

Platform Manager User's Guide

Invensys Systems, Inc.

Revision A

Last Revision: 6/25/07



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Contents

	Welcome.....	5
	Document Conventions	5
	Where to Find Additional Information.....	6
	Technical Support	6
Chapter 1	Getting Started	7
	About Platform Manager	7
	Starting Platform Manager	8
	Navigating in the Platform Manager	9
	Security	9
	Galaxy Authentication	10
	OS User Based Authentication.....	10
	OS Group Authentication	10
	Changing Users	10
	About Object Viewer.....	11
Chapter 2	Using Platform Manager	13
	About Platform and Engine Status	13
	Object Status Description	13
	On Scan/Off Scan State.....	14
	Checkpointed State	15
	Viewing Platform Status.....	15
	Viewing Engine Status.....	16
	Exporting Lists	17

- Managing Platforms..... 17
 - Setting a Platform On Scan..... 18
 - Setting a Platform Off Scan..... 18
 - Starting a Platform 19
 - Shutting Down a Platform..... 20
- Managing Engines 20
 - Setting an Engine On Scan..... 21
 - Setting an Engine Off Scan 21
 - Starting an Engine..... 22
 - Shutting Down an Engine 23

- Index 25**

Welcome

The Platform Manager guide provides information on performing run-time administrative tasks and diagnostics on ArcestrA Application Server platforms and engines.

Only the information relating to the Platform Manager is documented in this guide. All other information pertaining to the Microsoft Management Console (MMC) can be accessed through the Help button located on the MMC toolbar.

Although Object Viewer, the administrative utility used for performing diagnostics on ApplicationObjects and AutomationObjects, is accessible from Platform Manager, the information pertaining to that utility is available from the Object Viewer online Help.

Document Conventions

This documentation uses the following conventions:

Convention	Used for
Initial Capitals	Paths and file names.
Bold	Menus, commands, dialog box names, and dialog box options.
Monospace	Code samples and display text.

Where to Find Additional Information

Platform Manager provides you with diagnostic capabilities on platforms and engines.

- For information on configuring objects and deploying objects, see the *Application Server User's Guide*.
- For information on Object Viewer and how to view and modify object attribute values, see the *Object Viewer Online Help* available from the Help button on the Object Viewer toolbar.

Technical Support

Wonderware Technical Support offers a variety of support options to answer any questions on Wonderware products and their implementation.

Before you contact Technical Support, refer to the relevant section(s) in this documentation for a possible solution to the problem. If you need to contact technical support for help, have the following information ready:

- The type and version of the operating system you are using.
- Details of how to recreate the problem.
- The exact wording of the error messages you saw.
- Any relevant output listing from the Log Viewer or any other diagnostic applications.
- Details of what you did to try to solve the problem(s) and your results.
- If known, the Wonderware Technical Support case number assigned to your problem, if this is an ongoing problem.

Chapter 1

Getting Started

Use the Platform Manager to perform run-time administrative tasks and diagnostics on ArcestrA Application Server platforms and engines.

About Platform Manager

The Platform Manager provides you ArcestrA Galaxy application diagnostics. You can view run-time status of some system objects and perform actions upon those objects. These actions include:

- Setting platforms and engines in an executable or idle mode.
- Starting and stopping platforms and engines.

The Platform Manager is an extension snap-in to the ArcestrA System Management Console (SMC). The SMC is a Microsoft Management Console (MMC) container snap-in for all of the diagnostic and management utilities for your Galaxy application.

Other extension snap-ins include the Galaxy Database Manager, the Log Viewer, and the DAServer Manager.

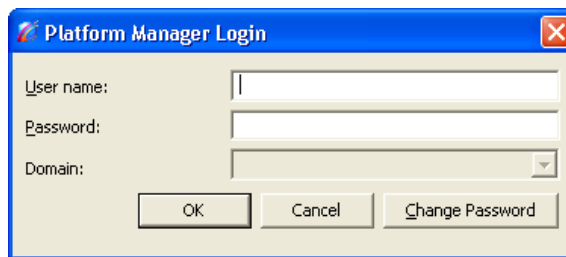
Starting Platform Manager

Platform Manager is a common component of a Galaxy application and it is available from any computer that has a deployed platform; therefore, you do not need to install it onto each node. This ensures that all nodes used within a Galaxy have access to Platform Manager.

When you use Platform Manager, you can access the platforms and engines deployed to the local computer and to any other computer in the Galaxy. Platform Manager does not require the GalaxyRepository to be installed on the local computer.

To start Platform Manager

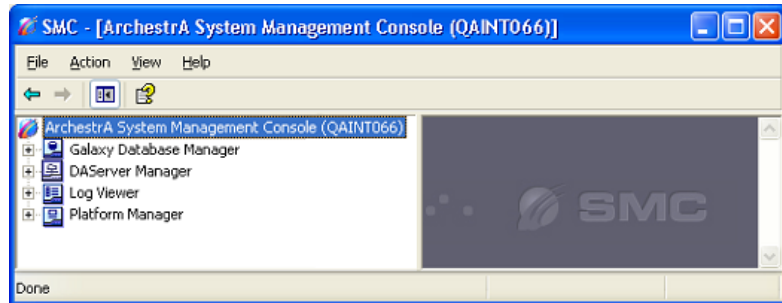
- 1 Ensure your Galaxy application is running.
- 2 On the Windows **Start** menu, point to **Programs**, point to **Wonderware**, and then click **System Management Console**. If Platform Manager has security enabled, the Platform Manager **Login** dialog box appears.



- 3 Type your User Name and Password.
- 4 If the configured security is OS User Based, select the domain from the **Domain** list.
- 5 Click **OK**.

Navigating in the Platform Manager

After successfully logging on, or if no security is enabled for Platform Manager, the Platform Manager snap-in appears under the ArcestrA System Management Console (SMC) root node.



The left pane, or console tree has a Windows Explorer-type layout, with the ArcestrA System Management Console appearing as the root node and the Platform Manager appearing below this node. You can expand and collapse the console tree by clicking on the "+" or the "-" symbols that appear next to the snap-in.

The console tree shows the items that are available in the console. Other snap-ins that may appear below the ArcestrA SMC node include the Galaxy Database Manager, the Log Viewer, and the DAServer Manager.

Security

For all ArcestrA administrative utilities, including Platform Manager, security is configured through the IDE. By default, there is no security enabled for Platform Manager or any of the other utilities.

There are four authentication modes for security that can be enabled for Platform Manager:

- No authentication
- Galaxy authentication mode
- OS User Based authentication mode
- OS Group authentication mode

When no security is enabled from the IDE, the user is automatically logged into Platform Manager as **DefaultUser**. Without security, the logon dialog box does not appear when Platform Manager is launched and the user is granted all permissions.

If the security configured from the IDE requires Galaxy authentication, OS User Based authentication, or OS Group authentication, then some of the existing users and roles are not valid and the user may not be able to perform some operations.

Galaxy Authentication

Galaxy authentication requires the user to log on to Platform Manager every time the utility is started.

OS User Based Authentication

OS User Based authentication allows users who have matching OS accounts to log on, while all others are rejected.

OS Group Authentication

In OS Group authentication, the user defines roles that match OS Groups. At log on, the OS Groups are matched with the roles.

For more information about security and authentication, see the *Integrated Development Environment (IDE) User's Guide*.

Changing Users

If security is enabled from the IDE, the user is logged in (either manually or automatically) when you open the Platform Manager.

If security is disabled in the IDE, clicking **Change User** results in no action. The command is ignored.

To log on as a new user

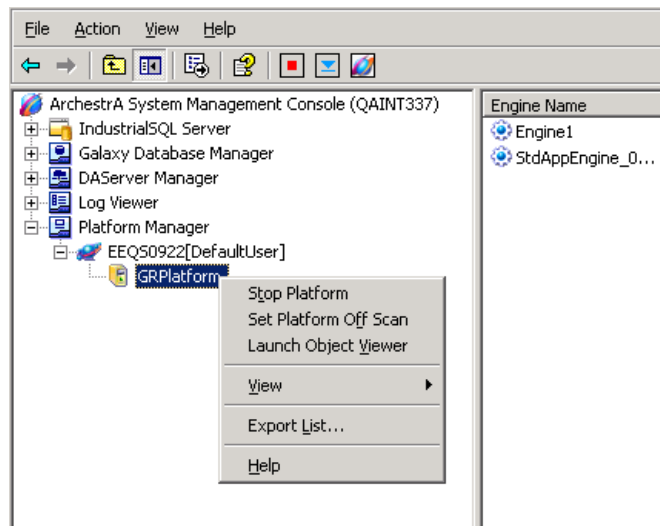
- 1 Select the Galaxy node.
- 2 On the **Action** menu, click **Change User**. A log-on dialog box appears.
- 3 Provide the requested log-on data and click **OK**. The new user is now logged on with only those permissions specific to that user.

About Object Viewer

Object Viewer is an administrative utility that lets you view and modify an object's attribute values.

Object Viewer can be accessed by one of the following methods.

- Through the IDE or through Platform Manager while a platform or an engine is selected in either the console tree or the details pane.
- From a shortcut menu available by right-clicking a platform or engine.



When you start Object Viewer from Platform Manager with a platform or engine selected, the utility starts and shows the attributes of the selected platform or engine. After Object Viewer is launched, it becomes independent from Platform Manager.

If Object Viewer is running, subsequent launches of Object Viewer from Platform Manager brings Object Viewer to the foreground with the selected platform or engine in focus.

For more information on Object Viewer, see the *Object Viewer Online Help*.

Chapter 2

Using Platform Manager

Using Platform Manager, you can monitor and change the state of any platform or engine in your Galaxy application.

About Platform and Engine Status

For diagnostic purposes, it is helpful to know if the platforms and engines are deployed, running, or are executing within a Galaxy application.

Object Status Description

All the states of platforms and engines are visible from Platform Manager, except for the **Not Deployed** state. However, some transitional states may occur so quickly that you may not be able to observe them. For example, the **Shutting down** state changes so quickly that you may not see this temporary transition.

Platforms and engines can have the following status.

Object Status	Description
Not Available	Platform is powered off.
Not Deployed	Object is not deployed.
Deploying	Object is in the process of being deployed.
Undeploying	Object is in the process of being undeployed.
Shutdown	Object has been shut down normally.

Object Status	Description
Shutdown - Failed	Object has been shut down due to failure.
Shutting Down	Object is in the process of being shut down.
Starting On Scan	Object is in the process of starting in an execute mode.
Starting Off Scan	Object is in the process of starting in an idle mode.
Running On Scan	Object is running and executing.
Running Off Scan	Object is idle.

Note The Platform Manager and Object Viewer utilities use different time-out functions for determining the status of an AppEngine on a remote node when a network connection is broken. This problem results in a Not Available status for the object. When viewing this changing status in the Platform Manager, the response time may be different from the Object Viewer. This is normal functionality.

On Scan/Off Scan State

An object whose status is **On Scan** is performing its normal processing, while an object whose status is **Off Scan** is considered idle and not available for execution.

Some conventions apply for objects starting and running on scan and off scan. For example, engines can only run on scan when the status of the platform that hosts the engine is also running on scan. Or, platforms can only be shut down after the engines that are hosted by the platform are placed off scan.

Checkpointed State

When managing platforms and engines, the platform saves the last scanned state of an object to a local hard drive. This act is called checkpointing and the last scanned state is known as the checkpointed state. Checkpointing allows for the quick recovery of an object's state in the event of a failure without the dependence on the application's database or GalaxyRepository.

Platforms and engines that are started by Platform Manager are started in their checkpointed scan state. When stopping platforms and engines, their last scan state is checkpointed.

Viewing Platform Status

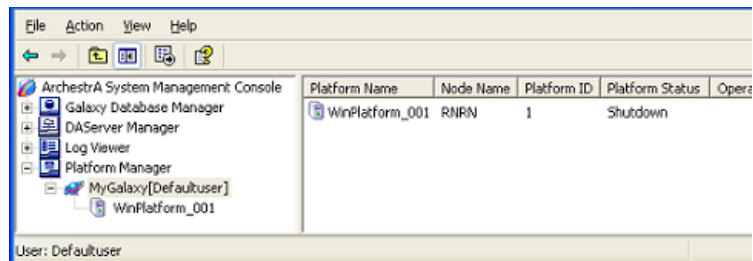
If you monitor the platform during its transition from a running state to a failed state, its status changes from **Running On Scan** or **Running Off Scan** to **Shutdown - Failed**. This indicates that the platform is in a shutdown mode and in a failed state.

If an event occurs that causes a platform to fail, then the status of that platform is **Shutdown - Failed**.

Note A network failure between platforms is not a platform failure, but instead, the platform is not available.

To view platform status

- 1 Expand the console tree and click the Galaxy name. In the console tree, a list of all platforms deployed within the application appears under the Galaxy name. The platforms also appear in the details pane.
- 2 In the details pane, locate the platform and view its status in the **Platform Status** column.



The following table describes each column:

Column	Description
Platform Name	The platform tag name.
Node Name	The computer name.
Platform ID	The platform's identifier when it was instantiated from a template.
Platform Status	The current status of the platform.
Operation Status	The progress of the transition after a command is placed on the platform. This changes throughout the transition until the stable state is achieved. An empty column indicates a successful transition.

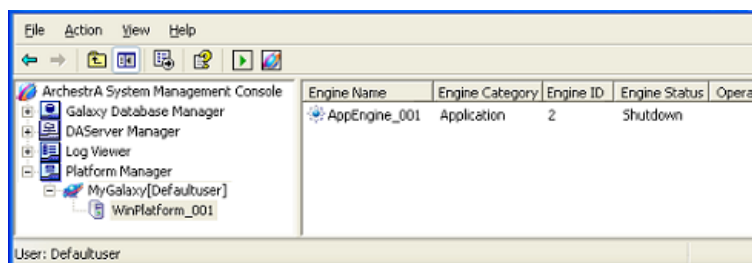
Viewing Engine Status

If you monitor the engine during its transition from a running status to a failed status, its status changes from **Running On Scan** or **Running Off Scan** to **Shutdown - Failed**. This indicates that the engine has failed and is not running.

If an event occurs that causes an engine to fail, then the status of the engine is **Shutdown - Failed**.

To view engine status

- 1 Expand the console tree and locate the platform that hosts the engine you want to view.
- 2 From the console tree, select the platform. In the details pane, a list of all engines hosted by the platform appears.



- 3 In the details pane, locate the engine and view its status in the **Engine Status** column.

The following table describes each column:

Column	Description
Engine Name	The engine tagname.
Engine Category	The engine type.
Engine ID	The engine's identifier when it was instantiated from a template.
Engine Status	The current status of the engine.
Operation Status	The progress of the transition after a command is placed on the engine. This changes throughout the transition until the stable state is achieved. An empty column indicates a successful transition.

Exporting Lists

It may be helpful for you to export the resulting object status to a list. You can do this by using the MMC export function located from the console menu bar or on the console toolbar.

To export a list

- ◆ On the **Action** menu bar, select **Export List**. A dialog box appears, allowing you to save the items in the resulting pane as either plain text or Unicode text.

Managing Platforms

After commanding a platform to a new state, you can view the transition status in the **Operation Status** column in the details pane.

The action of placing a platform on scan occurs when you place a platform in a run-time state in which it is performing its normal processing as part of its execute method. However, you can place a platform off scan, which is the state that indicates that it is idle and not ready for execution. You can also control the startup and shutdown of platforms.

Setting a Platform On Scan

To set a platform on scan, its status must be **Running Off Scan**.

To set a platform on scan

- ◆ In the details pane, right-click the platform, and then click **Set Platform On Scan**

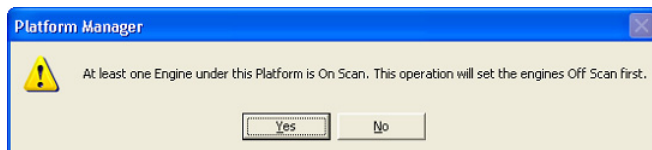
The status for the platform changes from **Running Off Scan** to **Running On Scan**, which indicates the platform is performing normally.

Setting a Platform Off Scan

To set a platform off scan, its status must be **Running On Scan** and the status of any engines hosted by the platform must be either **Running Off Scan** or **Shutdown**.

To set a platform off scan

- 1 In the details pane, right-click the platform, then click **Set Platform Off Scan**.
- 2 If an engine hosted by the platform has an on scan status, a dialog box appears informing you that continuing with the operation that places the platform off scan also puts the engines off scan.



Click **No** to cancel the operation or click **Yes** to put the engines off scan before setting the platform off scan.

- 3 The status for the platform changes from **Running On Scan** to **Running Off Scan** and the platform becomes idle.

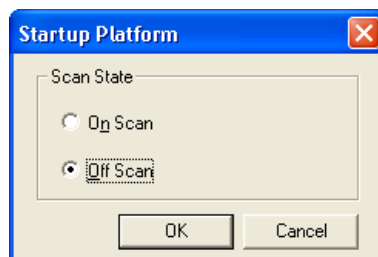
Starting a Platform

After a platform is stopped, it can be restarted by Platform Manager in either the on scan or off scan state if its Start Up mode is configured to **Manual Start**. You can verify the platform's configuration from the IDE.

If a platform's Start Up mode is configured to **Auto Start**, then it starts automatically in its last checkpointed scan state when the power is reapplied to the computer.

To start a platform

- 1 From the details pane, right-click the platform, and then click **Start Platform**. The **Startup Platform** dialog box appears.



- 2 Select **Off Scan** or **On Scan**, and then click **OK** to set the platform's startup scan state.

The platform begins to start and its status changes from **Shutdown** to **Starting Off Scan** or **Starting On Scan**. After the platform starts successfully, its status changes from **Starting Off Scan** or **Starting On Scan** to **Running Off Scan** or **Running On Scan**.

The status of all hosted engines changes from **Shutdown** to **Running Off Scan**.

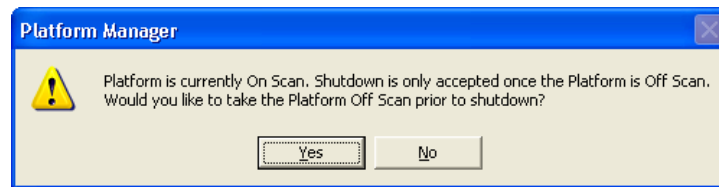
Shutting Down a Platform

To shut down a platform, the status of the platform must be **Running Off Scan**. If the status of any of its hosted engines are **Running On Scan**, then the hosted engines are first placed off scan.

To shut down a platform

- 1 From the details pane, right-click the platform, and then click **Stop Platform**.

If the status of the platform is **Running On Scan**, you are prompted to take the platform off scan before shutdown.



- 2 Click **No** to cancel the operation or click **Yes** to continue shutting down the platform.

If you select **Yes** and the status of an engine on the platform is on scan, then the engine is placed off scan and then shut down.

As the platform shuts down, its status changes from **Running Off Scan** to **Shutting Down**. If the platform shuts down successfully, its status changes from **Shutting Down** to **Shutdown**. The target platform is shut down and the platform's last scan state is checkpointed to **Off Scan**.

Managing Engines

You can view the transition status of an engine from the **Operation Status** column in the details pane after changing an engine to a new state.

The action of placing an engine on scan occurs when you place an engine in a run-time state in which it is performing its normal processing as part of its execute method. However, you can place an engine off scan, which is the state that indicates that it is idle and not ready for execution. You can also control the startup and shutdown of engines.

Setting an Engine On Scan

To set an engine on scan, the status of the platform that hosts the engine must be **Running On Scan**.

To set an engine on scan

- ◆ From the details pane, right-click the engine, and then click **Set Engine On Scan**.

The status for the engine changes from **Running Off Scan** to **Running On Scan**, which indicates the engine is performing normally. Any hosted ApplicationObject is also set on scan, you can verify this using Object Viewer.

Setting an Engine Off Scan

To set an engine off scan, its status must be **Running On Scan**.

To set an engine off scan

- ◆ From the details pane, right-click the engine, and then click **Set Engine Off Scan**.

The status for the engine changes from **Running On Scan** to **Running Off Scan** and the engine becomes idle. All hosted ApplicationObjects are also set off scan, you can verify this using the Object Viewer.

Starting an Engine

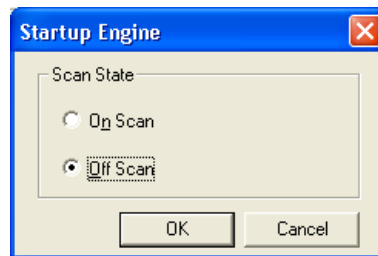
To start an engine, the status of the platform that hosts the engine must be **Running On Scan** and the engine's Start Up mode must also be configured to **Manual Start**. You can verify the engine's configuration from the IDE.

If the engine's Start Up mode is configured to **Auto Start**, then the platform starts the engine in the last checkpointed scan state. Engines configured in the **Semi Auto Start** mode start in the **Off Scan** state.

To start an engine

- 1 From the details pane, right-click the engine, and then click **Start Engine**.

The **Startup Engine** dialog box appears.



- 2 Click **Off Scan** or **On Scan**.
- 3 Click **OK** to set the engine's startup scan state.

The engine begins to start and its status changes from **Shutdown** to **Starting Off Scan** or **Starting On Scan**. After the engine starts successfully, its status changes from **Starting Off Scan** or **Starting On Scan** to **Running Off Scan** or **Running On Scan**.

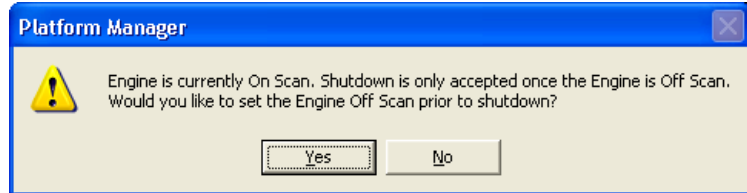
Shutting Down an Engine

If you try to shut down an engine whose status is **Running On Scan**, it is set to **Running Off Scan** before shutting down.

To shut down an engine

- 1 In the details pane, right-click the engine, and then click **Stop Engine**.

If the status of the engine is **Running On Scan**, you are prompted to take the engine off scan before shutdown.



- 2 Click **No** to cancel the operation or click **Yes** to continue shutting down the engine.

If you click **Yes**, the engine shuts down and its view changes from **Running Off Scan** or **Running On Scan** to **Shutting Down**. If the engine shuts down successfully, its status changes from **Shutting Down** to **Shutdown** and the engine's last scan state is checkpointed to **Off Scan**.

Index

A

- Action menu 11, 17
- administrative utility
 - DAServer Manager 7, 9
 - Galaxy Database Manager 7, 9
 - Log Viewer 7, 9
 - Object Viewer 5, 11
- application database 15
- ApplicationObject 21
- ArchestrA System Management Console 7, 9
- authentication modes 9
- Auto Start mode 19, 22

C

- checkpointing 15, 19
- column description 16, 17
- configure security 9
- console menu bar 17
- console toolbar 17
- console tree 9

D

- DAServer Manager 9
- default user 10
- deployed platform 8
- document conventions 5
- domain 8

E

- engine
 - category 17
 - failure 16
 - ID 17
 - managing 20
 - name 17
 - off scan 21
 - on scan 21
 - shutting down 20, 23
 - starting 22
 - status 13, 16, 17
 - tag name 17
 - type 17
- Engine Status column 16
- exporting object status 17

F

- failure
 - engine 16
 - network 15
 - platform 15

G

- Galaxy application 8
- Galaxy authentication 10
- Galaxy Database Manager 9
- GalaxyRepository 8, 15

H

hosted engine 19, 20

I

IDE 9, 10, 11, 19

idle 14

install 8

Integrated Development Environment
(IDE) User's Guide 6

L

Log Viewer 9

M

Manual Start mode 19

Microsoft Management Console 5, 7

MMC 7, 17

MMC toolbar 5

N

network failure 15

node 8

normal processing 14

Not Deployed state 13

O

Object Viewer 5, 6, 11

Off Scan status 14

On Scan status 14

Operation Status column 16, 17, 20

OS Group authentication 10

OS User authentication 10

P

password 8

platform

failure 15

ID 16

managing 17

name 16

node name 16

off scan 18

on scan 18

shutting down 20

starting 19

start-up configuration 19

status 13, 15, 16

Platform Manager Logon 8

Platform Status column 15

R

root node 9

S

security 9

authentication modes 9

disabled 10

password 8

user name 8

Semi Auto Start mode 22

shutting down

engine 20, 23

platform 20

SMC 7, 9

snap-ins

DAServer Manager 7, 9

Galaxy Database Manager 7, 9

Log Viewer 7, 9

starting

engine 22

platform 19

Platform Manager 8

start-up mode 19, 22

Auto Start 19, 22

Manual Start 19, 22

Semi Auto Start 22

state

checkpointed 15

description 13

off scan 14

on scan 14

status

engine 16

platform 15

System Management Console 7, 9

T

text

plain 17

Unicode 17

transition 13, 15, 16, 17, 20

U

user name 8