0 or later • PowerShell 4.0 or later For the latest information about supported versions, see the NetApp Interoperability Matrix Tool.

Host requirements for installing the SnapCenter Plug-ins Package for Linux

You should ensure that the host meets the requirements before installing the SnapCenter Plug-ins Package for Linux.

Item	Requirements
Operating systems	• Red Hat Enterprise Linux • Oracle Linux If you are using Oracle database on LVM in Oracle Linux or Red Hat Enterprise Linux 6.6 or 7.0 operating systems, you must install the latest version of Logical Volume Manager (LVM). • SUSE Linux Enterprise Server (SLES)
Minimum RAM for the SnapCenter plug-in on host	1 GB
Minimum install and log space for the SnapCenter plug-in on host	2 GB You should allocate sufficient disk space and monitor the storage consumption by the logs folder. The log space required varies depending on the number of the entities to be protected and the frequency of data protection operations. If there is no sufficient disk space, the logs will not be created for the recently run operations.
Required software packages	Java 1.8 (64-bit)Oracle Java and OpenJDK flavors If you have upgraded JAVA to the latest version, you must ensure that the JAVA_HOME option located at /var/opt/snapcenter/spl/etc/spl.properties is set to the correct JAVA version and the correct path.

For the latest information about supported versions, see the NetApp Interoperability Matrix Tool

Set up credentials for SnapCenter Custom Plug-ins

SnapCenter uses credentials to authenticate users for SnapCenter operations. You should create credentials for installing SnapCenter plug-ins and additional credentials for performing data protection operations on databases or Windows file systems.

What you will need

- Linux hosts

  You must set up credentials for installing plug-ins on Linux hosts.

  You must set up the credentials for the root user or for a non-root user who has sudo privileges to install and start the plug-in process.

  Best Practice: Although you are allowed to create credentials for Linux after deploying hosts and installing plug-ins, the best practice is to create credentials after you add SVMs, before you deploy hosts and install plug-ins.

- Windows hosts

  You must set up Windows credentials before installing plug-ins.

  You must set up the credentials with administrator privileges, including administrator rights on the remote host.

- Custom Plug-ins applications

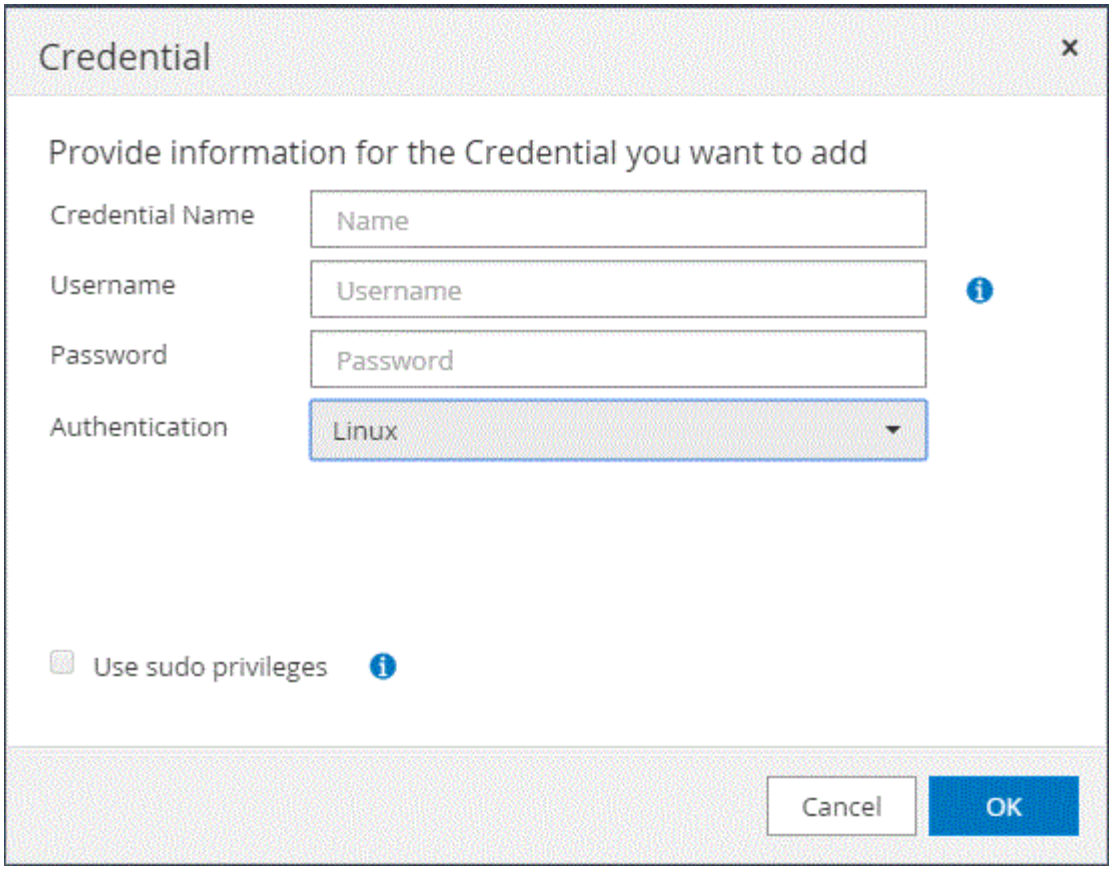
  The plug-in uses the credentials that are selected or created while adding a resource. If a resource does not require credentials during data protection operations, you can set the credentials as **None**.

About this task

If you set up credentials for individual resource groups and the username does not have full admin privileges, you must assign at least the resource group and backup privileges to the username.

Steps

1. In the left navigation pane, click **Settings**.
2. In the **Settings** page, click **Credential**.
3. Click **New**.



4. In the **Credential** page, specify the information required for configuring credentials:

For this field…	Do this…
Credential name	Enter a name for the credentials.

For this field…	Do this…
User name	Enter the user name and password that are to be used for authentication. • Domain administrator or any member of the administrator group Specify the domain administrator or any member of the administrator group on the system on which you are installing the SnapCenter plug-in. Valid formats for the Username field are: ◦ *NetBIOS\UserName* ◦ *Domain FQDN\UserName* • Local administrator (for workgroups only) For systems that belong to a workgroup, specify the built-in local administrator on the system on which you are installing the SnapCenter plug-in. You can specify a local user account that belongs to the local administrators group if the user account has elevated privileges or the User Access control feature is disabled on the host system. The valid format for the Username field is: *UserName*
Password	Enter the password used for authentication.
Authentication Mode	Select the authentication mode that you want to use. If you select the SQL authentication mode, you must also specify the SQL server instance and the host where the SQL instance is located.
Use sudo privileges	Select the **Use sudo privileges** check box if you are creating credentials for a non-root user. Applicable to Linux users only.

5. Click **OK**.

After you finish setting up the credentials, you might want to assign credential maintenance to a user or group of users on the My SnapCenter Assets page.

Configure gMSA on Windows Server 2012 or later

Windows Server 2012 or later enables you to create a group Managed Service Account (gMSA) that provides

automated service account password management from a managed domain account.

What you will need

- You should have a Windows Server 2012 or later domain controller.
- You should have a Windows Server 2012 or later host, which is a member of the domain.

Steps

1. Create a KDS root key to generate unique passwords for each object in your gMSA.
2. For each domain, run the following command from the Windows domain controller: Add-KDSRootKey -EffectiveImmediately
3. Create and configure your gMSA:
   a. Create a user group account.
   b. Add computer objects to the group.
   c. Use the user group you just created to create the gMSA.

      For example,

      ```
      New-ADServiceAccount -name <ServiceAccountName> -DNSHostName <fqdn>
      -PrincipalsAllowedToRetrieveManagedPassword <group>
      -ServicePrincipalNames <SPN1,SPN2,…>
      ```

   d. Run `Get-ADServiceAccount` command to verify the service account.
4. Configure the gMSA on your hosts:
   a. Enable the Active Directory module for Windows PowerShell on the host where you want to use the gMSA account.

      To do this, run the following command from PowerShell:

```
PS C:\> Get-WindowsFeature AD-Domain-Services

Display Name                            Name                Install
State
------------                            ----
-------------
[ ] Active Directory Domain Services   AD-Domain-Services  Available


PS C:\> Install-WindowsFeature AD-DOMAIN-SERVICES

Success Restart Needed Exit Code      Feature Result
------- -------------- ---------      --------------
True    No             Success        {Active Directory Domain
Services, Active ...
WARNING: Windows automatic updating is not enabled. To ensure that
your newly-installed role or feature is
automatically updated, turn on Windows Update.
```

b. Restart your host.

c. Install the gMSA on your host by running the following command from the PowerShell command prompt: `Install-AdServiceAccount <gMSA>`

d. Verify your gMSA account by running the following command: `Test-AdServiceAccount <gMSA>`

5. Assign the administrative privileges to the configured gMSA on the host.
6. Add the Windows host by specifying the configured gMSA account in the SnapCenter Server.

   SnapCenter Server will install the selected plug-ins on the host and the specified gMSA will be used as the service log on account during the plug-in installation.