Start SnapManagerfor SAP

SnapManager for SAP

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Start SnapManager for SAP

The SnapManager startup section lists the tasks that you perform when you start SnapManager. Use this section also if you are just learning about SnapManager.

What you'll need

Before using SnapManager, you should have performed the following actions:

- Downloaded and installed the SnapManager software.
- Determined whether you will use the graphical user interface or the command-line interface.

Identify an existing database to backup

You can identify the system identifier (SID) of the SnapManager database which is used in creating a profile.

About this task

The standard Oracle user ID for SAP systems is ora *`sid`* where *`sid`* is a three-character, alphanumeric value, for example, PRD, PR1, DEV, or QA3.

Steps

1. Click **Start** > **Control Panel** > **Administrative Tools** > **Services**.
2. Verify the Oracle service, `OracleServiceSID`.

   If the service is called OracleServiceFASDB, then the database SID is FASDB.

Verify the Oracle listener status

You can verify the Oracle listener status by using the `lsnrctl status` command.

What you'll need

- You must connect to the database.

About this task

The listener port details are as follows:

- A standard SAP Oracle installation sets the listener port to 1527.
- Anything that references a managed database listener port should have the value as 1527.
- Anything that references the repository database listener port should have the value as 1521.

The Oracle listener's log is located at `%ORACLE_HOME%\network\log` where `ORACLE_HOME is \oracle\SID\oracle version`.

Step

1. At the command prompt, enter the command:

   `lsnrctl status`

Create Oracle users for the repository database

You can create an Oracle user for the repository database and assign specific privileges to perform different operations on the repository database.

About this task

You must assign the connect and resource privileges to the Oracle user. You do not have to create a user for the repository database with sysdba privileges.

> However, you must create an Oracle user with the sysdba role for the target database.

Steps

1. Log in to SQL *Plus.

   At the command prompt, enter the following command:

   `sqlplus '/ as sysdba'`

   ```
   SQL*Plus: Release 11.2.0.1.0 Production on Wed Jun 1 06:01:26 2011
   Copyright (c) 1982, 2009, Oracle.  All rights reserved.
   Connected to:
   Oracle Database 11g Enterprise Edition Release 11.2.0.1.0 - Production
   With the Partitioning, Automatic Storage Management, OLAP, Data Mining
   and Real Application Testing options
   ```

2. To create a user, for example *`repo1_user`*, for the repository with the administrator password, for example, *`adminpw1`*, enter the following command at the SQL prompt:

   `SQL> create user repo1_user identified by adminpw1;`

3. To grant connect and resource privileges to the user, enter the following command:

   `grant connect, resource to repo1_user;`

Create an Oracle user for the target database

You need to create an Oracle user with the sysdba role that connects to the database and performs database operations.

About this task

SnapManager can use any Oracle user with sysdba privileges that exists in the target database, for example, the default "sys" user. You can also create a user in the target database to be used exclusively by SnapManager.

Steps

1. Log in to SQL *Plus.

   At the command prompt, enter the following command:

   ```
   sqlplus '/ as sysdba'
   ```

2. To create a user, for example *smsap_oper* with the administrator password, for example, *adminpw1*, enter the following command at the SQL prompt:

   ```
   SQL> create user smsap_oper identified by adminpw1;
   ```

3. Grant sysdba privileges to the Oracle user by entering the following command:

   ```
   SQL> grant sysdba to smsap_oper;
   ```

Accessing SnapManager

You can access SnapManager by using either the command-line interface (CLI) or graphical user interface (GUI).

You can perform different SnapManager operations in the following ways:

- By entering commands in the CLI on a host that is in the same network as the database host.

  For a list of all the commands and an explanation of their options and arguments, see the Command Reference chapter.

  To access the CLI, click **Start** > **All Programs** > **NetApp** > **SnapManager for SAP** > **Start SMSAP command-line interface (CLI)**.

- By accessing the GUI on a host in the same network as the database host.

  The GUI provides simple and easy-to-use wizards to help you perform different operations.

- By using SAP BR*Tools commands.

Start the SnapManager host server

You can start the SnapManager server by using the Windows services.

Steps

1. Click **Start** > **Control Panel** > **Administrative Tools** > **Services**.
2. In the **Services** window, select NetAppSnapManager 3.3 forSAP.
3. You can start the server in one of three ways:

- In the left panel, click **Start**.
- Right-click NetAppSnapManager 3.3 forSAP and select **Start** from the drop-down menu.
- Double-click NetAppSnapManager 3.3 forSAP and then in the Properties window, click **Start**.

Verify the SnapManager host server status

The server must be running for you to execute commands or initiate SnapManager operations. You must verify the status of the server before performing any operations.

Steps

1. In the Services window, select SnapManager 3.3 forSAP.
2. View the status in the Status column.

Use SnapManager commands

After you start the SnapManager host server, you can use SnapManager by entering commands at the prompt on your host.

Step

1. To perform an operation:
   - In case of a Windows host, go to **Start** > **All Programs** > **NetApp** > **SnapManager for SAP** > **Start SMSAP Command Line Interface (CLI)**

Start the SnapManager GUI

If SnapManager is installed on the host, start the graphical user interface (GUI) for SnapManager by selecting the program from a list of programs.

What you'll need

- Ensure that the SnapManager server is started.

About this task

You can start the SnapManager GUI in one of the following ways:

- In the SnapManager host, click **Start** > **All Programs** > **NetApp** > **SnapManager for SAP** > **Start SMSAP GUI**.
- If SnapManager is not installed on the host, use Java Web Start, which downloads SnapManager components and starts the GUI.

Download and start the graphical user interface using Java Web Start

You can use Java Web Start if SnapManager is not installed on the host. Java Web Start downloads SnapManager components and starts the graphical user interface (GUI). The supported JRE versions are 1.5, 1.6, and 1.7.

What you'll need

You must ensure that the following conditions are met:

- The SnapManager server is running.
- A web browser window is open.

Steps

1. In the Microsoft Internet Explorer Web browser window, enter `https://smsap-server.domain.com:port`.

   `smsap-server.domain.com` is the fully qualified host name and domain on which you installed SnapManager and `port` is the listening port for the SnapManager server (27314, by default).

   > You must enter `https` in the browser window.

   A dialog box with the following message is displayed.

   > `A dialog box with the message There is a problem with the site's security certificate…Do you want to proceed?`

1. Click **Yes** or **Continue**.
2. Click on the link labeled **Click here to download and install JRE 6.0 and the application**.

   A link labeled Download Java Web Start with the following message is displayed.

   > `This site might require the following ActiveX control: Java Plug-in 1.6"… "Click here to install`

3. In the **Install** window, perform the following steps:
   a. Click the message labeled `Click here to install….`

      An **Install ActiveX Control** menu is displayed.

   b. Select **Install ActiveX Control…**.

      The following message is displayed.

   > `Internet Explorer - Security Warning" containing the following text: "Do you want to install this software? Name: Java Plug-in 1.6`

a. Click **Install**.

   A "Java Plug-in 1.6." window for the installer for J2SE Runtime Environment 1.6 is displayed.

b. Click **Install**.

   A window requesting you to install J2SE Runtime Environment 1.6 is displayed. . In the Install window, perform the following steps:

c. On the **License Agreement** page, select **I accept the terms in the license agreement** and click **Next**.
d. On the **Setup Type** page, select **Typical** and click **Next**.
e. On the **Installation Completed** window, click **Finish**.

   SnapManager begins to download.

   A File Download dialog box with the message `Do you want to save this file? application.jnlp` is displayed. . In the **file download** window, perform the following steps:

f. Install the latest version of JRE 1.6 on the Windows client.
g. Verify that Java is installed by running the following command: `java -version`

   The output should indicate Java version 1.6.0_24 (which is Java 1.6) or later.

h. Change your Windows configuration settings to always open files with extension jnlp with the program Java Web Start Launcher.

   The steps to change the Windows configuration settings varies based on the version of Windows you are using.

i. Enter the SnapManager URL that you have specified in the step 1.

   The SnapManager download starts on the windows client and the following warning is displayed

```
security dialog box is displayed.
```

4. Perform the following steps.

   The message contents and button labels vary based on platform.

   a. In the **Warning - Security** dialog box, click **Yes**.

      A dialog box is displayed.

   b. In the host name mismatch dialog box, click **Run**.

      The Warning - Security dialog box with a message about the signature of the SnapManager application is displayed.

   c. Click **Run**.

      A dialog box with the title Java Installer - Security Warning and the following message is displayed.

```
Warning Security - the application’s digital signature has an error. Do
you want run the application
```

a. Click **Run**.

   The browser downloads and starts the SnapManager for SAP GUI.

Verify the environment

You can verify the environment to make sure SnapDrive and SnapManager are set up correctly.

What you'll need

Download, install, and set up the required prerequisites. Make sure SnapManager is installed and the host server is running.

Step

1. To verify that SnapDrive is installed and can be run from the root account, run the following command:

```
smsap system verify
```

Verify SnapDrive for Windows

If you have installed SnapDrive for Windows, verify that you can create a Snapshot copy before using SnapManager.

Steps

1. From the Start menu, right-click **My Computer** and select **Manage**.
2. In the **Computer Management** window, click **Storage** > **SnapDrive**.
3. Select a disk.

   See the *SnapDrive for Windows Installation and Administration Guide* for more information about using SnapDrive.

   If you have successfully found disk information for the SnapDrive product, SnapDrive is working correctly.

Related information

SnapDrive for Windows Installation and Administration Guide

Create repositories

SnapManager requires a repository on a host to hold data about the operations you perform.

What you'll need

Ensure that the following tasks are completed:

Steps

1. Create an Oracle user and password in the repository database.
2. Authorize user access to the repository.

For a repository, SnapManager for SAP requires a minimum 4K block size for the tablespace into which it is installed. You can check the block size using the following SQL command:

```
select a.username, a.default_tablespace, b.block_size
from dba_users a, dba_tablespaces b
a.username = repo_user
```

where

- `a.default_tablespace = b.tablespace_name`
- `a.username` = the user name on the repository

About this task

If you are upgrading repositories, you must reboot the SnapManager server to restart any associated schedules.

Step

1. To create the repository, enter the repository create command, using the following general format:

   smsap repository create -repository -dbname *repo_service_name* -host *repo_host* -login -username *repo_username* -port *repo_port* [-force] [-noprompt] [-quiet | -verbose]

   Where:

   - `-repository -dbname` is the name of the repository database.
   - `-host` is the name of the host for the repository.
   - `-username` is the name of the database user who has access to the repository.
   - `-port` is the port for the host. Other options for this command are as follows:

     [`-force`] [`-noprompt`]

     [`quiet` | `-verbose`]

> If you have an existing repository with the same name and you use the `-force` option, all data within an existing repository schema will be overwritten.

Creating a repository

The following command line creates a repository.

```
smsap repository create -repository -dbname HR1
-host server1 -login -username admin -port 1521
```

How to organize repositories

You can organize the SnapManager repositories to meet your business needs. You can

organize them in several ways, including by application type and usage.

You can organize repositories in several ways. Two such ways are as follows:

Type	Characteristics
By application	If you have multiple Oracle databases running different applications, you can create a SnapManager repository for every application type. Each SnapManager repository would have profiles for the databases of a particular application type. All production, development, and testing databases of that application type would be managed by the same SnapManager repository. This option would help group similar databases and ease cloning. However, if you have several application types, then you might have to manage several SnapManager repositories, and if you choose to implement another application type, you will need to create another SnapManager repository. Because these SnapManager repositories will be managing production databases, each of these repositories must be on a server with high availability, which can be expensive. Also, having to manage production databases along with development and test databases of the same type in the same SnapManager repository can be a security issue.
By usage	You can distribute the databases among the SnapManager repositories based on their usage (for example, production, development, testing, and training). This option limits the number of repositories to the different types of databases that you have. Because all production databases would be managed by a single SnapManager repository, only production database administrators can be given access to this repository. Also, if you choose to deploy another database for a new application type, then you only need to register the database in the corresponding SnapManager repository instead of creating a new repository. High availability can be provided only for the SnapManager repository that holds the profiles of all the production databases.

SnapManager for Oracle and SnapManager for SAP should not share the same repository. For SnapManager for Oracle and SnapManager for SAP, you must use a different repository (a different Oracle database user) for each product if you have both in your environment. Using a different repository, either in the same or different databases, provides more flexibility by allowing independent upgrade cycles for each product.

Order of performing operations

SnapManager enables you to perform various operations such as creating profiles, performing backups, and cloning backups. These operations must be performed in a

specific order.

Steps

1. Create a profile on an existing repository by using the `smsap profile create` command.

   > The Oracle user specified for the target database must have sysdba privileges.

   Example

   The following example shows the command to create a profile:

   ```
   smsap profile create -profile prof1 -profile-password prof1cred
   -repository -dbname HR1 -login -username admin -host server1 -port 1527
   -database -dbname SID -host db_server1 -port 1527
   ```

2. Create a backup on an existing profile by using the `smsap backup create` command.

   Example

   The following example shows the command to create a backup:

   ```
   smsap backup create -profile prof1 -full -offline -label
   full_backup_prof1 -force
   ```

3. Restore and recover a database backup on primary storage by using the `smsap backup restore` command.

   Example

   The following example shows the command to restore a backup:

   ```
   smsap backup restore -profile prof1 -label full_backup_prof1
   -complete -recover -alllogs
   ```

4. Create a clone specification by using the `smsap clone template` command.

   You can use the Clone wizard in the graphical user interface (GUI) to create a template clone specification. You can also create the clone specification file by using a text editor.

5. Clone a database with an existing backup by using the `smsap clone create` command.

   You must have an existing clone specification or create a clone specification to specify the storage and database specifications for the clone.

   Example

   The following example shows the command to create a clone:

```
smsap clone create -profile prof1 -backup-label full_backup_prof1
-newsid clone1 -label prof1_clone -clonespec
C:\\clone_spec\\prof1_clonespec.xml
```

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