Oracle® Enterprise Manager Cloud Control

Sybase Adaptive Server Enterprise (ASE) Plug-in User's Guide

13c Release 4

F23302-02

December 2020

ORACLE®

Oracle Enterprise Manager Cloud Control Sybase Adaptive Server Enterprise (ASE) Plug-in User's Guide, 13c Release 4

F23302-02

Contents

1 Sybase ASE Plug-in Overview and Prerequisites

2 Configuring the Sybase ASE Server for Monitoring

3 Configure the Management Agent and Deploy the Sybase ASE Plug-in

4 Post-Deployment Configuration

5   Creating and Editing Jobs for the Sybase ASE Target

6   Metrics and Reports for the Sybase ASE Plug-in

7   Inventory and Usage Details

8   Troubleshooting the Sybase ASE Plug-in

Index

Preface

This document provides a brief description about the Oracle system monitoring plug-in for Sybase Adaptive Server Enterprise (ASE), details on the versions the plug-in supports, prerequisites for installing the plug-in, and step-by-step instructions on how to install, verify, and validate the plug-in.

Audience

This plug-in installation guide is for Enterprise Manager users who perform administrative and problem-resolution tasks on a Sybase ASE system.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at `http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc`.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit `http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info` or visit `http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs` if you are hearing impaired.

Related Resources

For detailed information on Oracle Enterprise Manager, see the documentation available in Oracle Help Center:

`https://docs.oracle.com/en/enterprise-manager/`

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

1

Sybase ASE Plug-in Overview and Prerequisites

This chapter describes the Sybase Adaptive Server Enterprise (ASE) plug-in and provides the prerequisites necessary for installation on Oracle Enterprise Manager Cloud Control.
The following topics are presented in this chapter:

- Introduction to the Sybase ASE Plug-in
- Functionality Highlights
- Platforms Supported by the Sybase ASE Plug-in
- Software Versions Supported by the Sybase ASE Plug-in
- Sybase ASE Plug-in Prerequisites

Introduction to the Sybase ASE Plug-in

The System Monitoring Plug-in for Sybase Adaptive Server Enterprise extends Oracle Enterprise Manager Cloud Control 13*c* to add support for managing Sybase Adaptive Server instances. By deploying the plug-in within your Cloud Control environment, you gain the following management features:

- Monitor Sybase Adaptive Server instances.
- Gather configuration data and track configuration changes for Sybase Adaptive Server instances.
- Raise alerts and violations based on thresholds set on monitored metrics and configuration data.
- Provide rich out-of-box reports based on the gathered data.
- Support monitoring by a remote Agent. Local Agent is an agent running on the same host as the Sybase Adaptive Server. Remote Agent is an agent running on a host that is different from the host where Sybase Adaptive Server is running.
- Collect and display top SQL Statements and their related statistics, including CPU Time and Execution Count, of your Sybase ASE Database.
- Collect and display information regarding the top Lock Wait Events in Sybase ASE Database, including top Wait Count by Table and top Wait Times.
- Utilization of Cloud Control jobs to start and stop the Sybase ASE database. These jobs are not only accessible from the Cloud Control Jobs Library but also from the Sybase ASE plug-in's UI home page.
- Expose vital Sybase ASE metrics in the form of easy-to-use charts and tables.

Functionality Highlights

This release of the Sybase ASE Database plug-in for Oracle Enterprise Manager Cloud Control 13*c* includes many features for better visibility into your Sybase ASE environment. Highlighted below are some of the features included in this release:

- Support Updates
- Updated User Interface
- Sybase ASE Out-of-the-Box Monitoring Templates
- Sybase ASE Database Plug-in Metric Thresholds
- Business Intelligence Publisher Reports

Support Updates

The Sybase ASE Database plug-in for Oracle Enterprise Manager Cloud Control 13*c* has been updated to support the `jconn4.jar` JDBC driver and maintain support for `jconn3.jar`.

Updated User Interface

The user interface has been updated to add a Performance page and add a new link to the Home page.

The Home page (Figure 1-1) has been enhanced with the addition of a link in the Summary section to the Performance page. This has enabled more efficient navigation throughout the plug-in.

Figure 1-1   Sybase ASE Target Home Page
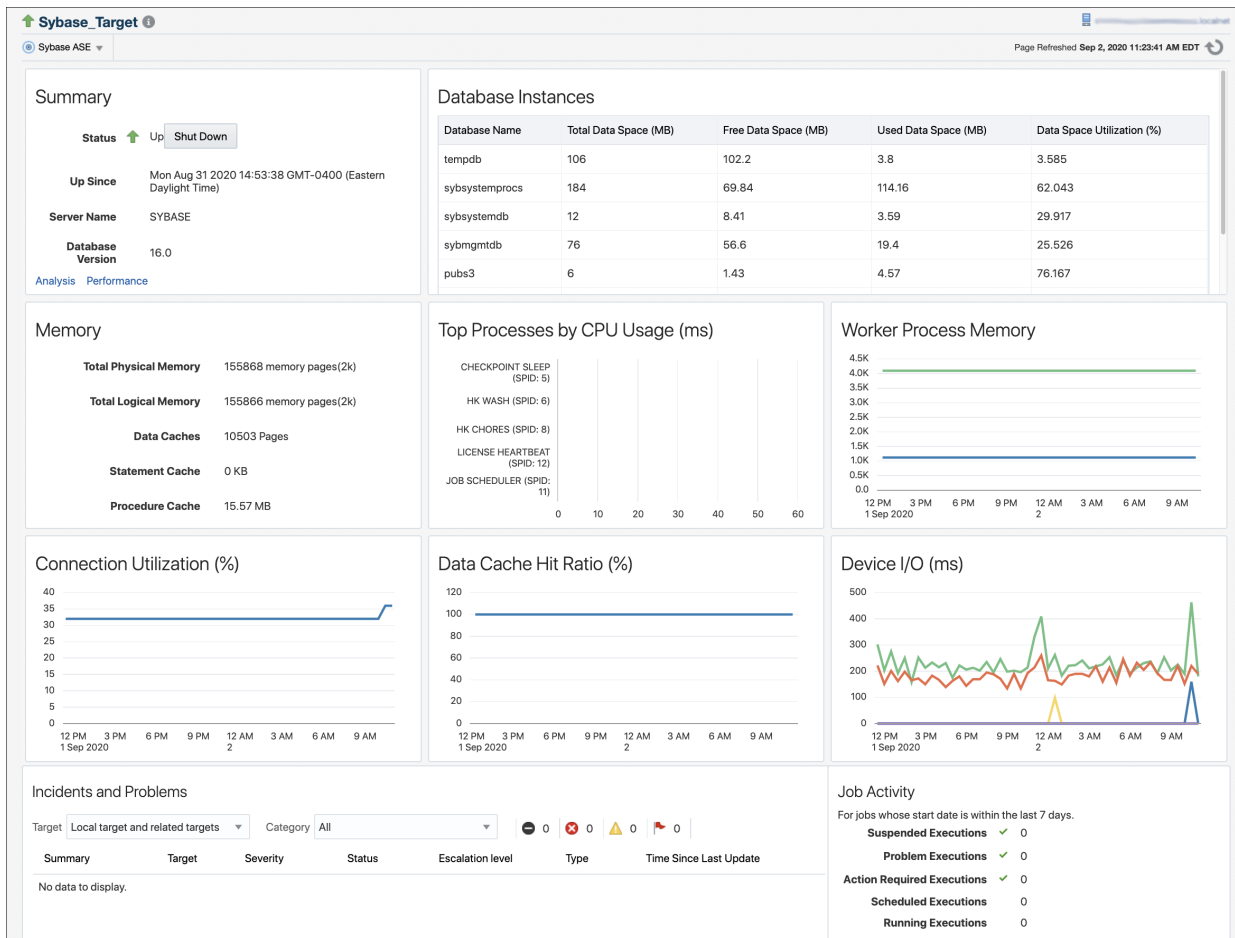
The all-new Performance page (Figure 1-2) has been added to the plug-in to give greater insight into the monitored Sybase ASE key performance indicators (KPI's) over a selectable time range. This includes Connection KPI's, Memory KPI's and Space and CPU KPI's.

Figure 1-2   Sybase ASE Plug-in Performance Page
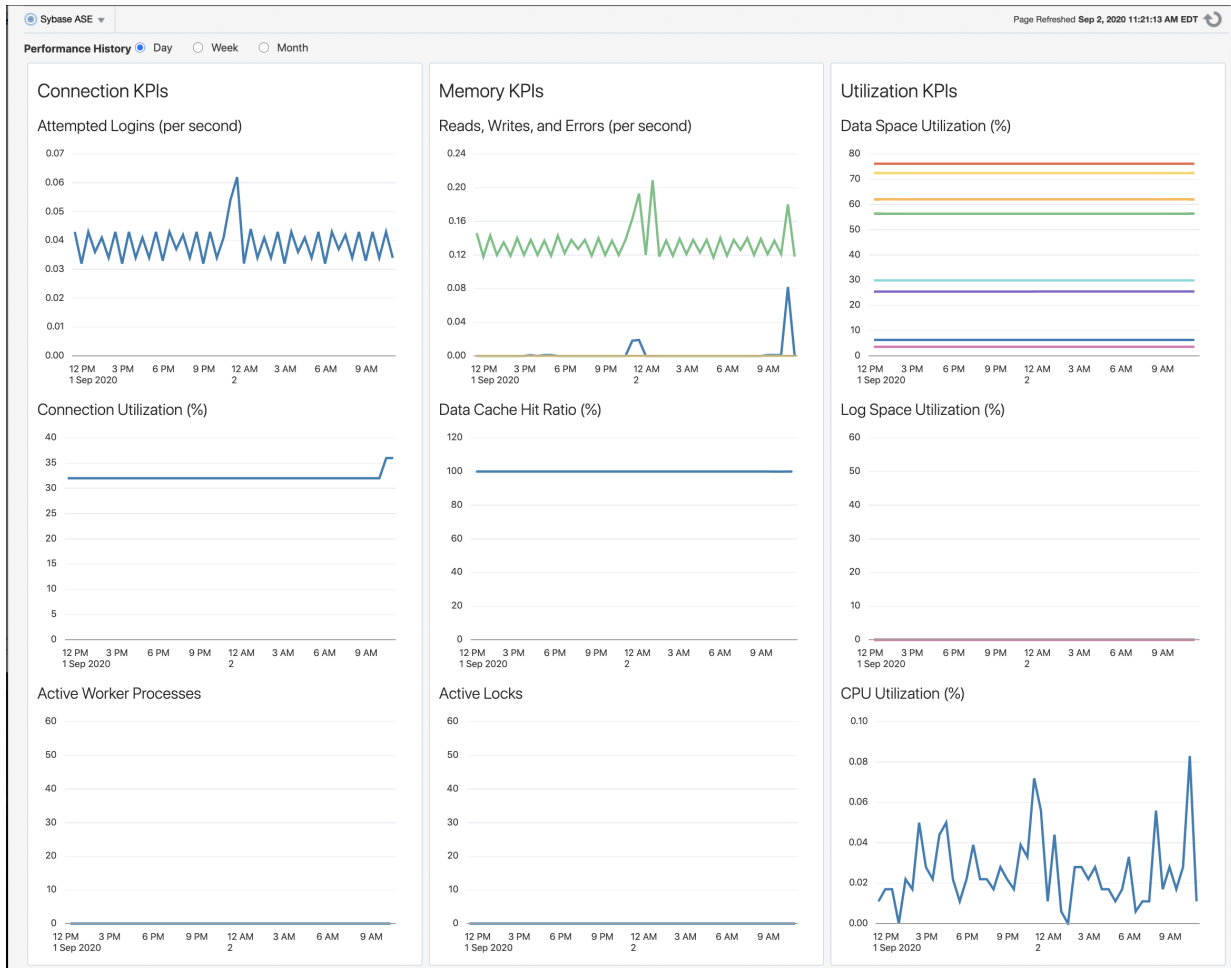
Sybase ASE Out-of-the-Box Monitoring Templates

This release adds three out-of-the-box monitoring templates (Figure 1-3) to streamline configuration of your Sybase ASE Database. This includes Efficiency, Traffic, and Utilization monitoring templates that you can use depending on your needs.

Figure 1-3   Sybase ASE Plug-in Monitoring Templates

Sybase ASE Database Plug-in Metric Thresholds

This release enables additional metric thresholds (Figure 1-4) to increase user control of your Sybase ASE Database. This includes metric thresholds for Device Statistics, Top 10 Big Cached Objects, Waiting Events Statistics, Cache Pools Statistics, and many more.

Figure 1-4   Sybase ASE Plug-in Metric Thresholds

Business Intelligence Publisher Reports

In this release, Information Publisher Reports included in the previous release of the Sybase ASE Plug-in have been migrated to BI Publisher Reports. BI Publisher Reports eliminate complexity and simplify report development and maintenance.

See Metrics and Reports for the Sybase ASE Plug-in for more information on using these reports.

Platforms Supported by the Sybase ASE Plug-in

The plug-in supports monitoring of Sybase Adaptive Server Enterprise (ASE) on all the platforms where Sybase ASE can be installed.

Software Versions Supported by the Sybase ASE Plug-in

This plug-in supports the following versions of products:

• Enterprise Manager Cloud Control 13c:

- The plug-in is certified for the latest release of Oracle Enterprise Manager Cloud Control 13*c* (13.1.0.1.0) or higher (Oracle Management Server (OMS) and Oracle Management Agent).
- Version 15.7 and 16.0 or higher of Express (XE), Enterprise (EE), and Developer (DE) editions of Sybase Adaptive Server Enterprise.

> **Note:**
>
> The system monitoring plug-in for Sybase Adaptive Server is not certified for monitoring Sybase Adaptive Server Clusters.

Sybase ASE Plug-in Prerequisites

The following prerequisites must be met before you can deploy the plug-in:

1. Sybase Adaptive Server Enterprise version 15.7 to 16.0 or higher is installed.

2. The following components of Oracle Enterprise Manager Cloud Control are installed and running:

   - Oracle Enterprise Manager Cloud Control 13*c* (13.1.0.1.0) or higher.

   - Oracle Management Agent 13.1.0.1.0 or higher (any platform supported by this release of agent).

     You can install the agent on the same computer as Sybase Adaptive Server (referred to as local agent monitoring), or you can install the agent on a different host computer from Sybase Adaptive Server (referred to as remote agent monitoring).

   - The Inventory and Usage Patch (20692416) must be installed. This patch is available for download from My Oracle Support (`https://support.oracle.com`).

3. The Monitoring and Diagnostic (MDA) tables must be installed before they can be queried. Follow the steps below to install MDA tables:

   a. Ensure that the configuration parameter enable cis is set to 1. If not, restart ASE. Run the following command:

   ```
   sp_configure 'enable cis', 1
   go
   ```

   b. Install the MDA tables. Do not run this script with 'sqsh' as it will cause errors. 'sqsh' sees a '$' as the start of a sqsh variable, and this distorts the native RPC names, since these start with a '$' as well. Instead, either use 'isql' as below, or run 'sqsh' with the '-Lexpand=0' option to disable sqsh variable expansion feature. This script is included in the installmaster.

   ```
   isql -U sa -P yourpassword -S YOURSERVER \
        -i $SYBASE/$SYBASE_ASE/scripts/installmontables
   ```

   c. Assign `mon_role` to logins allowed MDA access. This also applies to the 'sa' login.

   ```
   use master
   go
   ```

```
grant role mon_role to sa
go
```

d. Test basic MDA configuration as follows. You may need to disconnect and reconnect to activate mon_role when you grant this role to the login you are currently using.

```
select * from master..monState
go
```

e. Enable all configuration parameters. These are all dynamic (except the per object statistics active parameter). For all 'pipe' tables, the number of messages is set to 100 here, but you can choose a larger size.

```
sp_configure "enable monitoring", 1
go
sp_configure "sql text pipe active", 1
go
sp_configure "sql text pipe max messages", 500
go
sp_configure "plan text pipe active", 1
go
sp_configure "plan text pipe max messages", 100
go
sp_configure "statement pipe active", 1
go
sp_configure "statement pipe max messages", 500
go
sp_configure "errorlog pipe active", 1
go
sp_configure "errorlog pipe max messages", 100
go
sp_configure "deadlock pipe active", 1
go
sp_configure "deadlock pipe max messages", 100
go
sp_configure "wait event timing", 1
go
sp_configure "process wait events", 1
go
sp_configure "object lockwait timing", 1
go
sp_configure "SQL batch capture", 1
go
sp_configure "statement statistics active", 1
go
sp_configure "per object statistics active", 1
go
sp_configure "enable stmt cache monitoring", 1
go
sp_configure "max SQL text monitored", 4096
go
set mon_stateful_history off
go
```

f. Set the following static parameter to a higher value (the setting is in bytes per user connection) if you are expecting a lot of (or long) SQL batches:

```
sp_configure "max SQL text monitored", 2048
go
```

> **Note:**
>
> Enabling the following configuration parameters will result in >5% performance overhead:
>
> ```
> sp_configure "sql text pipe active", 1
> sp_configure "sql text pipe max messages", 500
> sp_configure "max SQL text monitored", 2048
> sp_configure "plan text pipe active", 1
> sp_configure "plan text pipe max messages", 100
> sp_configure "statement pipe active", 1
> sp_configure "statement pipe max messages", 500
> sp_configure "statement statistics active", 1
> sp_configure "per object statistics active", 1
> sp_configure "enable stmt cache monitoring", 1
> sp_configure "max SQL text monitored", 4096
> set mon_stateful_history off
> ```

4. As part of the JDBC URL, either IP Address or host name can be provided. Ensure that the host name can be resolved consistently on the network. Standard TCP tools such as "nslookup" and "traceroute" can be used to verify the host name. Validate using the following commands on Management Agent where plug-in is deployed:

   - `nslookup <hostname>`

     This returns the IP address and fully qualified host name.

   - `nslookup <IP>`

     This returns the IP address and fully qualified host name.

5. The plug-in may sometimes depend on the cache size of the TempDB.

6. If the monitoring user does not have permission on all databases in Sybase ASE target, provide permission to query `SYSSEGMENTS` table to monitoring user or else create guest user account in each database.

7. To enable the use of Jobs for Sybase ASE the following settings are required:

   a. The plug-in for Sybase ASE must be deployed as a local configuration. Local configuration is when the Oracle Management Agent with the plug-in installed resides on the host of the Sybase ASE Server.

   b. Set the Sybase Adaptive Server Enterprise Preferred Credentials for both "Admin Sybase ASE Credentials" and "Agent Host Credentials."

   c. Set the following Sybase environmental variables:

      - `STARTSERVER` - Must equal the full path to the Sybase `startserver` executable. For example:

        `/apps/sybase/ASE-15_0/install/startserver`

      - `RUNFILE` - Must equal to the full patch of the Sybase `runfile` executable. For example:

        `/apps/sybase/ASE-15_0/install/RUN_SYBASE_SERVER`

8. Verify that the JDBC drivers are available in your Sybase/SAP ASE Installation. The JDBC drivers are located in the database software installation location:

- For Sybase 15.7 ASE:

```
echo $SYBASE
=/apps/sybas
$SYBASE/jConnect-7_0/classes/jconn4.jar
/apps/sybase/jConnect-7_0/classes/jconn4.jar
```

- Sybase 16.0 ASE

```
/apps/sap/jConnect-16_0/classes/jconn4.jar
```

If the drivers are not there, then follow the instructions in Setting up the JDBC Driver.

2

Configuring the Sybase ASE Server for Monitoring

This topic describes how to configure Sybase ASE server target configure the Sybase Adaptive Server Enterprise (ASE) target to be monitored by Enterprise Manager Cloud Control.

To monitor the Sybase ASE target using Enterprise Manager, the Sybase ASE user must have the role `mon_role`. In addition to `mon_role` permissions, the monitoring user must also have Select permissions to access the following `sys` tables:

- `syslisteners`
- `sysloginroles`
- `syssrvroles`

The following commands will grant Select permission to the monitoring user:

```
grant select on syslisteners to public
go
grant select on sysloginroles to public
go
grant select on syssrvroles (name, srid) to public
go
```

The above steps will give Select permission to all existing users in the database. To grant Select permission to only the monitoring user, referred to as `monuser` below, run the following commands. To execute these commands, the user must have `sa_role` permissions.

1. Create a group.

   ```
   sp_addgroup OracleEMGroup
   go
   ```

2. Add the user `monuser` to the group.

   ```
   sp_adduser monuser, null, OracleEMGroup
   go
   ```

3. Grant Select permission on the tables to `OracleEMGroup`.

   ```
   grant select on syslisteners to OracleEMGroup
   go
   grant select on sysloginroles to OracleEMGroup
   go
   grant select on syssrvroles (name, srid) to OracleEMGroup
   go
   ```

3

Configure the Management Agent and Deploy the Sybase ASE Plug-in

This chapter describes how to configure the Enterprise Manager Cloud Control Management Agent to allow for monitoring of the Sybase Adaptive Server Enterprise (ASE) target.

The following topics are described in this chapter:

- Configure the Management Agent to Deploy the Plug-In
- Deploying the Plug-in

Configure the Management Agent to Deploy the Plug-In

To configure the Agent, you must first ensure that the user starting the Agent service belongs to the Local Administrators Group. Also, you must set the preferred credentials on all Agents where you want to deploy the plug-in. Follow the instructions below to configure the Agent:

- Assigning Advanced Privileges to User
- Setting and Validating Preferred Credentials

Assigning Advanced Privileges to User

(**For Microsoft Windows ONLY.**) To assign advanced privileges in a Microsoft Windows environment, do the following:

1. Locally on the Microsoft Windows node hosting the Agent, check that the user starting the Agent service belongs to the Local Administrators Group. If not, then add it.

2. Open the Local Security Settings Windows Tool and give the following Advanced Privileges to the user starting the Agent service:
   - Act as part of the operating system
   - Adjust memory quotas for a process
   - Logon as batch job
   - Replace a process level token

3. Restart the Agent service if it is running.

4. Set the Preferred Credentials for the Host and the Agent in Cloud Control. For more information, see Setting up the JDBC Driver.
   - The OS user set in the Preferred Credentials must belong to the Local Administrators Group.
   - This OS user must have the following Advanced Privileges:
     – Act as part of the operating system

- – Adjust memory quotas for a process
- – Logon as batch job
- – Replace a process level token

Setting and Validating Preferred Credentials

To set the preferred credentials on all Agents where you want to deploy the plug-in, do the following:

1. In Enterprise Manager Cloud Control, from the **Setup** menu, select **Security**, then **Preferred Credentials**.

   The Preferred Credentials page appears, showing a table of targets.

2. Select Host target type from the table and then click **Managed Preferred Credentials**.

   The Host Preferred Credentials page appears.

3. In the Host Preferred Credentials page, in the Target Credentials section, select the host that is running the Management Agent where the plug-in has to be deployed, and click **Set**.

4. In the Select Named Credential dialog box, Select Credential as **New** and specify the user name and password and click **Test and Save**. If your test runs successfully, your credentials are set correctly.

5. Run the OS Command job for the Management Agent where the plug-in has to be deployed.

   - Log in to Enterprise Manager Cloud Control.

   - From the Enterprise menu, select **Job** and then **Activity**.

   - In the Job Activity page, from the Create Job list, select **OS Command**, and click **Go**.

   - Fill up the details required in the following pages, and click **Submit** to run the job. If the job runs successfully, your credentials are set correctly.

Deploying the Plug-in

See Managing Plug-ins in the *Oracle Enterprise Manager Cloud Control Administrator's Guide* for steps to deploy the plug-in.

4

Post-Deployment Configuration

This chapter describes the tasks to complete after the Management Agent is successfully deployed.
The following topics are described in this chapter:

- Setting up the JDBC Driver
- Configure TCP/IP Port Information
- Adding Instances for Monitoring
- Verifying and Validating the Plug-in
- Undeploying the Plug-in

Setting up the JDBC Driver

Follow the steps below to set up jConnect for the Sybase Adaptive Server plug-in:

1. Download the jConnect JDBC driver version 7.0.

    a. Go to the SAP web site:

        https://support.sap.com/swdc

    b. Log in with your active SAP support credentials.

    c. On the left side of the page, select **Databases**.

    d. Select **SAP Adaptive Server Enterprise**.

    e. Re-authenticate with your SAP support credentials.

    f. Select **Database Patches**.

    g. Select **SAP ASE FOR BUSINESS SUITE**.

    h. Select **SAP ASE 16 DBCLIENT BUS.SUITE**

    i. Select the appropriate platform for where the driver will be placed (Oracle Management Agent host):

        - AIX 64-bit

        - HP-UX on IA64 64-bit

        - Linux on x86_64 64-bit

        - Oracle Solaris on SPARC 64-bit

        - Windows on x64 64-bit

    j. Check the box for **ASEBC1600002** and click **Add to Download Basket**.

    k. Re-authenticate with your SAP support credentials. Close the pop-up dialog box once added to Download Basket.

    l. Click **Maintain Download Basket**.

    m. In the pop-up windows, click **ASEBC1600002** in the description column.

ORACLE®

n. The file `ASEBC1600002_0-20012477.SAR` will begin downloading in your web browser.

o. Extract the downloaded `.sar` file with SAP's `sapcar.exe` extraction utility. This must be done on a Windows host. See Downloading SAPCAR for details.

p. After extracting the `.sar` file, the `jconn4.jar` file should be located in the `sybjdbc\jconn4.jar` directory.

2. If it does not already exist, create a `$ORACLE_HOME\plugins\dependencies\oracle.em.ssad\jdbcdriver\` directory.

3. Copy the JDBC driver file (`jConn.jar`) into the `$ORACLE_HOME\plugins\dependencies\oracle.em.ssad\jdbcdriver\` directory.

Downloading SAPCAR

Follow the steps below to download SAPCAR:

1. Go to the SAP web site:

   https://support.sap.com/swdc

2. Log in with your active SAP support credentials.

3. On the left side of the page, select **Support Packages and Patches**.

4. Select **Browse by**.

5. Select **Additional Components**.

6. Select **SAPCAR**.

7. Select **SAPCAR 7.21**.

8. Select the platform used for extracting the `.sar` file:

   • AIX 64bit

   • HP-UX on IA64 64bit

   • HP-UX on PA-RISC 64bit

   • Linux on IA32 32bit

   • Linux on IA64 64bit

   • Linux on Power 64bit

   • Linux on x86_64 64bit

   • Linux on zSeries 64bit

   • OS/400

   • Solaris on SPARC 64bit

   • Solaris on x86_64 64bit

   • Windows Server on IA32 32bit

   • Windows on IA64 64bit

   • Windows on x64 64bit

   • z/OS 64bit

9. Check the box for **SAPCAR_0-80000935.EXE** and select **Add to Download Basket**.

10. Select **Maintain Download Basket**.

11. Click **SAPCAR** in the Description column to begin the download of the `SAPCAR_0-80000935.EXE` file. You may need to re-authenticate with your SAP support credentials.

12. Copy the `SAPCAR_0-80000935.EXE` and `ASEBC1600002_0-20012477.SAR` files to the host system.

13. Run the `sapcar.exe` command to extract the `.sar` file. For example:

    `# ./SAPCAR_0-80000935.EXE -xvf ASEBC1600002_0-20012477.SAR`

14. In the extracted folder `sybjdbc`, copy `jconn4.jar` and move to the appropriate plug-in JDBC path.

Configure TCP/IP Port Information

The following sections provide information you require to enable the TCP/IP port and to find the TCP/IP port for a particular Sybase ASE instance:

- Enabling the TCP/IP Port
- Finding the TCP/IP Port

Enabling the TCP/IP Port

For all editions of Sybase Adaptive Server Enterprise

1. From the **Sybase Adaptive Server Configuration Manager,** select **Sybase Adaptive Server Network Configuration** in the left panel and navigate to the Sybase Adaptive Server instance.

   The right panel displays all protocols for the specified Sybase Adaptive Server instance and their status.

2. Ensure that TCP/IP is enabled.

3. (If TCP/IP is disabled), right-click **TCP/IP** and select **Properties.** The TCP/IP Properties dialog box appears.

4. In the Protocol tab, select **enabled,** and click **Apply.**

5. Restart the Sybase Adaptive Server instance.

Finding the TCP/IP Port

To find the TCP/IP port number for a particular Sybase Adaptive Server instance, run the following query:

`Select address_info from syslisteners`

The above query returns the host address followed by the port number.

Adding Instances for Monitoring

After successfully deploying the plug-in, follow these steps to add the plug-in target to Cloud Control for central monitoring and management:

1. From the **Setup** menu, select **Add Target** and then **Add Targets Manually** as shown in Figure 4-1:

Figure 4-1   Add Targets Manually Menu
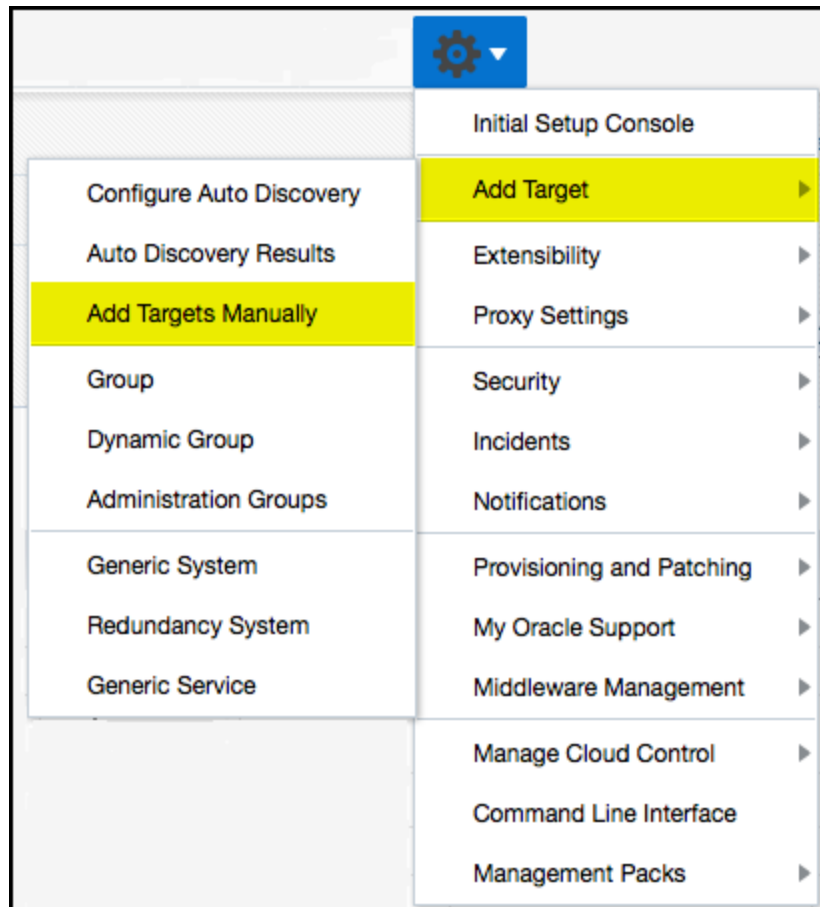
2. In the Add Targets Manually page (Figure 4-2), select **Add Targets Declaratively by Specifying Target Monitoring Properties**, select **Target Type** as **Sybase Adaptive Server Enterprise**, select a **Monitoring Agent** and click **Add Manually**.

Figure 4-2   Add Targets Manually Page

3. In the Add Sybase Adaptive Server Enterprise page (Figure 4-3), provide the following information for the properties:

   - **Target Name**: Unique target name across all the Cloud Control targets, such as `SybaseServer_Hostname`. This is the display name in Cloud Control. It represents this Sybase Adaptive Server target across all user interfaces within Cloud Control.

   - **Monitoring Sybase ASE Credentials**
     - **Sybase ASE User Name**: Valid user for the database in `mon_role`.
     - **Sybase ASE Password**: Corresponding password for the database user.
     - **Confirm Sybase ASE Password**: Confirm password entry.

   - **Sybase ASE Host Credentials**
     - **User Name**: Operating System account for Sybase host. This account must also be the Sybase User.
     - **Password**: Corresponding password for the host user name.
     - **Confirm Password**: Confirm password entry.

   - **Properties**
     - **JDBC Driver**: Optional parameter. Provide this value in the following format:

```
com.sybase.jdbc3.jdbc.SybDriver
```

– **JDBC URL**: Provide the URL in the following format:

```
jdbc:sybase:Tds:<hostname>:<port>
```

The JDBC URL argument represents a data source. Parameter definitions are as follows:

jdbc:sybase: Indicates that the connection is to a Sybase ASE server.

server: Fully qualified hostname or IP address of the database server.

port: TCP/IP server port number assigned to the database server, which is an integer between 0 and 65535. The default port for Sybase ASE is **5000**.

4. Click **Test Connection** to make sure the parameters you entered are correct.

Figure 4-3   Add Sybase Adaptive Server Enterprise Page

After you deploy and configure the plug-in to monitor one or more targets in the environment, you can customize the monitoring settings of the plug-in. This alters the collection intervals and threshold settings of the metrics to meet the particular needs of your environment. If you decide to disable one or more metric collections, this could impact the reports that the metric is a part of.

Verifying and Validating the Plug-in

After waiting a few minutes for the plug-in to start collecting data, use the following steps to verify and validate that Enterprise Manager is properly monitoring the plug-in target:

1. Click the Sybase Adaptive Server target link from the All Targets page. The Sybase ASE home page appears (Figure 4-4):

Figure 4-4   Sybase ASE Target Home Page
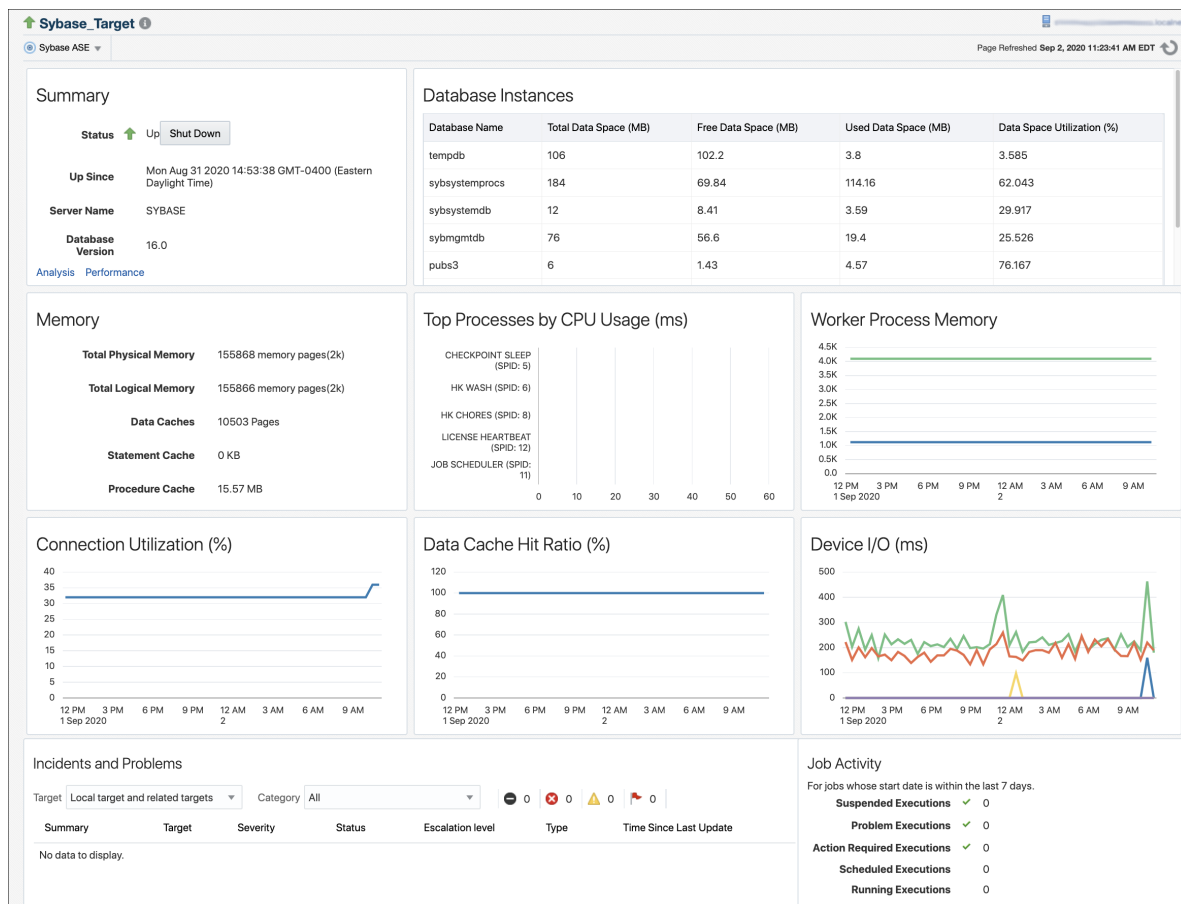

2. Verify that no metric collection errors are reported by clicking **Monitoring** and then **Metric Collection Errors** from the **Target** menu.

3. Ensure that reports can be seen and no errors are reported by clicking **Information Publisher Reports** in the **Target** menu and viewing reports for the Sybase ASE target type.

4. Ensure that configuration data can be seen by clicking **Configuration** and then **Last Collected** in the **Target** menu. If configuration data does not immediately appear, click **Refresh** in the Latest Configuration page.

5. Ensure that the Analysis page can be viewed by clicking Analysis in the Target menu. The Sybase ASE Analysis page appears (Figure 4-5):

Figure 4-5   Sybase ASE Target Analysis Page
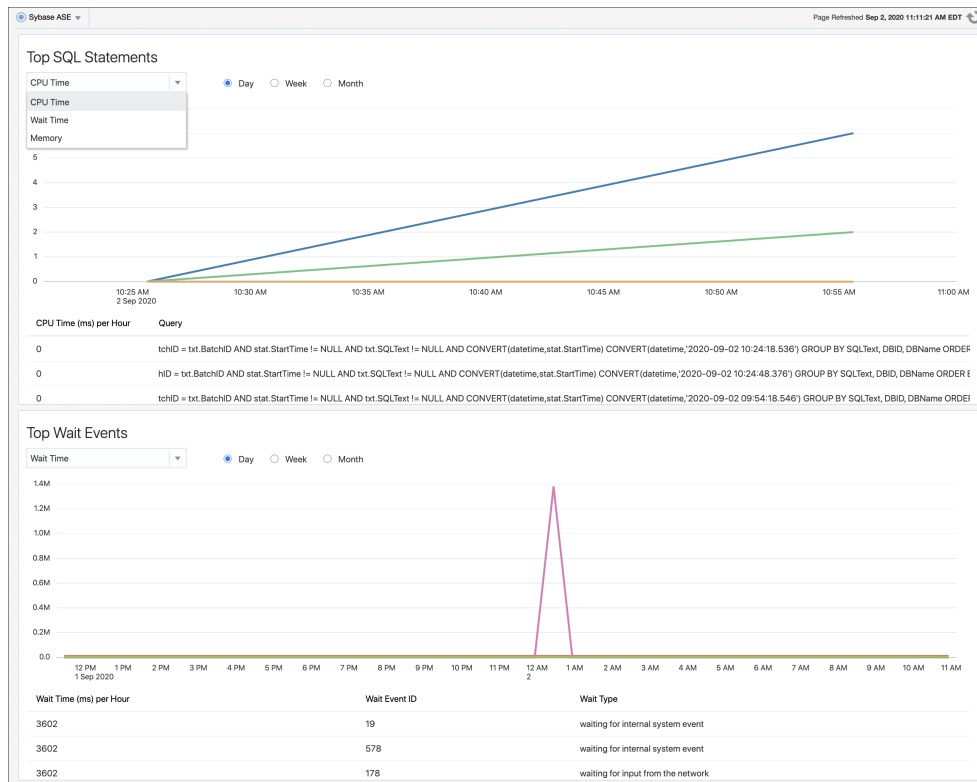
Undeploying the Plug-in

See Managing Plug-ins in the *Oracle Enterprise Manager Cloud Control Administrator's Guide* for steps to undeploy the plug-in.

5

Creating and Editing Jobs for the Sybase ASE Target

This topic describes how to use Enterprise Manager to create and edit jobs for the Sybase ASE target.

Follow the steps below to create and edit jobs:

1. From the Enterprise menu, select **Job**, then click **Activity**.

2. On the Job Activity page, select a job type from the Create Job menu and click **Go**. Select one of the following:

   - **Startup Sybase ASE**

     – Performs a Startup of the Sybase Adaptive Server Enterprise.

     – When Sybase ASE is shut down, the Startup job icon will be accessible in the Summary section of the Target Home page

     – Requires the `STARTSERVER` and the `RUNFILE` environmental variables to be set correctly on the Sybase ASE host.

     > **Note:**
     >
     > For Windows systems, the Startup Sybase ASE job requires that the `SYBSERVICE` environment variable be set to the name of the Sybase Service. For example:
     >
     > `SYBSQL_NODS16WIN12.`

   - **Shutdown Sybase ASE**

     – Performs a Shutdown of the Sybase Adaptive Server Enterprise.

     – When Sybase ASE is running, the Shutdown job icon will be accessible in the Summary section of the Target Home page.

     – Requires Admin Sybase ASE Credentials to be configured as a Preferred Credential.

     > **Note:**
     >
     > All jobs available for the Sybase ASE plug-in are only available when the plug-in is set up for local monitoring of the database. Preferred Credentials are required to be set for use.

3. In the General tab of the Create *<Job Type>* Job page, provide a name for the job and add the individual targets or one composite target such as a Group. If you are editing a job, then modify the job name and the selected targets.

4. These jobs do not require and parameters to be set in the Parameters tab of the Create *<Job Type>* Job page.

5. In the Credentials tab of the Create *<Job Type>* Job page, select an appropriate option for credentials.

   You can choose to use the preferred credentials that are already set or override the preferred credentials with new credentials. In either case, you need to provide the credentials for agent host and database host.

   To set the preferred credentials, click **Preferences** at the top-right corner of the Cloud Control console. From the left-vertical navigation bar, click **Preferred Credentials**. Cloud Control displays the Preferred Credentials page. On this page, you can set the preferred credentials.

6. In the Schedule tab of the Create *<Job Type>* Job page, schedule the job.

7. In the Access tab of the Create *<Job Type>* Job page, define or modify the access you want other users to have to this job.

8. Click **Submit** to create the job.

> **Note:**
>
> To enable use of the Job buttons found in the Summary section of the Target home page, be sure to set the Preferred Credentials for the Sybase Adaptive Server Enterprise target type.

6

Metrics and Reports for the Sybase ASE Plug-in

This chapter provides details of the reports gathered by the Sybase ASE plug-in. The following sections are provided:

- Using the Sybase ASE Plug-in Reports
- Deploying Reports After BI Publisher is Configured
- Complete List of Plug-in Metrics
- Using the Sybase ASE Plug-in Monitoring Templates

Using the Sybase ASE Plug-in Reports

To further aid administrators with critical tasks such as problem diagnosis, trend analysis and capacity planning, the Sybase ASE Database plug-in includes 17 out-of-box reports (Figure 6-1):
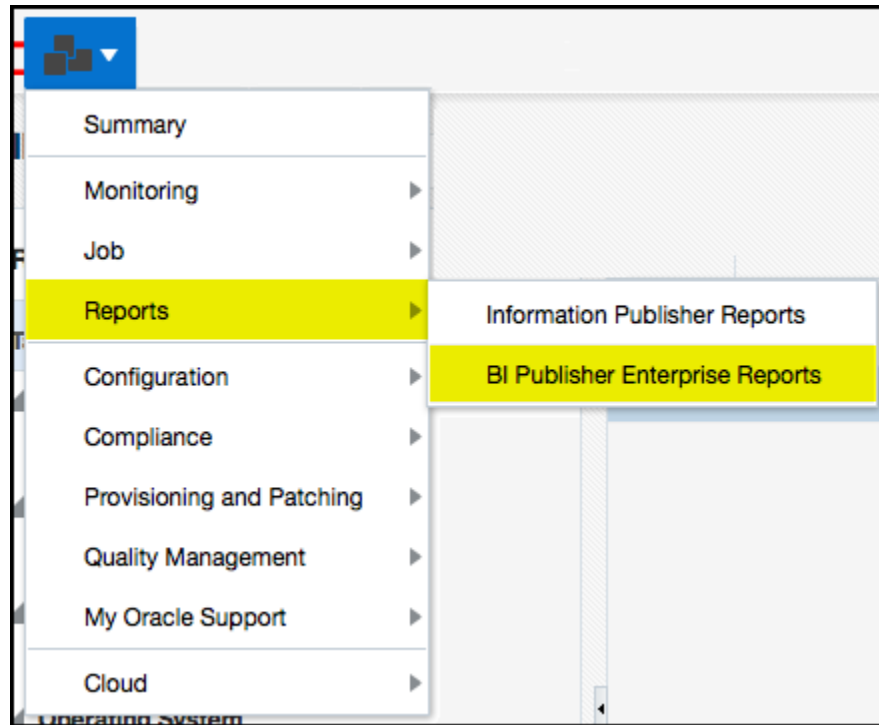
Figure 6-1   Sybase ASE Plug-in BI Publisher Reports
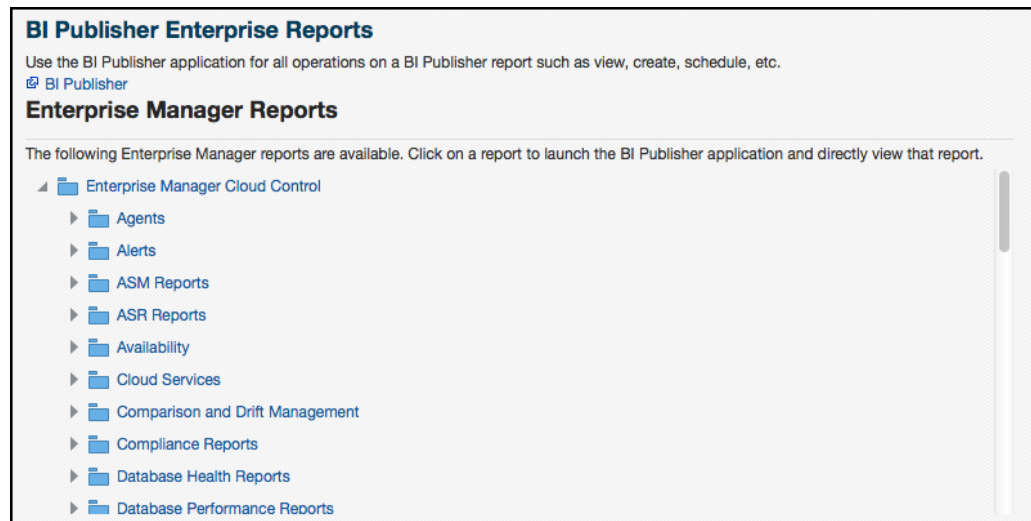
Follow the steps listed below to generate a new report from one of the out-of-the-box reports provided by Oracle:

1. From the Enterprise menu, select **Reports**, then **BI Publisher Enterprise Reports** as shown in Figure 6-2:

Figure 6-2   BI Publisher Enterprise Reports Menu

2. Scroll down to the Sybase ASE section, find the desired report, and click the report title hyperlink.

3. After the reports have been sorted to Sybase ASE reports only, find the desired report and click on the report title hyperlink. Figure 6-3 shows an example of a report:

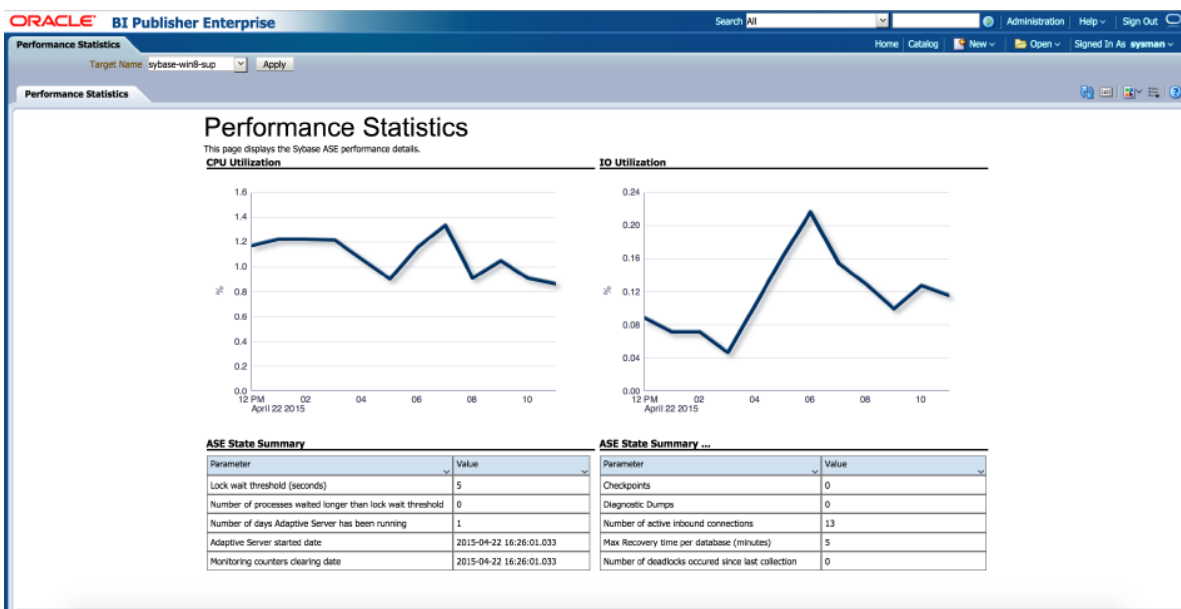**Figure 6-3   Sybase ASE BI Publisher Report Example**

Table 6-1 shows the BI Publisher Enterprise Reports provided by Oracle:

Table 6-1   Sybase ASE Plug-in Reports

Report Name	Report Description
Sybase ASE Engines Statistics	Displays Sybase ASE Engines related information.
Sybase ASE Configuration	Displays Sybase ASE Configuration Information.
Sybase ASE Data Cache Statistics	Displays Data Cache related information.
Sybase ASE Database Log Statistics	Displays Database log related information.
Sybase ASE Databases Space Statistics	Displays Databases Space related information.
Sybase ASE Device IO Statistics	Displays Device IO related information.
Sybase ASE Procedure Cache Statistics	Displays Procedure Cache related information.
Sybase ASE Deadlock Statistics	Displays the deadlock statistics for Sybase ASE.
Sybase ASE Error Statistics	Displays the error statistics for Sybase ASE.
Sybase ASE Open Objects Statistics	Displays the Open Objects Buffer and Page Read/Write statistics for Sybase ASE.
Sybase ASE Process Statistics	Displays the process statistics for Sybase ASE.
Sybase ASE SQL Statistics	Displays the SQL statistics for Sybase ASE.
Sybase ASE User Statistics	Displays the user statistics for Sybase ASE.
Sybase ASE Network IO Monitoring Report	Displays Network Monitoring Statistics Report.
Sybase ASE Performance Statistics	Displays Sybase ASE performance related information.
Sybase ASE Transaction Log Statistics	Displays Transaction log related information.
Sybase ASE Worker Threads Statistics	Displays Sybase ASE worker threads related information.

Deploying Reports After BI Publisher is Configured

If the Sybase ASE plug-in is deployed or upgraded after BI Publisher is already configured and the reports were not deployed automatically, then execute the following command:

```
emcli deploy_bipublisher_reports -pluginid="oracle.em.ssad" -
pluginversion="12.1.0.4.0" -force
```

Complete List of Plug-in Metrics

For a complete list of all the metrics contained in this plug-in, see Sybase Adaptive Server Enterprise Database Metrics in the *Oracle Enterprise Manager Cloud Control System Monitoring Plug-in Metric Reference Manual for Non Oracle Database Management*.

Using the Sybase ASE Plug-in Monitoring Templates

To view the out-of-box templates, from the Enterprise menu, select **Monitoring** and then **Monitoring Templates**. Using the Target Type drop down, select **Sybase Adaptive Server Enterprise** and press the arrow button.

A complete list of all out-of-box monitoring templates will be available for use as follows (also, see Figure 6-4):

- **Sybase ASE Efficiency Monitoring Template:** Recommended template for monitoring Sybase ASE efficiency.

- **Sybase ASE Traffic Monitoring Template:** Recommended template for monitoring Sybase ASE traffic.

- **Sybase ASE Utilization Monitoring Template:** Recommended template for monitoring Sybase ASE utilization.

Figure 6-4   Sybase ASE Plug-in Monitoring Templates

To apply a monitoring template to a Sybase ASE target, perform the following actions:

1. Click the desired monitoring template to select it.

2. Click **Actions** and select **Apply**.

3. Choose to either replace or override existing thresholds with the Apply Options radial button.

4. Click **Add** to add the Sybase ASE Targets to apply the template to. Follow the prompts through the target Search and Select Targets screen.

5. Click **Ok** and a confirmation message will appear at the top of the page notifying of a successful application.

The Actions button found on the Monitoring Templates screen will also give access to setting a selected template as "Default" for all new Sybase ASE Target deployments, or Edit an existing template's threshold values.

See Using Monitoring Templates in the *Oracle Enterprise Manger Cloud Control Administrator's Guide* for more information on how to use Monitoring Templates in Enterprise Manager Cloud Control 13*c*.

7

Inventory and Usage Details

This chapter describes the features and how to access the Inventory and Usage Details page (Figure 7-1) for the Sybase ASE database.
The following sections are discussed:

- Inventory and Usage Details Page Feature Summary
- Accessing the Inventory and Usage Details Page
- Additional Information

Figure 7-1   Inventory and Usage Details Page
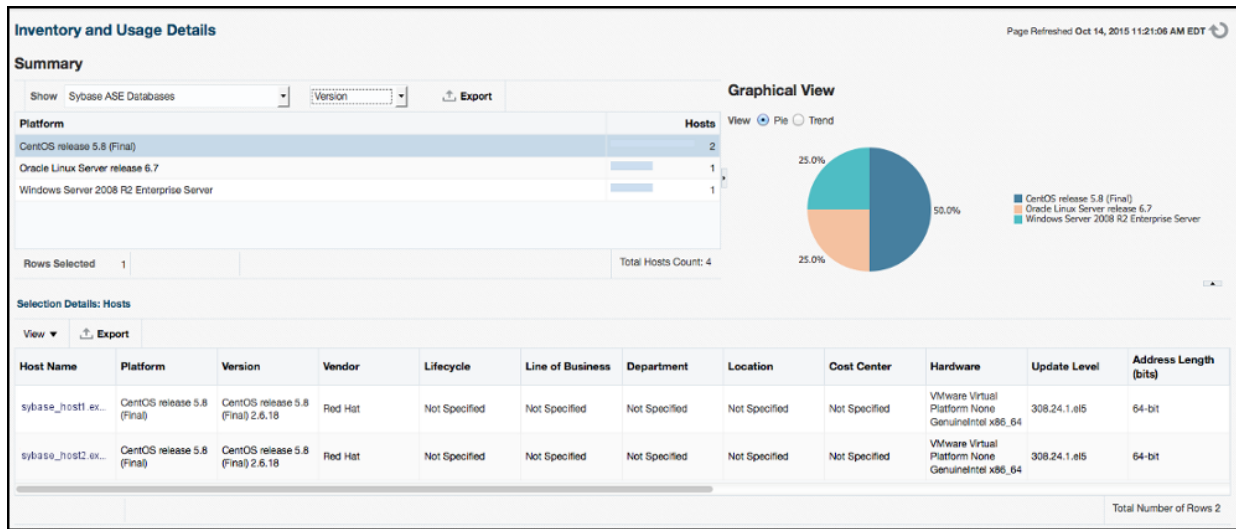
Inventory and Usage Details Page Feature Summary

With the Inventory and Usage Details page you can:

- View inventory summaries for your Sybase ASE databases.
- View inventory summary information in the context of different dimensions such as version, platform, OS version and vendor, life cycle, department, location, and cost center.
- Drill down multiple levels of inventory details.
- View to a pie chart to break down the inventory data for the roll-up option by color-coded percentages.
- Repeatedly revise selections to refresh chart and details based on new selections.
- Export deployment and details tables as a `.csv` file.

Accessing the Inventory and Usage Details Page

To view inventory and usage details:

1. From the **Enterprise** menu, select **Configuration**, and then select **Inventory and Usage Details**.

   Alternatively, you can click **Details** in the Inventory and Usage region of the Enterprise Summary page.

2. Select the entity you want to examine and choose a roll-up option. For example, show all deployed hosts rolled up by platform. The page refreshes automatically upon selection.

3. In any given row in the top table, there is a count bar next to the count that represents a percentage of the maximum count. For example, if the maximum number of hosts by platform is four, the bar for hosts represented on two platforms would be half as long. Click the bar to refresh the details table and chart for the row.

Additional Information

For further information, see Working with Inventory and Usage Details in the *Oracle Enterprise Cloud Control Database Lifecycle Management Administrator's Guide*.

8

Troubleshooting the Sybase ASE Plug-in

This chapter describes the possible troubleshooting scenarios and any known issues for the Sybase ASE plug-in.
The following topics are presented in this chapter:

- Metric Collection Errors

Metric Collection Errors

If the following parameters are not enabled for the Sybase Adaptive Server Enterprise (ASE) plug-in, metric collection errors may occur:

```
sp_configure "sql text pipe active", 1
sp_configure "sql text pipe max messages", 500
sp_configure "max SQL text monitored", 2048
sp_configure "plan text pipe active", 1
sp_configure "plan text pipe max messages", 100
sp_configure "statement pipe active", 1
sp_configure "statement pipe max messages", 500
sp_configure "statement statistics active", 1
sp_configure "per object statistics active", 1
sp_configure "enable stmt cache monitoring", 1
sp_configure "max SQL text monitored", 4096
set mon_stateful_history off
```

For information about the troubleshooting scenarios that you might encounter while working with the System Monitoring plug-ins, see Troubleshooting the Sybase ASE Plug-in in the *Oracle Enterprise Manager Cloud Control Third-Party Database Plug-in Troubleshooting Guide*.

Index