HP OpenView
Service Quality Manager

SLA Administration User Interface User's Guide

Edition: 1.4

for the Microsoft Windows Operating System

March 2007

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Preface

HP OpenView Service Quality Manager **SLA Administration User Interface** is part of the Hewlett Packard solution for Service Quality Management. This manual describes the Graphical User Interface (GUI) and explains how to use the SLA Administration User Interface in the context of the HP OpenView Service Quality Manager complete solution.

Intended Audience

This document is intended for personnel who will use the HP Service Quality Manager SLA Administration User Interface.

HP OpenView Service Quality Manager Documentation Set

The following documents form the set of HP OpenView Service Quality Manager User Guides:

- *OpenView Service Quality Manager Overview.*

- *OpenView Service Quality Manager SLA Monitoring UI User's Guide.*

- *OpenView Service Quality Manager Administration UI User's Guide (this manual).*

- *OpenView Service Quality Manager UI User's Guide.*

- *OpenView Service Quality Manager Service Designer UI User's Guide.*

- *OpenView Service Quality Manager Planning Guide.*

- *OpenView Service Quality Manager Installation Guide.*

- *OpenView Service Quality Manager Administration Guide.*

- *OpenView Connectivity Installation and User's Guide.*

Prerequisites

To be able to use HP OpenView Service Quality Manager SLA Administration UI, the core components must be installed and started. Refer to the *HP OpenView Service Quality Manager Installation Guide*.

It is recommended that Users have knowledge of the platform and of the Service Model.

Software Versions

The software versions referred to in this document are:

Service Quality Manager	Windows
1.4	Windows XP

Support

You can visit the HP OpenView support web site at:

http://support.openview.hp.com/support.jsp

This Web site provides contact information and details about the products, services, and support that HP OpenView offers.

HP OpenView online software support provides customer self-solve capabilities. It provides a fast and efficient way to access interactive technical support tools needed to manage your business. As a valued support customer, you can benefit by using the support site to:

- Search for knowledge documents of interest
- Submit enhancement requests online
- Download software patches
- Submit and track progress on support cases
- Manage a support contract
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- Review information about available services
- Enter discussions with other software customers
- Research and register for software training

Chapter 1

Introduction

This chapter introduces the HP OpenView Service Quality Manager
SLA Administration User Interface, and places it in the context of HP OpenView
Service Quality Manager.

1.1 What is HP OpenView Service Quality Manager?

OpenView SQM provides a complete service quality management solution. It
consolidates quality indicators across all domains — telecom, IT networks, servers,
and applications — giving end-to-end visibility on service quality. OpenView SQM
links service quality degradations to potential affects on business, allowing the user to
proactively address problems and prioritize actions.

OpenView SQM monitors the service quality by aggregating information coming
from all of your data sources, such as the network, the IT infrastructure, and your
business processes. Using this information, the user can pinpoint infrastructure
problems and identify their potential affect on customers, services, and SLAs.

1.2 What is a Service Level Agreement?

An SLA is a contract that specifies, among other things, service quality criteria and
values against these criteria that must be achieved by the service provider to satisfy
the customer. The criteria are often related to the quality of service and are expressed
through service levels and thresholds.

This section describes the role of SLAs and service levels, and introduces the SLA
lifecycle.

1.2.1 Role of SLAs

OpenView SQM supports two types of service level agreements:

- Customer SLAs.

  A customer SLA is a set of service quality parameters with threshold values that
  characterize the service quality to be achieved for a service sold to a customer.

- Operational SLAs.

  An operational SLA is a set of service quality parameters with threshold values
  that characterize the service quality to be achieved by a department within the
  service provider's organization.

  These SLAs are not related to any customer in particular and allow the user to:

Test future customer SLAs by checking whether future service quality proposals can be achieve.

Prioritize work within the organization.

Improve the performance of internal processes.

Manage the relationship between the different departments.

1.2.2   About Service Levels

A service level describes the objectives to be achieved by the service provider for a given service. A service level gives a set of service quality parameters required for controlling the quality of service along with their threshold values.

When selling a service to a customer, the service provider often has various marketing offers for the same service, such as a "gold", a "silver", and a "bronze" quality of service offer. Each of these offers corresponds to a quality of service, a price, and a specific service level.

The service quality parameters are usually specific to the service and should be expressed in terms that the customer understands.

The difference between the "gold", "silver", and "bronze" service levels depends on the threshold values, which fix the agreed level of quality of service to be delivered. For example, the "gold" quality of service would have a higher bandwidth offered than the "silver" and "bronze" offers.

1.2.3   About the SLA Lifecycle

The SLA lifecycle describes the interactions between the various processes involved in service quality management. It has the following five phases:

- **Service design phase**

  In the service design phase, the user identifies the parameters used to evaluate service quality and use them to build the service model for service quality management.

  The result of this phase is a unique service class broken down into service components that provide the relevant service quality parameters.

- **Service instantiation phase**

  Before the service instantiation phase, a negotiation and sales phase occurs that lead to an SLA contract signature for a particular service. Negotiation and sales is outside the scope of the SLA lifecycle.

  In the service instantiation phase, a new service needs to have its quality monitored. For example, a service model needs to be instantiated when a customer buys a new service. Service quality management begins as soon as the service is launched.

  This phase results in a service instance and triggers the collection of service quality parameters.

- **SLA creation phase**

  In this phase, an SLA is created for a specific service instance or a group of service instances, depending on the contract. All the threshold values of the service level are identified for each service quality parameter managed for the SLA.

This phase results in an SLA that:

Associates the service instance(s) with the service level and a customer (for customer SLAs).

Associates the service instance(s) with the service level and an internal department (for operational SLAs).

- **Service monitoring phase**

In this phase, the service and the service level agreement are monitored in real-time.

The goal of the service monitoring phase is to rapidly handle any service degradation to avoid SLA violations.

- **Service reporting phase**

In the service level reporting phase, reports about service quality are generated.

This phase assesses service quality on a long-term basis (monthly or quarterly) to analyze service trends or to provide customer service quality reports.

Figure 1 illustrates the SLA lifecycle and shows the different OpenView Service Quality User Interfaces that can be used during the different phases.

Figure 1   OpenView Service Quality Manager and the SLA Lifecycle
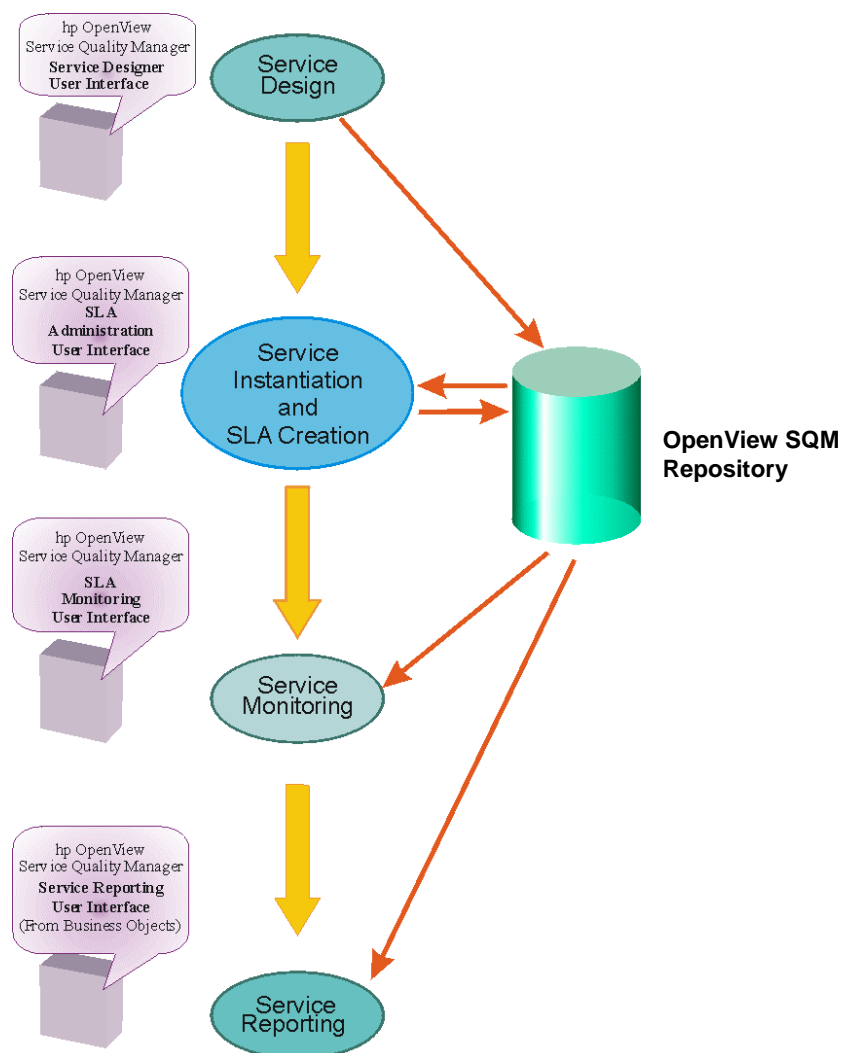
1.3   What is SLA Administration UI?

HP OpenView Service Quality Manager **SLA Administration UI** is the part of OpenView Service Quality Manager that facilitates the tasks involved in the administration of SLAs.

It is a Graphic User Interface that facilitates the Service Instantiation, the creation and management of Service Level Agreements and the management of Services.
Its relationship to HP OpenView Service Quality Manager as a whole is illustrated in About Service Levels.

HP OpenView Service Quality Manager **SLA Administration UI** uses the Definitions (including their attributes and parameters) defined in the Service Design stage using Service Designer, and enables performing all the actions necessary to manage and administer Services, Customer Service Level Agreements and Service Levels.

The Service definitions created with Service Designer are saved and stored in the SQM Repository. Using **SLA Administration UI**, new Services can be instantiated using these definitions.

In OpenView Service Quality Manager **SLA Administration UI**, the generic term **Object** is used for the items on which the actions can be performed. These Objects are:

- Service
- Service Group
- Customer
- Operation
- Data Feeder
- SLA (Service Level Agreement)
- Service Level

All activities that can be performed using **SLA Administration UI** are illustrated in Figure 2.

Figure 2   **SLA Administration UI**
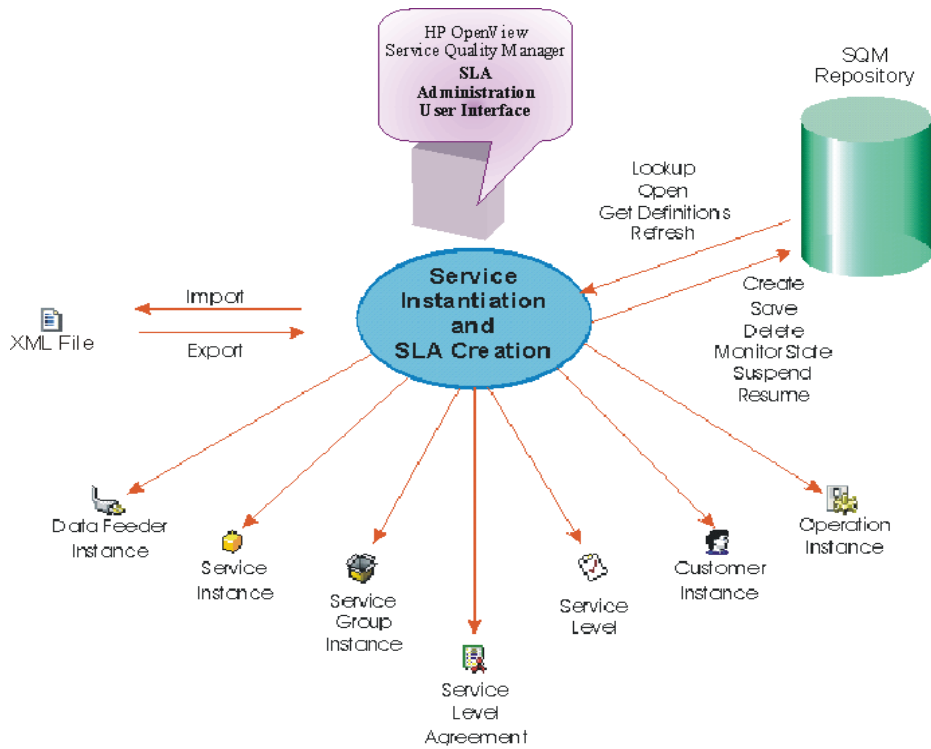
The **SQM Repository** is the storage center for all **SLA Administration** data. It receives data from the various **OpenView Service Quality Manager** interfaces, and each interface can request information data from the Repository.

Chapter 2

Getting Started

This chapter describes how to start the **Service Level Administration User Interface**, and how to get help.
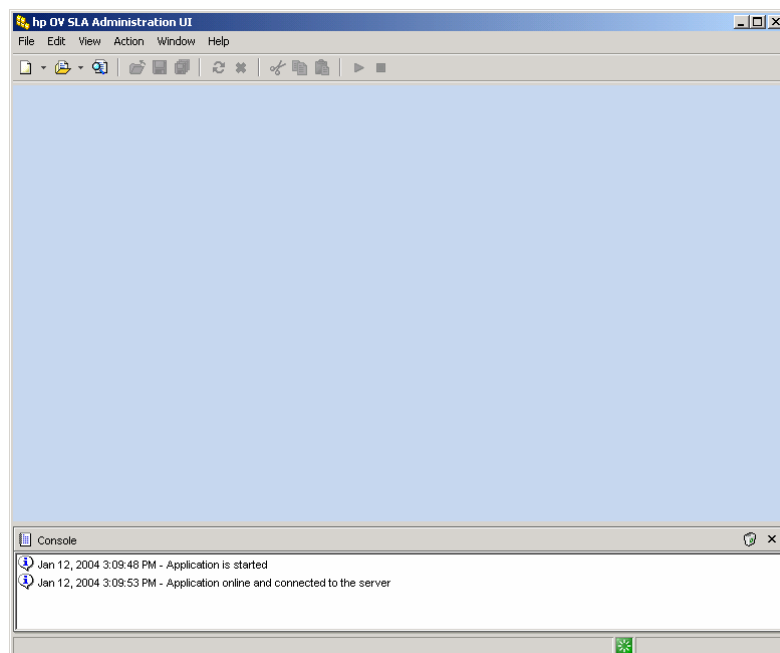
2.1 Starting the SLA Administration UI

An icon for HP OpenView Service Quality Manager **SLA Administration UI** will be placed on your Desktop when the application is installed.

To start the **SLA Administration UI**, double-click on this icon .

The window illustrated in Figure 3 will open.

Figure 3   **SLA Administration UI First Window, Showing Window Layout**

While the application is connecting to the server, the red Offline icon is displayed in the information bar at the bottom of the window.

When the connection is successful, a message indicating this is displayed in the bottom information bar of the window, and the Green Online icon replaces the Offline icon in the information bar.

The **Console** (icon), displayed at the bottom of the window, just above the status bar, displays messages relating to the performance/status of the application. See Figure 3.

If the application doesn't connect to the server, refer to Chapter 7, the troubleshooting section of this manual.

Important

When the application is connected to the server, the connection with the SQM Repository is made automatically.

2.2 SLA Administration Menu Bar

The standard menu bar gives the following options:

- **File**

	Connect	Allows the user to connect to the SQM Repository. (This is grayed if the application is connected.)
	Disconnect	Allows the user to Disconnect from SQM Repository. (This is grayed if the application is **not** connected.)
	New:	Displays a sub-menu of the Objects that can be created (Ctrl/N)
	Open…	Opens an Object (Ctrl/O)
	Close	Closes the current Editor (Ctrl/F4)
	Save	Saves the Object in the current Editor (Ctrl/S)
	Save All	Saves all Objects in open Editors
	Duplicate	Duplicates the object in the current Editor
	Delete	Deletes the Object in the current Editor (Ctrl/D)
	Refresh	Refreshes the Object in the current Editor (F5)
	Import	Displays a sub-menu of the Objects that can be imported from XML files.
	Export	Displays the dialog box allowing the user to export Objects to XML files.
	Exit	Exits the application

- **Edit**

	Cut	(Ctrl/X)
	Copy	(Ctrl/C)
	Paste	(Ctrl/V)

- **View**

	Console	Displays or closes the Console
	Search Panel	Displays a sub-menu of the groups of Objects for which the user can perform a search
		Displays or Closes the Search Panel

- **Action**

▶	<u>R</u>esume (Green Triangle)	Resumes Data Collection Not available for all Objects
■	<u>S</u>uspend (Red Square)	Suspends Data Collection Not available for all Objects

- **Help**

<u>C</u>ontent	Displays this User Manual
<u>A</u>bout	Displays information about the application

- **Window**

<u>C</u>ascade	Changes the window display to cascade
Tile <u>H</u>orizontally	Displays the open windows horizontally as tiles
Tile <u>V</u>ertically	Displays the open windows vertically as tiles
<u>A</u>rrange Icons	When several objects are opened and iconized in the SLA Administration User Interface window, this action allows the user to re-arrange them in the window as he wants.

2.3   SLA Administration Toolbar

The most common actions available on the Menu bar are also available as shortcuts on the Toolbar.

2.3.1   Contextual Menus

If a right-click is performed on some items, contextual menus are displayed.

2.4   How to Get Help?

The SLA Administration **Console** displays messages that provide information about the actions previously performed.

Messages are also displayed on the bottom bar of the screen and an action progress gauge is displayed on the right of this bar.

Messages and tips are displayed on the appropriate screen relating to the actions the user is about to perform, or have just performed.

There is no Context-Sensitive Help provided with this version of SLA Administration UI.

The **Help** menu provides two options:

- **Content**
  displays this manual on-line.

- **About**
  displays details of the application version and Copyright information.

2.5 SLA Administration UI Object Editors

The Object editors provide the means of performing all the actions required to use the SLA Administration UI. These graphical interface editors provide two modes of working, Create Mode, and Edit Mode. The mode is indicated in the editor window title.

Important

An asterisk is displayed to the right of the word Mode when a change has been made to a detail or Object that has not been saved in the SQM Repository. When the Object has been saved, the asterisk is no longer displayed.

Whenever it is mandatory to supply information in a field, the name of the field is displayed in red text until appropriate information has been supplied. The information may be supplied by making a choice from a drop down list, by using the **Wizard** button , by typing the information, or in some cases, supplied by the system when other information have been supplied.

2.6 SLA Administration UI Common Actions

There are a number of actions that are performed frequently when using SLA Administration UI. These actions are described in Chapter 3.

Chapter 3

Common Actions

There are many actions that will be performed frequently when using the SLA Administration UI application. To make these tasks easy to understand, they are presented in this chapter.

3.1 Saving an Object

Whenever the user has created, modified or edited an Object, he should save the object.

This can be done in several ways.

	Click the **Save** Icon on the Toolbar or from the File Menu.	Saves the Object in the current Editor.
	Click the **Save All** Icon on the Toolbar or from the File Menu.	Saves all Opened Objects.
Ctrl/S	Press **Ctrl** and keep it pressed while typing **S**.	Saves the Object in the current Editor.

Important

Clicking OK at any stage of the user's activities in creating or modifying, does not save the work previously done, it merely takes the user to the next stage of the task.

When an Object has not been saved, an **asterisk** * is displayed to the right of the word **mode** on the title banner of the activity window.

When the Object has been saved, the asterisk is no longer displayed.

3.2 Creating an Object

All Objects can be created in several ways:

- The New method (creating an Object from scratch)

- The **Duplicate** method:
  this method enables the user to create an Object quickly, by copying the content of a "reference" object. The resulting duplicated object can be edited as any other object the copied values can be kept or modified within the new object. The duplication process is described in Section 3.2.2.

3.2.1   Creating a New Object from Scratch

The principle is the same for creating all Objects, but the mandatory will vary for each Object.

The process can be started in two ways:

1. From the **File** menu choose New,

    or

2. Press **Ctrl/N.**

The option box displayed in Figure 4 will be displayed.

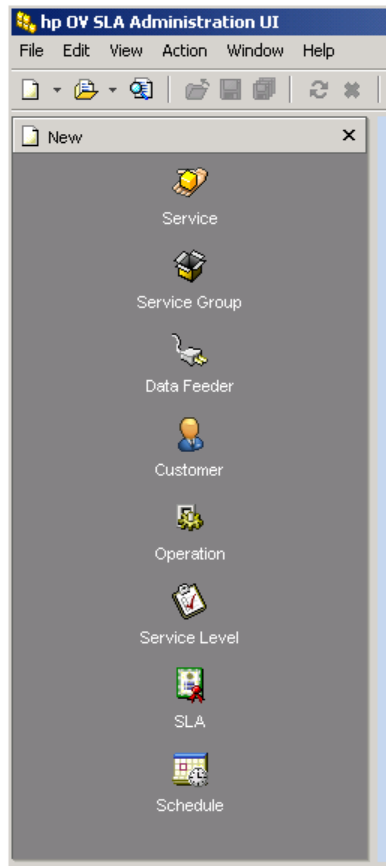**Figure 4**   **Create an Object Option Box, File Menu Method**
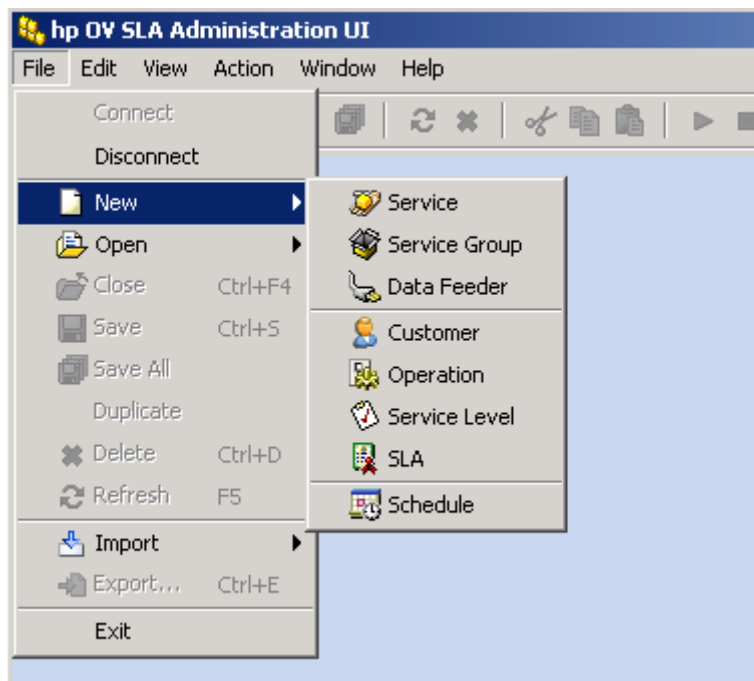
If the user clicks on the **New** Icon ▯ on the menu bar, the option box illustrated in Figure 5 will be displayed.

**Figure 5   Create an Object Option Box,
                Menu Bar**

Whichever method used to start the process, the "class" (for example: Service) of the object to be created has to be chosen from the option box displayed.

The proper **Create** dialog box will then be displayed (the **Create** a Service dialog box is given as an example in Figure 6).

Important

The same information is needed for creating a Service, a Service Group, an SLA and a Service Level. The dialog box contents are identical to the **Create a Service** dialog box', but the titles are respectively **Create a Service Group**, **Create an SLA**, and **Create a Service Level**.

If the drop-down list of available Definitions is empty, or not up to date, the user needs to click on the **Refresh** icon to the right of this field to load the latest available Definitions.

Note

Every Object must have an ID that is unique on the platform, whether generated using the wizard button or entered manually.

If the entered Name is composed of more than 12 characters, the application takes the first 12 characters of this Name, and adds a number to it. If no Name has been entered, the Identifier automatically created will just be Numeric.

The following set of characters must be used for the Identifier:

- Alphanumeric characters

- "-","_",":"

As for the Service Definition, the Identifier field cannot be left empty, but, as long as the Service is in Create mode, it is possible to change the value.

Figure 6   Create a Service Dialog Box

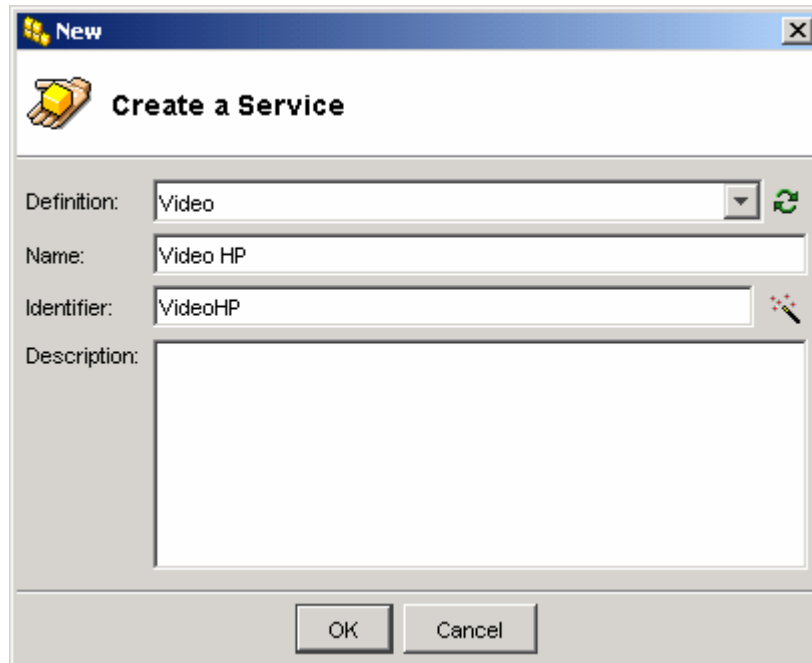1. From the drop-down list, choose a Definition that the new Object will rely on. This step is mandatory, but, as long as the new Object has not been saved, the chosen Definition may change.

2. A Name has to be entered for the new Object.

3. A description may be filled. This field may be left empty at this stage, as it can be modified at any time later.

4. The user needs to click the OK button to validate the creation of this Object. The user will then start working with the Editor for the created Object, opened in Create Mode.

3.2.2   Creating a New Object by the Duplicate Method

To create an Object by the duplicate method, the procedure, described in Section 3.7, needs to be followed.

The user can make any modifications he wants and then save the object. Note that the name of the newly created object, which is actually the name of the existing object preceded by "copy of", can be updated before saving.

3.3   Searching for an Object

The Main Menu bar gives the opportunity of searching for Objects using specific criteria.

1. From the View menu, choose Search Panel. The menu illustrated in Figure 7 will be displayed.

Figure 7   Search Panel Sub-Menu
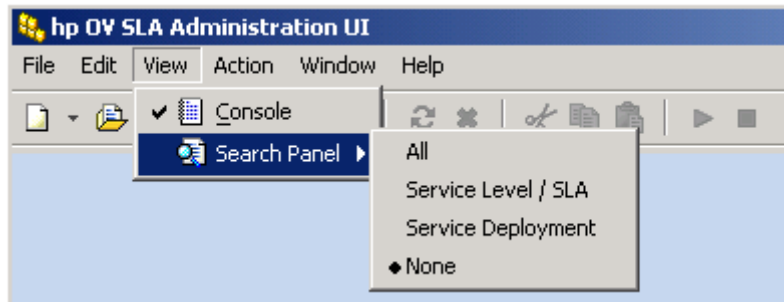
2. The option **None** is the default state. However, if a **Search Panel** is opened, choosing this option closes the current active **Search Panel**.

For each of the options (All, Service Level/SLA and Service Deployment) a window is displayed containing Tabs for the set of Search Panels for that group of activities. To make a search for a given Object, the user needs to click on the corresponding Tab. The Search Panel for this Object will then be displayed.

The specific sets of Search Panels are designed to meet operational needs, for example: the **SLA/Service Level** option restricts the search to the Objects used in the creation of these Objects (illustrated in Figure 8).

Figure 8   Search Panels, SLA/Service Level Tabs
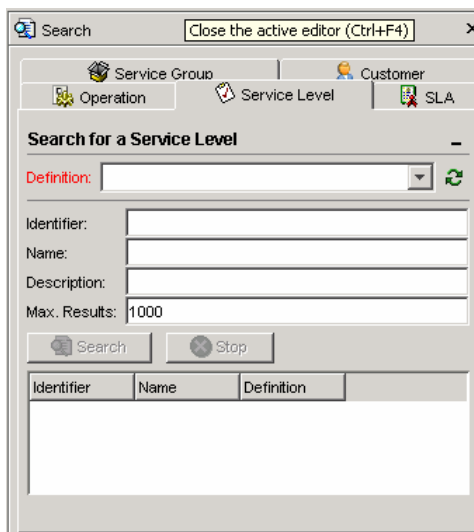
Although **Service Level/SLA** restricts the search to the Objects used when designing an SLA or SL, the user can also search for these Objects from the **All** option, even if, in that case, unneeded Object searches will be made available.

-   **All** allows searching among all Objects, which are:

    Service

    Service Group

    Data Feeder

    Customer

    Operation

    Service Level

SLA

- The **Service Deployment** Tabs are:

  Data Feeder

  Service

  Service Group

- The **Service Level/SLA** Tabs are:

  Service Group

  Customer

  Operation

  Service Level

  SLA

Whichever selection made from the Search Panel sub-menu, the presentation of the tabs is the same.

The examples illustrated in Figure 9 are **Search for a Service** on the left and **Search for an SLA** on the right.

Note

The **Search** criteria presented depend on the Object. Examples of Search criteria are illustrated in Figure 9.

Figure 9   **Search Panels, Maximized – Service and SLA**
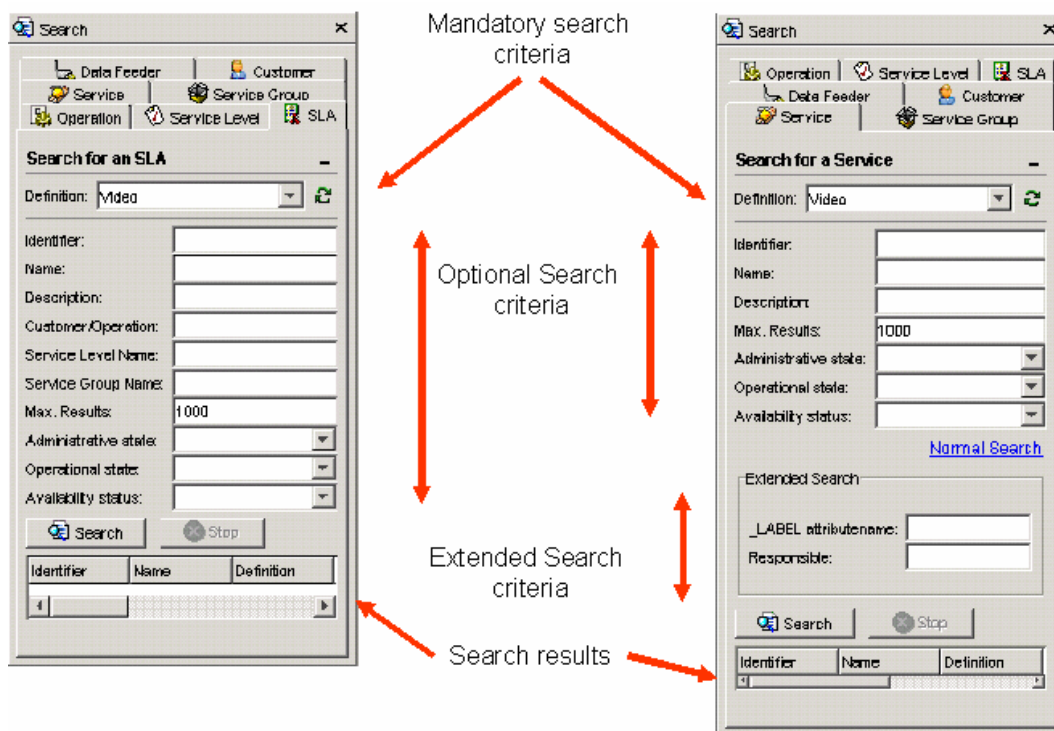
The Definition field name is displayed in red text as it is a mandatory field. When it is mandatory to fill a field, the name of the field is displayed in red text until the required information is filled.

1. If the drop-down list of available Definitions is empty, or not up to date, a click on the Refresh icon ![refresh icon] to the right of this field is necessary to load the latest available Definitions.

2. The information 'loading data' will be displayed in the field in gray while the data is being loaded. The progress bar will indicate when the data has been loaded. The updated drop-down list of available Definitions will then be displayed.

Figure 10   Definitions Displayed after Refresh

3. Select the targeted Definition, by left-clicking on the item.

The Search button is grayed until the Definition has been selected and loaded. Extended Search is also displayed.

<div align="center">Note</div>

For **most** Objects, the search prerequisite is to provide a Definition.

However, no Definition needs to be provided for the Objects Customer and Operation.

The Identifier, Name and Description fields can be edited to refine the Search.

Advanced criteria can also be specified in order to filter the results:

Specify the maximum number of results displayed (Max. results),

Specify the Administrative state, Operational Status or Availability Status of the objects to be returned.

Enter values for the extra fields of Extended Search.

4. Click on the **Search** button.

5. A list of the available Services will be displayed in the Search Results field.

The details that are displayed are a function of the chosen Definition.

Figure 11　　　　　Search Results
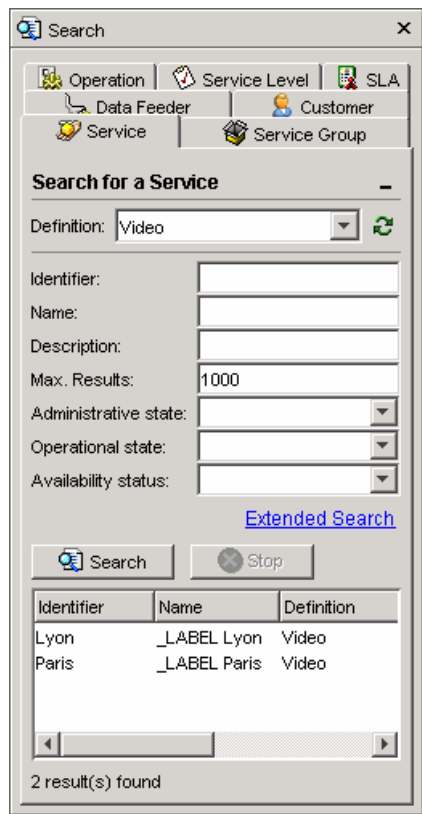
6. The Search can be stopped at any time by clicking on the
   Stop button ⊗ . In this case, no results will be displayed in the Search Results
   field.

The screen illustrated in Figure 12 illustrates the extra search criteria made available
with the Extended Search function. If the Extended Search is chosen, the criteria that
are displayed are linked with the chosen Definition.

Figure 12　　　　　Extended Search Options
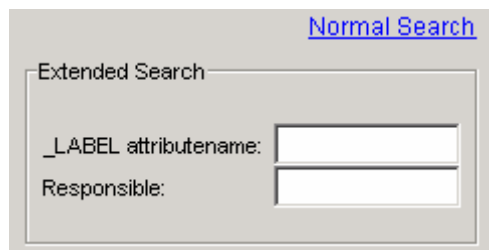
When the Extended Search criteria are displayed, Normal Search is displayed
allowing the user to toggle back to the Normal Search display. Each Object displays
different Extended Search criteria. Figure 12 illustrates the Extended Search criteria
when searching for a Service.

7. The user can then double click on one of the matching Objects. The Object
   window will then be displayed in Edit mode.

3.4 Opening an Object

Apart from the **Search Panel**, there are three other ways of starting the process of opening an Object: the **Menu** method, the **Toolbar** method and the **Keyboard** method.

- The **Menu** method: from the **File** menu, select ⬛ **Open**.

- The **Toolbar** method: click on the **Open** icon ⬛ on the toolbar.

- The **Keyboard** method: press **Ctrl/O**.

The principle of opening any Object is the same, but there are slight differences after the first three steps for some of the Objects.

Whichever method used to start the process (with the exception of using the Search Panel method) an **Open an Object** Selection box will be displayed.

Figure 13   **Open an Object Selection Box**
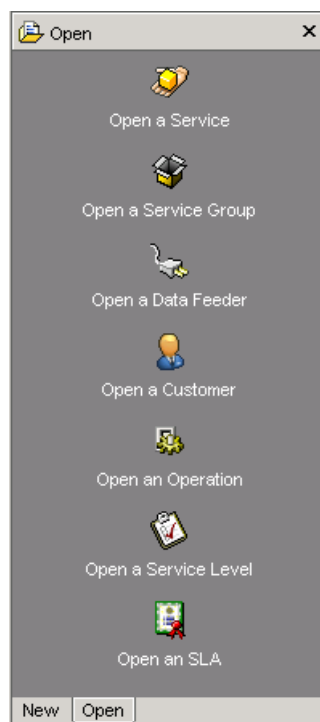
1. Select the **Object** to open and click **OK**.

2. The **Open an Object** dialog box will be displayed. The example illustrated in Figure 14 is **Open a Service**. The Open an Object dialog box is always the same as the Search Panel's and behaves in exactly the same way.

**Figure 14   Example of Open an Object Dialog Box
                              (Open a Service)**
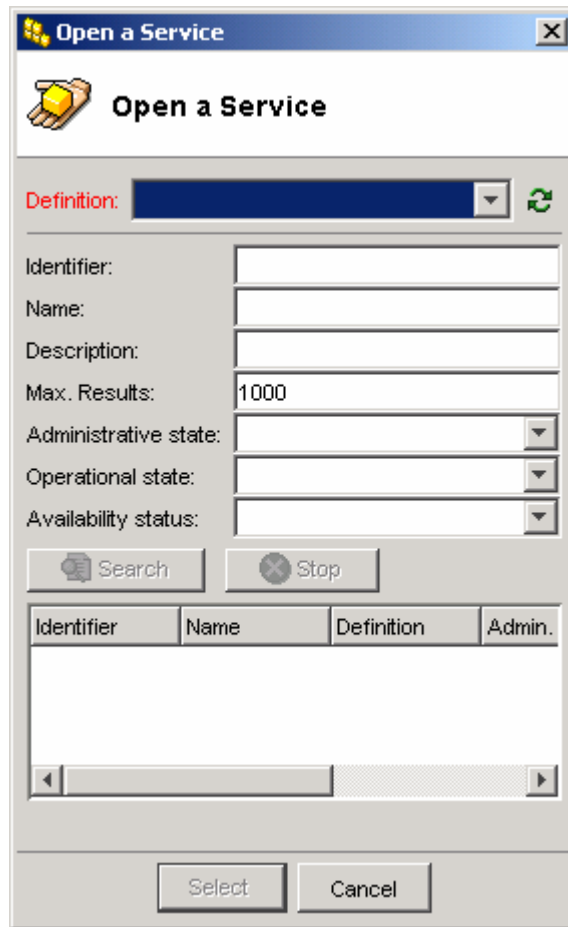
If the drop-down list of available Definitions is empty, or not up to date, the user needs to click on the Refresh icon 🔄 to the right of this field to load the latest available Definitions.

The information 'loading data' will be displayed in the field in gray while the data is being loaded. The progress bar will indicate when the data has been loaded.

The updated drop-down list of available Definitions will then be displayed.

Once the Object is retrieved from the Search Result, the user can either double click, or click on Select to open it.

The **Open** dialog boxes for Service, Service Group, Data Feeder, SLA and SL display the same basic fields to be completed to Open an Object, but some provide extra criteria. See the illustration in Figure 9 for an example. Each Search Panel displays the criteria that correspond to the criteria of the Object Definition chosen.

3.5 Refreshing an Object

It is sometimes necessary to refresh the displayed details of an Object as they may not be up to date. An Object **could have been** modified **outside** the current instance of SLA Administration, if this is the case, the information about the Object, opened in Edit mode in the current editor, will not be up to date.

To ensure that the information is correct, from the **File** menu or the **Toolbar,** click on the **Refresh** button ![refresh icon] (or press **Ctrl/R**) to update the content of the current editor.

Loading Data will be displayed in the window where the Object was selected, and then the refreshed information will be available.

The refresh action is not available for Objects that are in Create mode, because they only exist in the current instance of SLA Administration. An Object **is not contained in the SQM Repository** if it has not been saved.

<div align="center">

Important

</div>

It is not recommended to Refresh a **modified** Object as the modifications could be lost (an asterisk **∗** is displayed in the title bar after the word mode if the Object has been modified). If the user tries to refresh the Object, SLA Administration will ask to confirm whether or not save the changes.
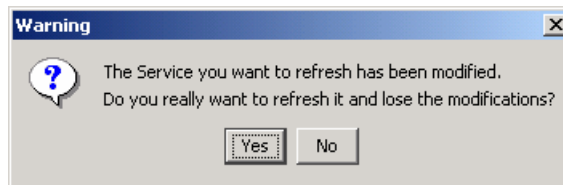
If the Object to be refreshed no longer exists in the SQM Repository
(it could have been deleted) the status of the Object will revert to Create mode and the user will be able to save it if needed.

If the Object no longer exists, a message is displayed.

3.6 Importing and Exporting Objects

Objects can be **imported** into SLA Administration User Interface from an XML file. Objects can also be **exported** to an XML Definition file. The user can Import and Export the XML definition files of all Objects with the exception of Service Component Instances. All items that are exported or imported have the format .XML. Exported Objects can be stored either in the SQM Repository or locally.

When the user exports some Objects, he should carefully organize the output XML files into a meaningful structure.

This feature is available in order to be able to continue working if there is a connection failure, as these actions are carried out locally. This feature can also be used to recover .XML files.

3.6.1 Exporting an Object

This option is not available on the File menu unless an Object is opened.

From the **File** menu, select **Export**, or press **Ctrl/E**. The Export dialog box will be displayed.

Figure 15   Export Dialog Box
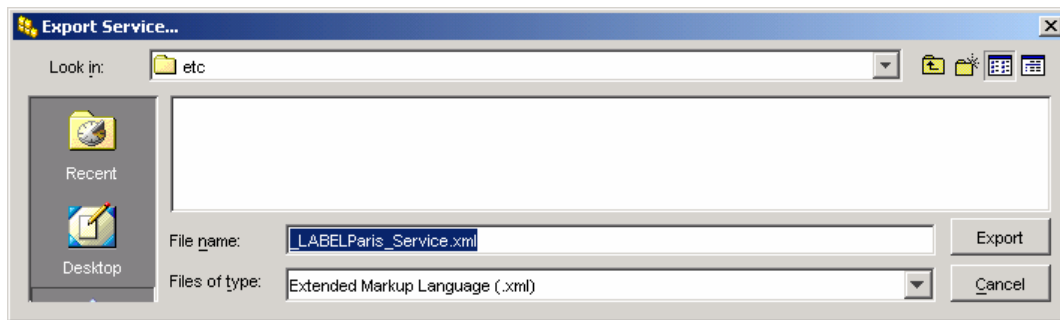
The location where to Export the Object can be chosen by selecting the directory in the **Look in:** field.

The user can click on either **Cancel**, or **Export**. If Export is selected, the Object will be exported and a message indicating what Object has been exported will be displayed in the message bar at the bottom of the window.

3.6.2   Importing an Object

From the **File** menu, select **Import**. The Import dialog box will be displayed.

Figure 16   Import Dialog Box
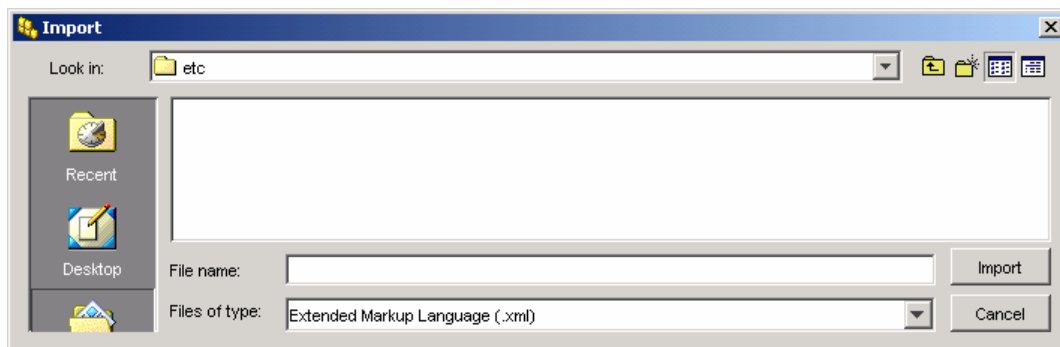
The directory from which the files are imported can be chosen. The type of the files to be imported can be either "All Files" or Extended Markup Language (XML). Extended Markup Language (.xml) should be selected. Then the user has to choose a file from the directory through the **Look in:** field.

Afterwards, the user can click on either **Cancel**, or **Import**. If a click is performed on Import, the Object will be imported into memory and opened in **Modify** mode, which means that any modification can then be performed and saved.

3.7 Duplicating an Object

Before an Object can be a candidate for duplication, it must be opened and selected.

1. If it is not already open, open the Object to duplicate.

2. From the **File** menu, select **Duplicate**.

3. A message indicating that the duplication was successful is displayed in the Console window and on the information bar at the bottom of the window.

The duplicated Object is displayed in a new window in **Create** mode with a name that is "**Copy of**" plus the name of the original Object. The original Object remains displayed in its window under the newly created Copy.

An Identifier is automatically generated for the newly-duplicated Object.

The duplicated Object can then be modified and saved at will.

3.7.1   Duplicating a Service

Duplicating a Service presents an extra window. This is explained in Section 4.2.

3.8   Deleting an Object

There are two ways of deleting an Object:

- Delete the Object while it is opened,

- Delete it using the search panel.

3.8.1   Deleting an Opened Object

1. Open the Object to be deleted as described in Section 3.4.

2. From the **File** menu, choose ❋ **Delete**.

A Pop-up box will ask the user to confirm the deletion of the Object.
("_LABEL HP" in the example.)
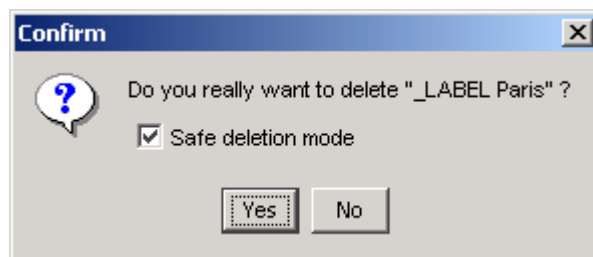
3. Click on **Yes**: the Object will be deleted.

<div align="center">

Important

</div>

The **Safe deletion mode** check box provides a safeguard when deleting an object. Indeed an object may have dependencies (for example, a Service may be used by one or several Service Instance Groups which are themselves referenced by one or several Service Level Agreements). During an object deletion, there are two ways to maintain the model consistency within the Service Repository Manager:

– Delete the object and all the "child" objects ("Force" mode)

– Reject the object deletion if there is at least one dependency ("Safe" mode)

When the Safe Deletion Mode is checked, the deletion is performed in "Safe" mode. Otherwise, the "Force" mode is used.

3.8.2   Deleting an Object Using the Search Panel

1. Display the Search Panels.

2. Display the Tab for the Object to be deleted.

3. Click on the Search button.

4. Single right-click on the Object to be deleted.

5. The pop-up Menu, giving the options to Open or Delete will be displayed.

Figure 17   Deleting an Object Using the Search Panel
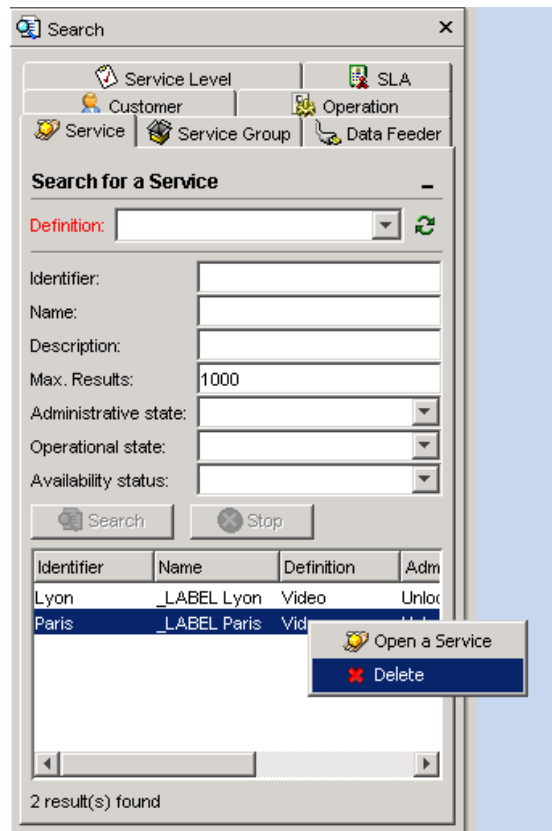
6. Click on the ✖ Delete button.

7. A Pop-up box will ask the user to confirm the deletion of the Object (as with the other method).

3.9 Viewing the States of an Object

To be able to see the States of an Object, the Object must be opened.

1. Open the Object.

2. Wait for **Loading Data** to complete.

3. Click on the **States** Tab.

There are three states for every Object:

- The **Administrative State**, which can be:

    Locked:
    The resource is administratively prohibited from performing services for its users.

    Unlocked:
    The resource is administratively permitted to perform services for its users.

- The **Operational State**, which can be:

    Enabled:
    The resource is partially or fully operable and available for use.

Disabled:
The resource is totally inoperable and unable to provide services to users.

- The **Availability Status**, which can be none, one, or several of:

Normal (Available)

In Test
The resource is undergoing a test procedure. If the administrative state is locked or shutting down, then normal users are precluded from using the resource and the control status attribute has the value reserved for test. Tests that do not exclude additional users can be present in any operational or administrative state but the condition **reserved for test** should not be present.

Power off
The resource is not powered on. For example, a fuse or other protection device is known to have removed power or a low voltage condition has been detected. The operational state is disabled.

Failed
The resource has an internal fault that prevents it from operating. The operational state is disabled.

Off Line
The resource requires a routine operation to be performed to place it online and make it available for use. The operation may be manual or automatic, or both. The operational state is disabled.

Off Duty
The resource has been made inactive by an internal control process in accordance with a predetermined time schedule. Under normal conditions, the control process can be expected to reactivate the resource at some scheduled time, and it is therefore considered to be optional. The operational state is enabled or disabled.

Degraded
The service available from the resource is degraded in some respect, such as in speed or operating capacity. Failure of a test, or an unacceptable performance measurement, has established that some or all services are not functional or are degraded due to the presence of a defect. However, the resource remains available for service, either because some services are satisfactory or because a degraded service is preferable to no service at all. Object-specific attributes may be defined to provide further information indicating, for example, which services are not functional and the nature of the degradation. The operational state is enabled.

Dependency
The resource cannot operate because some other resource on which it depends is unavailable (that is: a resource not represented by the same managed object). For example, a device is not accessible because its controller is powered off. The operational state is disabled.

Not Installed
The resource represented by the managed object is not present, or is incomplete. For example, a plug-in module is missing, a cable is disconnected or a software module is not loaded. The operational state is disabled.

Log Full
This indicates a log full condition, the semantics of which are defined in CCITT Rec. X.735 | * ISO/IEC 10164-6.

The states of an Object can also be verified by the means of the View → Search option. See Section 3.3.

The error text displayed in the Console (and at the base of each screen) can also give information about the states of an Object.

Chapter 4

Service Deployment

This chapter describes how to create and instantiate Services from Service Definitions, create Service Groups and register new Data Feeders in the SQM Repository.

4.1 Registering New Data Feeders

Data Feeders must be Registered and declared so that they can provide data to monitored Services. The complete declaration of a Data Feeder is not carried out using SLA Administration User Interface, but using the tools provided with the Service Adapters.

SLA Administration User Interface allows the registration of a Data Feeder to be able to complete the binding of a new Service. However, Data Feeders registered with this process do not collect data until they have been declared with the Service Adapter tools.

Registered or Declared Data Feeders can be used to bind Data Feeders to a Service.

The Registration of a Data Feeder is the Request for the declaration of a new Data Feeder in the **SQM Repository**.

To register a New Data Feeder:
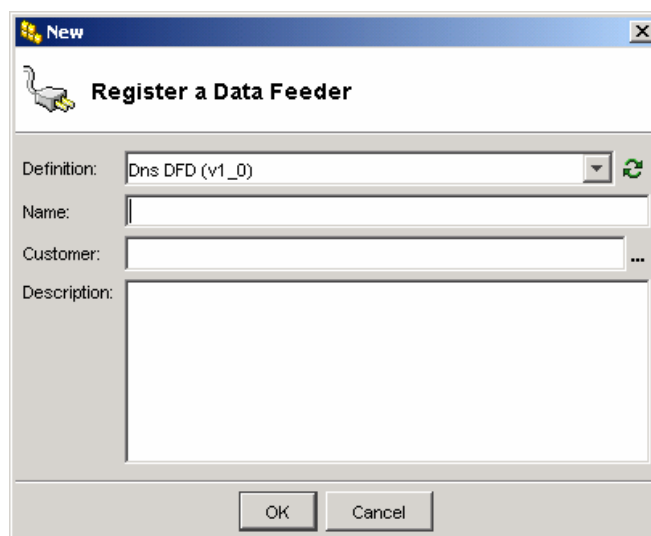
1. From the **File** sub-menu, choose **New**,
   or click on the **New** 🗋 icon on the toolbar,
   or Press **Ctrl/N**.

2. The **Register a Data Feeder** screen will be displayed.

Figure 18   Register a Data Feeder, First Screen

3. Choose the Definition for the Data Feeder from the drop down list in the Definition field.

4. Type a Name.

5. No ID needs to be provided for a Data Feeder: it is made of the MRP.

6. If this Data Feeder is dedicated to a specific customer (i.e any measures received on it are for the same customer), choose the associated customer in the Customer field.

7. Enter a meaningful description text in the Description field.

8. Click on **OK**.

9. The Data Feeder Editor window will be opened in Create Mode. This indicates that the Data Feeder has never been saved in the SQM Repository.

As displayed in the screen illustrated in Figure 19, there is an asterisk after **Create mode**. This indicates that the Data Feeder must be saved.

Figure 19   Register a Data Feeder, Editor Window
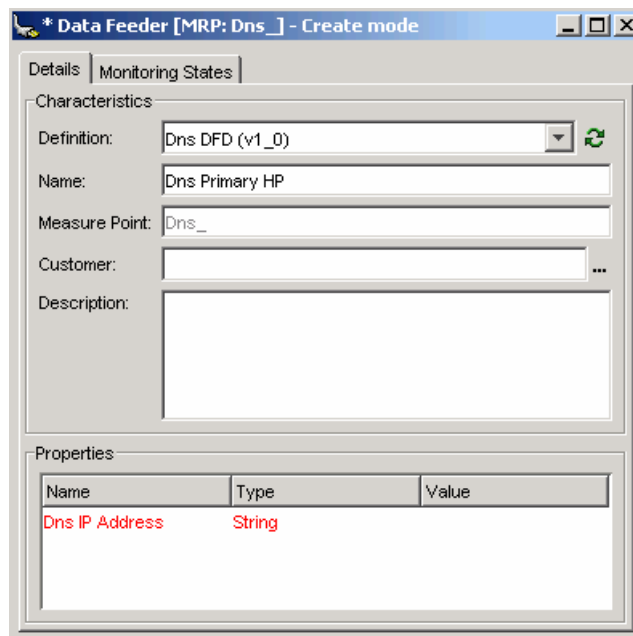
The Data Feeder has two Tabs: **Details** and **Monitoring States**. The window is opened displaying the **Details** Tab, which itself has two sections: **Characteristics** and **User Defined Properties**.

4.1.1   The Properties Tab

The **Characteristics** section displays the same fields as the previous screen and an additional field, Measure Point. The properties displayed in the User Defined Properties section are the properties that come from the Data Feeder Definition.

Important Notice

Properties of type Date (referred to as AbsTime in Service Designer) must be filled with the following format:

```
YYYY-MM-DD hh:mm:ss
```

T is a mandatory character. For example, the string 2004-03-25T21:00:00 represents the twenty-fifth of March 2004 at nine o'clock pm.

The Measure Point field is displayed in red text as it is a mandatory field and remains red until it is filled.
The way it is filled is described in the section **The Measure Point Field Behavior**.

This field cannot be edited directly unless no MRP Naming Schema is defined for the Data Feeder Definition.

Importance of the Choice of Data Feeder Definition at Creation Time

While the current Data Feeder has not been saved, the editor remains in Create mode. This means that the Data Feeder Definition can be changed at will. The choice of a Data Feeder Definition has two impacts: it changes the Measure Point field behavior and it updates the list of properties. **This means the values chosen for the previous properties are lost**.

4.1.2   Behavior of the Measure Point Field

The behavior of the Measure Point field is driven by the **MRP Naming Schema** defined in the chosen Data Feeder Definition.

Depending on the content of the MRP Naming Schema, the field is updated with the values that are typed in the **User Defined Properties** section. This Measure Point field cannot be edited directly. The values are computed by SLA Administration, concatenating the values of the MRP Naming Schema fixed string and properties.

Let's illustrate this behavior by looking at the MRP Naming Schema defined in the Dns Data Feeder Definition shown in Figure 19.

```
<sc:MRPNamingSchema>
    <sc:FixedString>Dns_</sc:FixedString>
    <sc:PropertyName property.name="DomainName"/>
    <sc:FixedString>:</sc:FixedString>
    <sc:PropertyName property.name="Dns_IP"/>
</sc:MRPNamingSchema>
```

The properties **DomainName** and **Dns_IP** are used to create the MRP Name. This makes these properties "special", they become more important than the others because their values will be included in the final Measure Point used to identify the Data Feeder being created.

Important

Such properties can **only** be edited during Data Feeder creation, while the Editor is in Create mode.
Once the Data Feeder has been saved these properties become read-only.

If no MRP Naming Schema is defined, the Measure Point field becomes editable.

4.1.3   The Monitoring States Tab

The **Monitoring States** Tab has no information because the Data Feeder has not yet been saved and is not yet operational.

4.2 Creating a New Service

1. Follow the steps detailed in section **Error! Reference source not found.**, **Error! Reference source not found.**.

2. Choose **Create a Service.**

The Create a Service dialog box will be displayed.

3. Click the OK button to validate the creation of this Service and start working with the Service Editor.

The Service Editor will be opened in Create mode (with an asterisk (*****) indicating that the Object has **not** been saved). The editor window has two sections, the Service tree Hierarchy on the left, and the Property Editor on the right, displaying the properties of the node currently selected in the tree hierarchy. The Property editor has two Tabs available in Create mode: the Properties Tab and the Data Feeder Tab. It is displayed with the Properties Tab open.

Figure 20   **Create a Service, Service Editor, Displaying the Properties Tab**
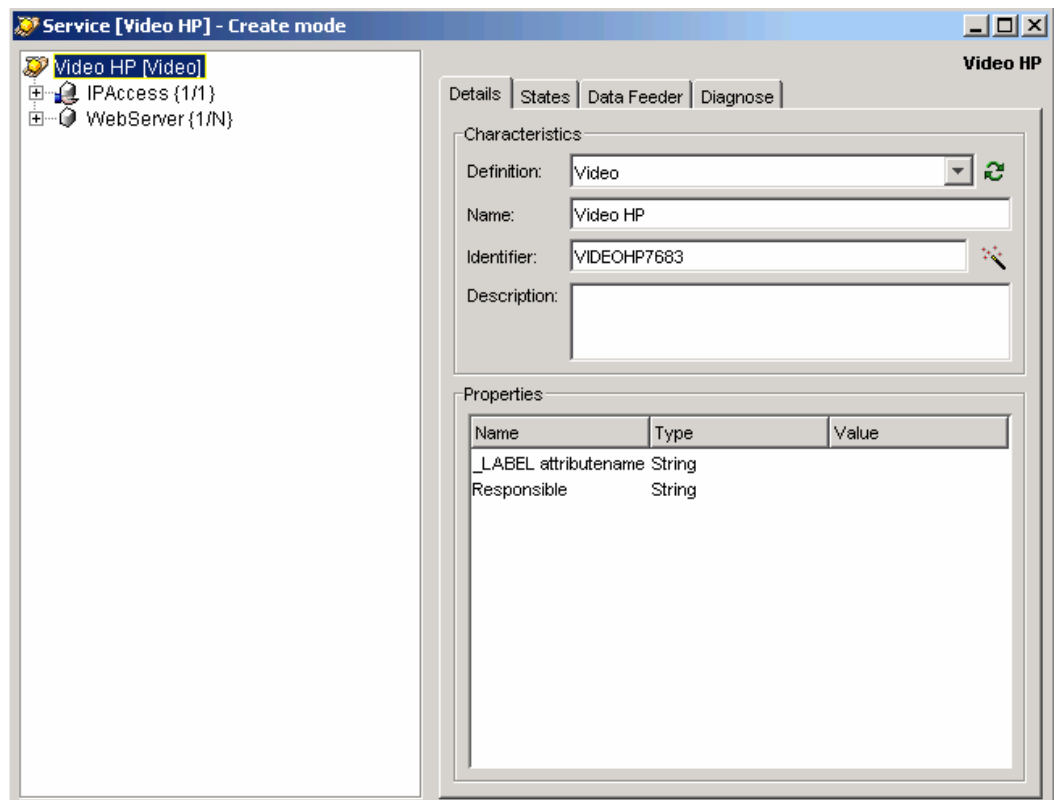
4.2.1 The Service Hierarchy Tree

The Service tree shows a hierarchy of Service Components under the Service root node. When a new Service is edited, the tree displays only the mandatory Service Component Definitions defined by the chosen Service Definition (those having a minimum multiplicity not equal to zero). The multiplicity of the Service Component Definition node is shown between braces **{1/1}**.

Service Component Definition Icons

	Service Component Definition – Not Shared
	Shared Service Component Definition

There are situations when no child node is displayed under the root node. This can be because the minimum multiplicity of the first level child Service Component definitions are equal to 0, or that there are no child Service Component Definitions.

By default, the tree selection is on the Service root node. Choosing another node changes the content of the property editor. When a Service Component Definition is selected, the properties displayed are read-only. It is not possible to change the content of the Service Definition. The **information** displayed on the Data Feeder tab is grayed.

4.2.2   Creating a Service, Property Editor

The Property Editor is composed of several tabs, each of which displays the properties of the node currently selected in the tree hierarchy, whether Service, Service Component or Service Component Definition.

The name of the node for which details are displayed is also indicated on the top right-hand side of the window outside the Tabs.

Whenever the user clicks on a node in the tree hierarchy, its name is displayed in this label at the top right-hand side of the window.

If the root node is selected, the name of the Service is displayed.

If a Service Component is selected at any level of the hierarchy, the label displays the name of the Service and the name of the Service Component in the format: **Video HP/_LABEL IPAccess**, where the Service is **Video HP** and the Component is **_LABEL IPAccess**

4.2.2.1   The Details Tab

The **Details Tab** has two panels, Characteristics and Properties.

4.2.2.2   Characteristics Panel

The Characteristics panel displays the global properties (Definition, Name, Identifier and Description) of any object the GUI deals with. This generic panel is present in several other editors.

4.2.2.3   Properties

The Properties panel displays the properties that are specific to the Service Definition chosen. It is impossible to add new properties, but when a Service or a Service Component node that contains properties is selected, their values can be edited.

In the example, these are Location and Responsible (Contact Name).

To enter a Value, or change an existing one:

1. Select an item (the Location or Responsible in the example).

2. The Value field will become available. Click on the **Value** field and type a value. There is no limit to the number of characters that the user can use.

4.2.2.4   The Data Feeder Tab

Data Feeders must be bound before they become effective for a Service, refer to Section 4.3 for details of how to bind Data Feeders.

4.2.2.5 The Diagnose Tab

Diagnose tab is activated only when Service diagnose has been selected (see 4.5).

4.2.3 Duplicating a Service

When a Service is duplicated, after the initial Duplicate action, the dialog box illustrated in Figure 21 is displayed.

When checking the share components checkbox, the share Service Components are re-used from the original service to the new one (i.e. with the same identifiers/labels). Otherwise, the shared components are themselves duplicated.

Checking Prefix/Suffix checkbox and entering a value for the prefix and/or suffix will impact the identifiers and labels of the created objects.

Figure 21   Duplicating a Service
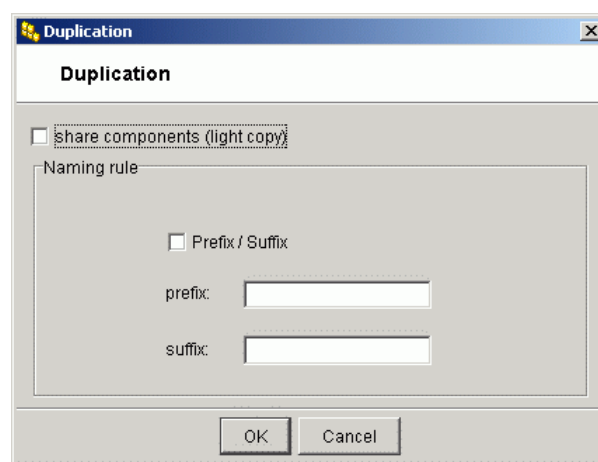
4.2.4 Instantiating a New Service

The process of instantiating (or deploying) a Service is to create (or re-use) Service Components according to the content of the Service Definition.

Service Components can only be accessed by means of the Service Editor as they are always attached to a specific Service.

Components can be created or re-used by Duplicating the Component Object.

To do this,

1. Open the Service to be reproduced,

2. Select the Component to be re-used in the Tree Window,

3. Then from the **File** menu, select **Duplicate**.

4. A message indicating that the duplication was successful is displayed in the Console window and on the information bar at the bottom of the window.

The duplicated Object is displayed in a new window in **Create** mode with a name that is **Copy of** plus the name of the original Object. The original Object remains displayed in its window under the newly created Copy.

An Identifier is automatically generated for the newly-duplicated Object.

5. The duplicated Object can then be renamed, modified and saved at will.

4.2.4.1 Understanding the Service Editor Model Representation

The Service Definition model designed with OpenView Service Quality Manager Service Designer (illustrated in Figure 22) will help to explain the Service Hierarchy Tree illustrated in Figure 23.

Figure 22   Service Designer Model Definition
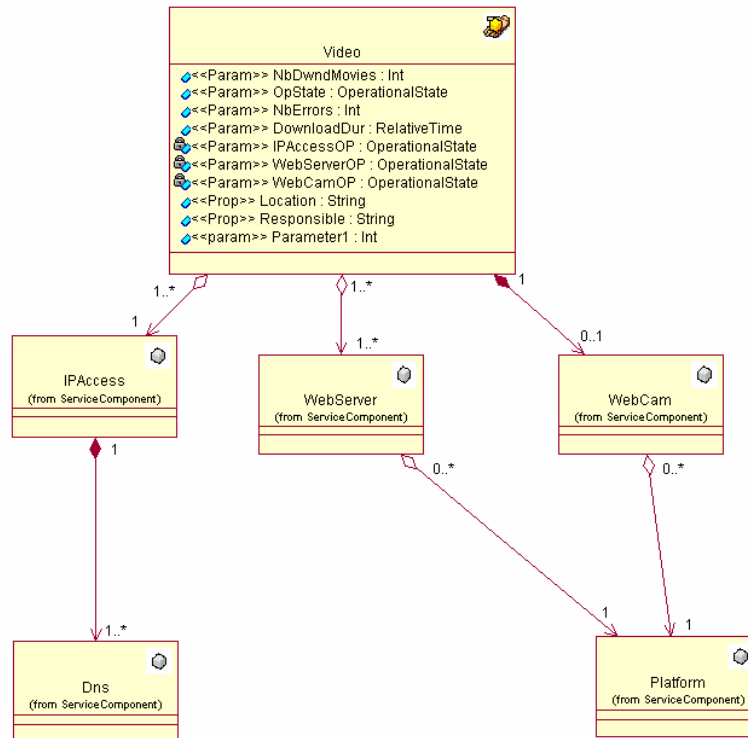
When a new instance of this model is created, the Service editor tree displays the hierarchy illustrated in Figure 23.

Figure 23   Service Hierarchy Tree for the Model Illustrated in Figure 22

The root node representing the Service is automatically instantiated with the properties entered in the Service creation screen.

Below the root node, there are the Service Component Definitions **IPAccess** and **WebServer**. The **WebCam** Service Component Definition is not displayed because the minimum multiplicity is zero (therefore this component is not mandatory).

At least one Service Component has to be created for each displayed Definition to be a **valid Service**.

There are two ways of doing this: either create Service Components one by one, or use the Auto Instantiate feature.

4.2.4.2 Auto Instantiating a New Service

Auto Instantiating a Service Instantiates a Service with the minimum required Components.

To Auto Instantiate a new Service, right-click on the Service root node to display the pop-up menu illustrated below, and click on Auto Instantiate.
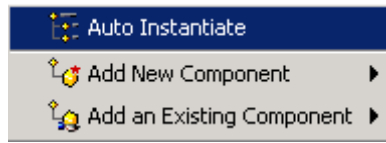
The Service Component Definitions are replaced by new **Instances** of Service Components.
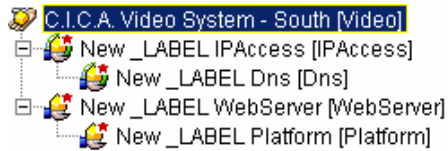
The red star at the top right-hand side of each icon indicates that the component has just been created and must be saved before it can be accessible through the Service Quality Manager platform.

The new Service Components are saved when the Service is saved.

4.2.4.3   Instantiating a Service Manually

Auto Instantiating a Service may not always meet the user's needs, for example when existing Service Components need to be referenced in the new Service.

The Service can be instantiated gradually using the pop-up menus available by right-clicking on the Service Hierarchy tree nodes.
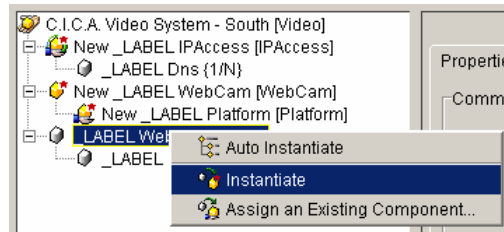
Service Component Icons

	Service Component – Not Shared
	New Service Component – Not Shared, New indicated by a red star.
	Locally shared Service Component
	New Locally shared Service Component, New indicated by a red star.
	Globally shared Service Component
	New Globally shared Service Component, New indicated by a red star.

Actions Available from the Service Tree Hierarchy Window

	Automatically creates all the **mandatory** Service

Auto Instantiate	Components starting from the selected node. This action is available on any node selection (Service, Service Component and Service Component Definition).
Instantiate	Creates a new Service Component for the selected Definition. This action is only available on Service Component Definitions and **only** if its parent node has been instantiated.
Assign an Existing Component…	This action opens a dialog box to obtain the list of all available Shared Service Components for the selected Service Component Definition. This action is available **only** if the selected SCD allows sharing and if the parent node has been instantiated.
Add New Component	According to the tree node selected, this action displays a list of all available Service Component Definitions for which new Service Components may be created. Once the Definition is chosen, a new Service Component is created and added as a child of the current selection. This action is available **only** on instantiated nodes (Service or Service Component).
Add an Existing Component	This action displays a list of all available Shared Service Component Definitions for which existing Shared Service Components may be used. Once the Definition is chosen, a dialog box is opened to obtain the list of all available Shared Service Components. Choose a Service Component from the list. It will be added under the currently selected node. This action is available **only** on instantiated nodes (Service or Service Component).
Duplicate Component	Adds a new duplicated Service Component at the same level as the selected Service Component. This action is **only** available on Service Component and if multiplicity allows it.
Remove Component	Removes the selected Service Component. This action is **only** available for Service Components. The action **ONLY** removes the Service Component. It **DOES NOT Delete** it. It is SQM Repository which manages the Deletion of Objects.

4.3 Binding and Unbinding a Data Feeder

Binding a Data Feeder is the act of linking the supply of information to the Service or Service Component.

Two kinds of Parameters exist for a Service or Service Component:

- Primary Parameter (collected parameter)
  where a Data Feeder supplies its information directly to the Parameter

or

- Secondary Parameter (computed parameter)
  where the value is computed from other Service or Service Component Parameters.

The **type** of Binding and calculation method for a Parameter is determined in Service Quality Manager **Service Designer** at the Definition stage.

At the Service Instantiation stage, **secondary** Parameters are automatically computed based on the operations defined in the Service Definition. For **primary** Parameters, a data source must be selected. This is the action of binding a Data Feeder to a Service.

To do this, the Data Feeder Tab of the Service Editor must be used. This Tab is only active for Service Components that have Primary Parameters and therefore require a Data Feeder.

The Diagnose function (described in Section 4.5) will also help the user to bind Data Feeders to a Service, as it displays all the required Data Feeders in a single list.

4.3.1 Binding a Data Feeder

To bind a Data Feeder:

1. Open a Service as described in Section 3.4. The Service will open in Edit mode.

2. Select a Service or Service Component in the Service Tree hierarchy

3. Click on the Data Feeder Tab.

4. Right click on the Data Feeder to be bound to this Service or Service Component.

5. If it is not already bound, the Bind button illustrated in Figure 24 will be presented.

Figure 24   Bind a Data Feeder Button
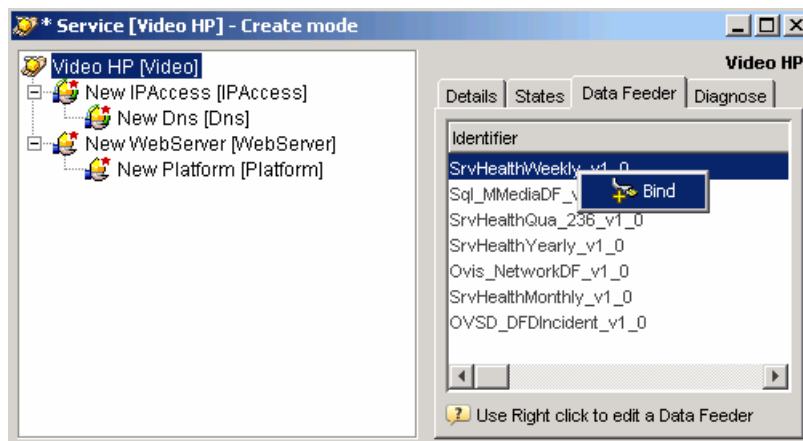
6. Click on the Bind button.

7. The **Open a Data Feeder** dialog box will be displayed, **with the Search Results field already filled in** with the occurrences of this Data Feeder.

8. Select the occurrence of the Data Feeder to be bound.

9. The **Data Feeder Tab** will be re-displayed. Moreover the Adm. State, Op. State and Avail. Status details will be now displayed.

4.3.2 Unbinding a Data Feeder

If a Data Feeder, has to be unbound, simply right click on it to Unbind it.

4.4 Managing Service Data Collection

The Administrative State of the Services should be managed only through the SLA (see section 6.4.6 for more details), this guaranty that only useful data are collected. Anyway during integration there will be sometimes the need to stop or start collecting Data for a specific Service. This can be done by using the **Suspend/Resume** Action.

To suspend a Service:

1. Open a Service.

2. Select the Service in the tree window.

3. From the States Tab, click on the ▮ Suspend button. (The Suspend button is a red square).

Use the **Resume** Action to start the collection of data.

The **Resume** Action sets the Administrative State to UNLOCKED. This action restarts data collection for the whole Service. If needed, the collection is also re-started on child Service Components/Data Feeders. The procedure is the same as for stopping data collection, but using the ▶ Resume button. (A green triangle.)

These actions are also available from the Action Menu, on the toolbar, or by pressing the Characters underlined (S for Suspend and R for Resume).

4.5 Diagnosing a Service

When a Service is opened, it is in Edit mode.
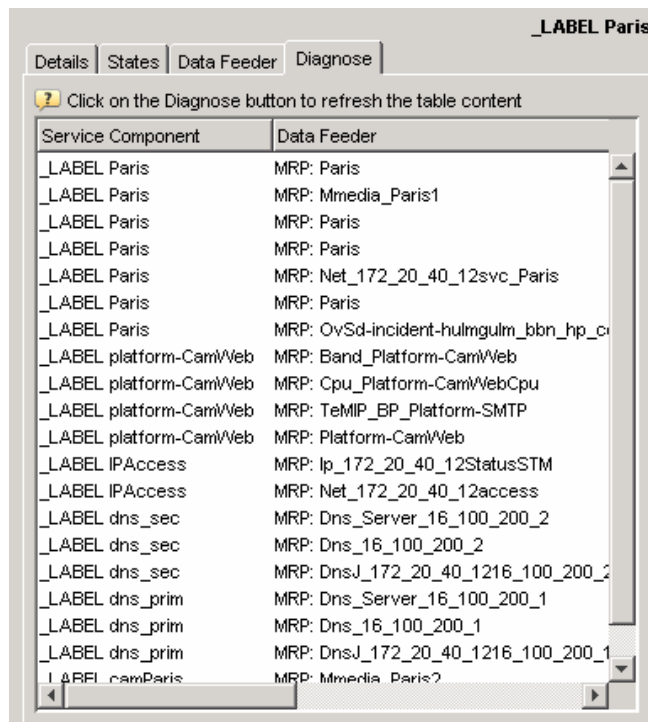
1. To display a list of all the Service Components, details of their Data Feeders and their States, and the Availability Status,

2. Go to the Diagnose Tab,

3. Click the **Refresh** button ↻ on the Toolbar,

4. The results of the diagnosis are displayed in the Diagnose panel. An example is illustrated in Figure 25.

Figure 25   Diagnose Results

The details displayed on the Diagnose Tab are information details of the Service; they cannot be edited from this display.

When a service component is displayed in the Diagnose Tab, the Service Hierarchy view is updated to point out the selected Service Component. At this stage, it is possible to switch to the details of this Service Component and edit it normally.

4.6 Creating a New Service Group

A **Service Group** is a set of Services that have the same Service Definition.

1. Follow the steps from 1 to 3 of section 3.2.1Creating a New Object from Scratch.

2. Select **Create a Service Group**.

3. The Create a Service Group dialog box will be displayed. In the same way as for Creating a Service, choose a Definition from the drop down list, Type a Name and type an Identifier, or click on the **Wizard** button ⚒ to create an Identifier automatically. Type a Description (not mandatory) and click on OK when finished.

Figure 26   Create a Service Group dialog Box
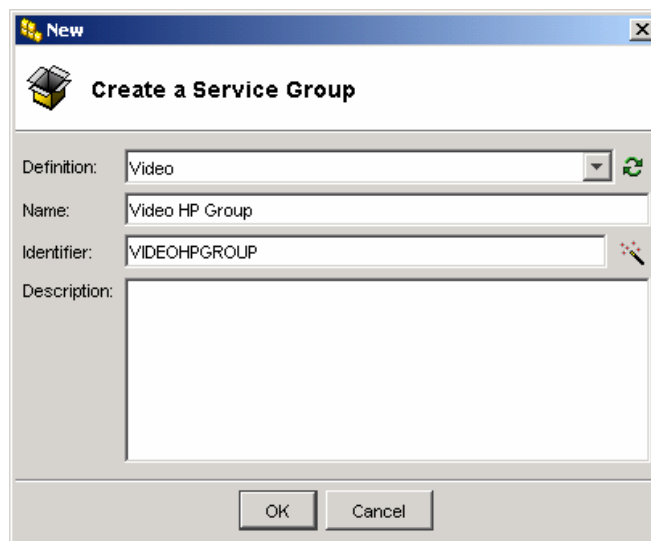
4. The Service Group editor window will be displayed in Create mode. It has three Tabs: Properties, States and Services. The Properties Tab is the one presented when the Editor window is first displayed.

Figure 27   Create a Service Group, Properties Tab
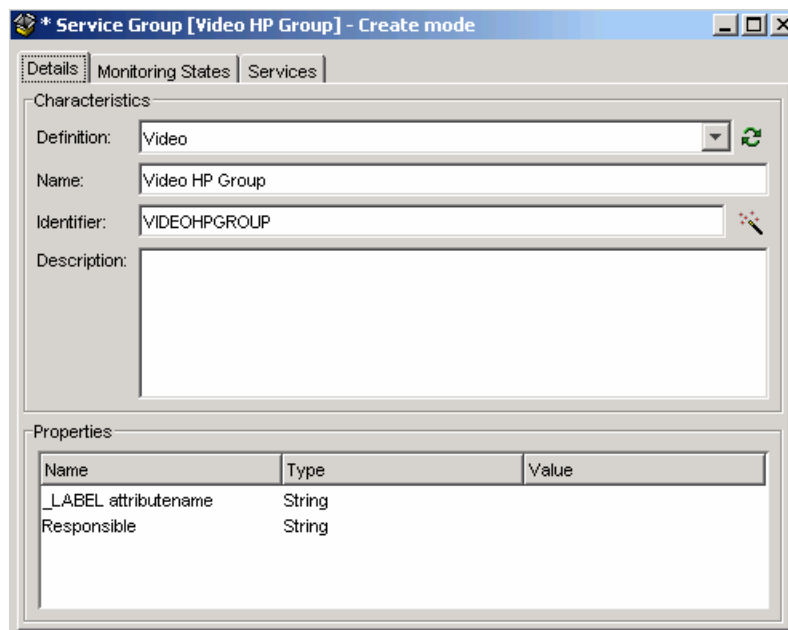
4.6.1 The Details Tab

The **Details** Tab has two sections Characteristics and Properties:

Characteristics displays the information entered on the previous screen. These details can be modified until the Service Group is saved.

Properties

The information displayed here is a function of the Definition chosen.

To enter or edit values for the User Defined Properties:

1. Select an item.

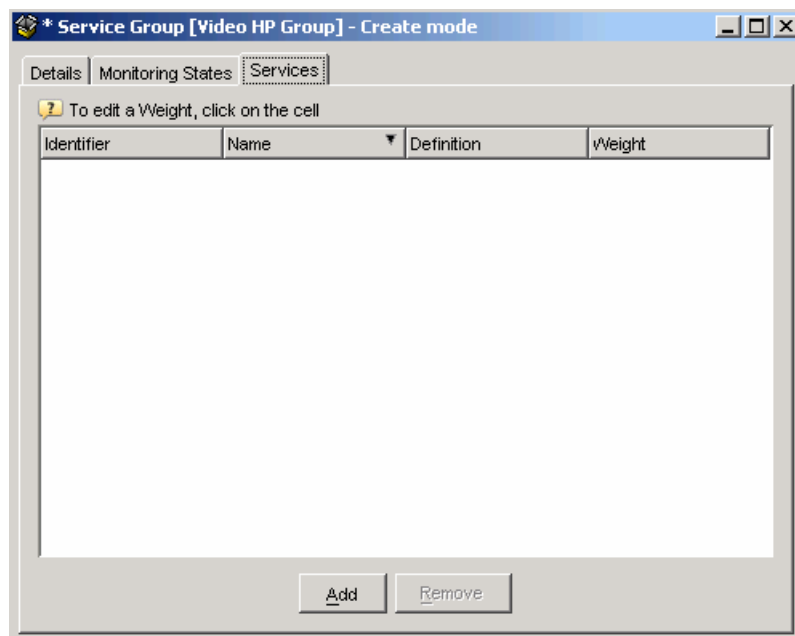2. Left click on the Value field and type a value.

4.6.2 The Monitoring States Tab

The **Monitoring States** tab will not contain any information as the Service Group is new.

4.6.3 The Services Tab

The **Services** Tab allows the user to **add** Services to the Service Group. (And later remove Services from the Service Group.)

Figure 28   **Create a Service Group, Services Tab**

The Tab is empty until the user has added Services to the Group.

4.6.4 Adding Services to a Service Group
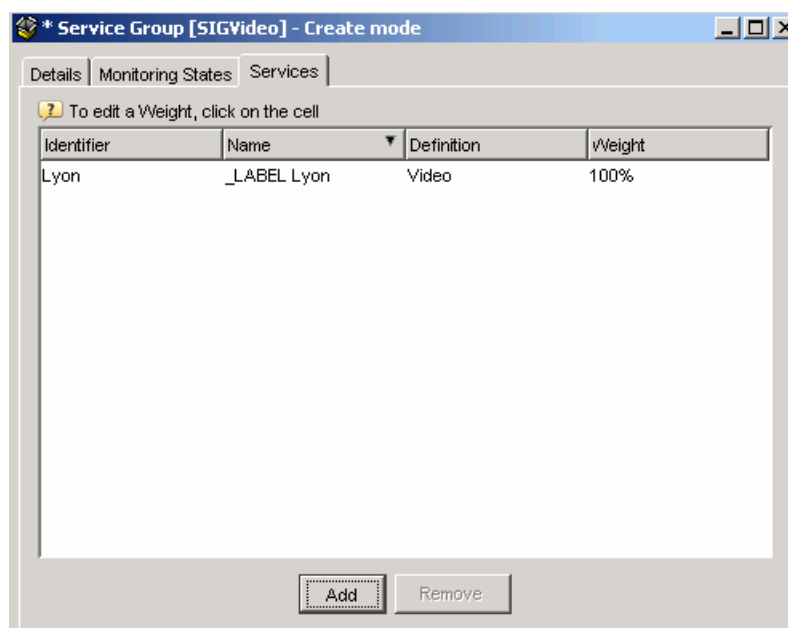
To add Services to a Service group:

1. Click on the Services Tab to display it.

2. Click on the **Add** button at the bottom of the screen.

3. The **Open a Service** dialog box is displayed with the Definition field **already filled and grayed**.

Figure 29   Open a Service Dialog Box for Adding a Service
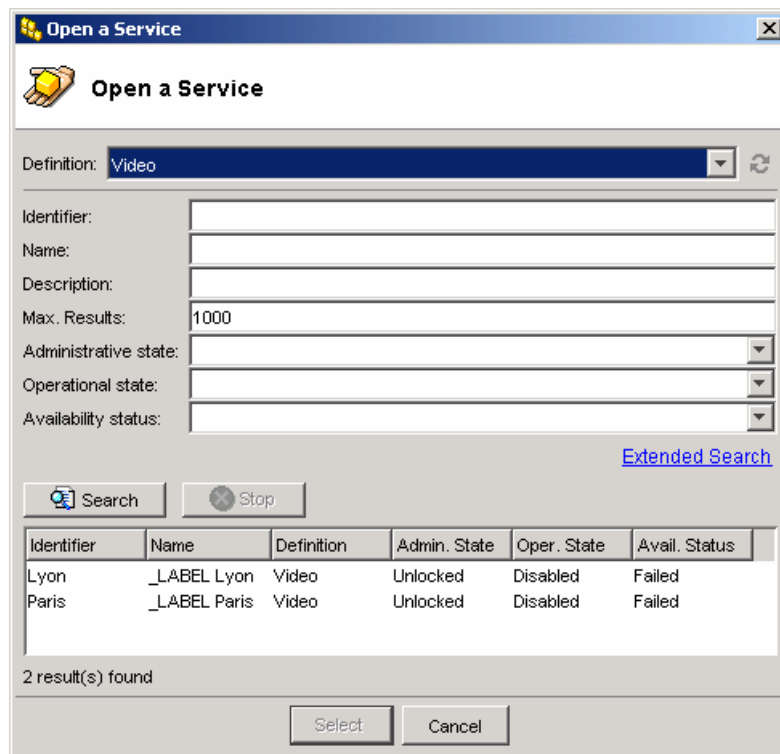
4. When the data has been loaded, it is displayed in the Search results field without having to perform a search.

5. A Service to be added to the new Service Group can be chosen from the ones displayed. **Only one Service can be added at a time and only existing Services can be added.**

6. Select a Service to be added to the Service Group, the Open a Service dialog box will close and the details of the newly added Service will be displayed on the Services Tab.

Figure 30   Services Tab With One Service Added

The Weight of the Service may be changed.

7. Select the Service and left click on the Weight cell.

8. When all the needed Services have been added to the Service Group (there must be at least one), Save the Service Group.

4.6.5 Removing Services from a Service Group

Services can be removed from a Service Group, if needed.

Removing a Service from the Service Group **does not delete** the Service, it merely removes it from the current Service Group.

When there are Services in the Service Group, the Remove button is active and can be selected to remove a Service.

When it is finished, click on **Save**.

Chapter 5
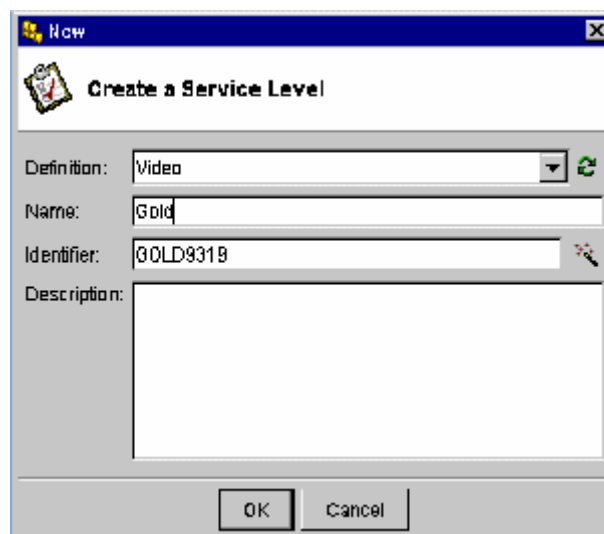
Service Levels

A Service Level is the set of parameters and limits that define the level of service expected by the Customer, or the parameters and limits defined for Operational SLAs.

5.1 Creating a New Service Level

1. Follow steps 1 to 3 in section 3.2.1 Creating a New Object from Scratch.

2. Whichever method used to start the process, choose Service Level from the option box that is displayed.

Figure 31   **Create a New Service Level, First Screen**

3. Type a Name.

4. Type an Identifier, or click on the **Wizard** button on the right of the Identifier field to create an Identifier automatically. Note that the wizard uses the Name previously entered as the basis of the identifier, adding a number to it.

5. Type a description (optional).

6. When done, click on **OK**.

7. The **Service Level** editor is displayed in **Create** mode.

**Figure 32   Create a Service Level, Second Screen**
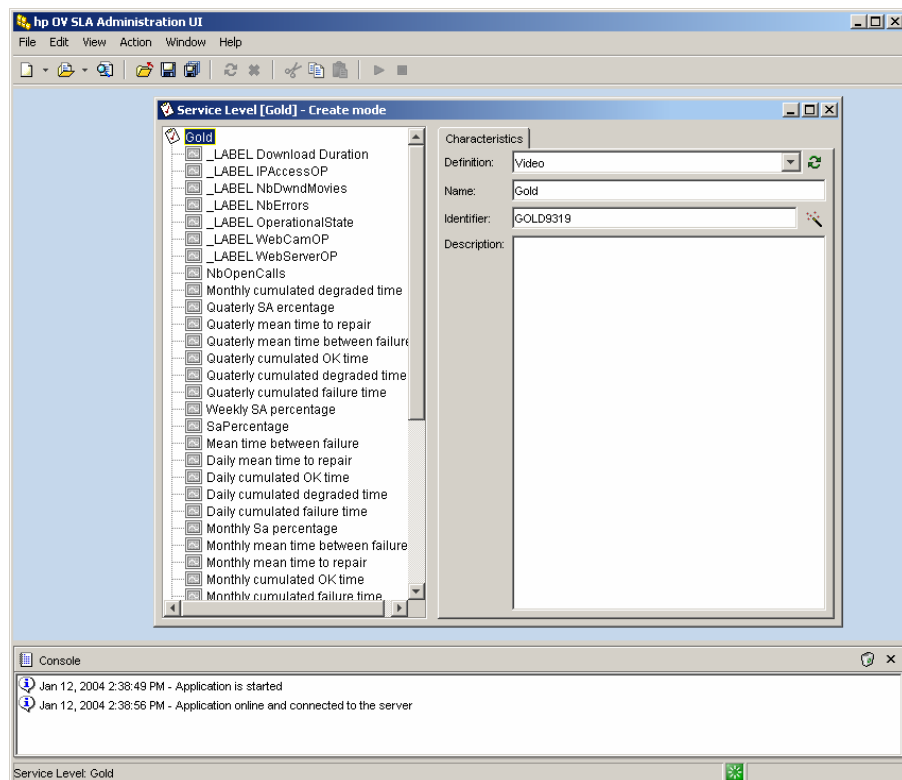
All items in the left-hand tree hierarchy window are grayed when the editor is opened, meaning that no objective has yet been defined.

5.2 Setting Objectives for Parameters

1. Select a Parameter in the tree window.

The **Parameter Details** are displayed in the right-hand window, along with the **Extended Properties** for this item, which are also displayed in a separate panel at the bottom of the window. These Characteristics and Properties cannot be edited, as they are the standard properties of the Model for the Definition chosen on the previous screen.

Figure 33   **Parameter Information Window, Create a Service Level**
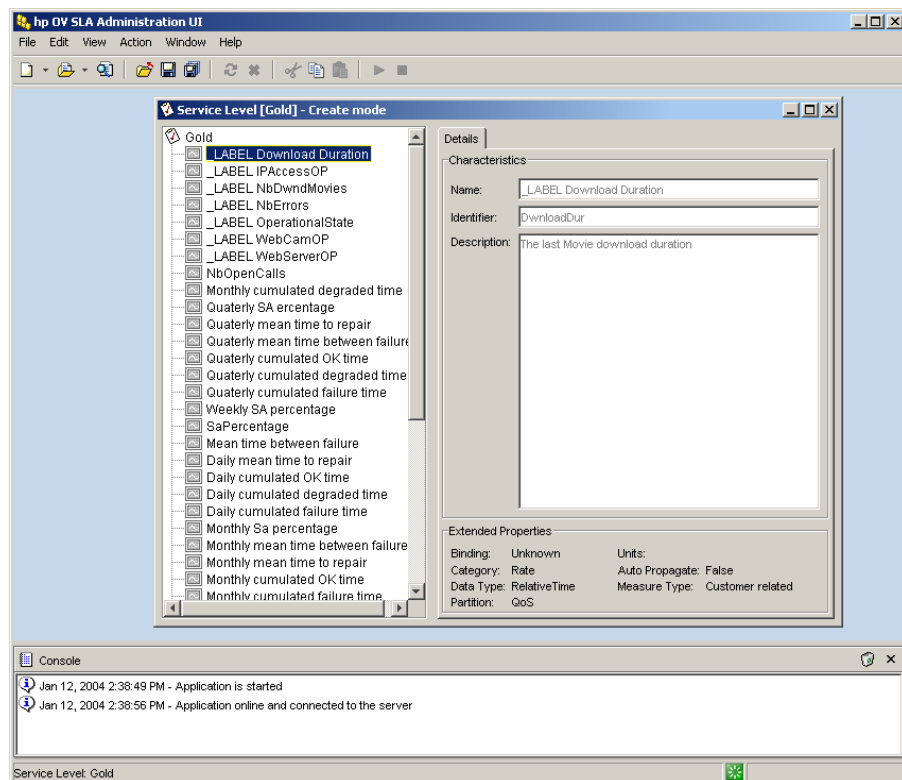
2. All the icons in the tree window are grayed until an objective has been created for them.

3. Right-click on the Parameter item in the tree window. The **Create SLO** button is displayed.

4. Click on this button. The item becomes active in the Tree Window. The right-hand window displays three tabs: SLO Details, Thresholds and Parameter Details. The Tabs are discussed in detail in the following sub-sections.

5.2.1　The SLO Details Tab

Figure 34　　Create a Service Level Objective, Properties Tab
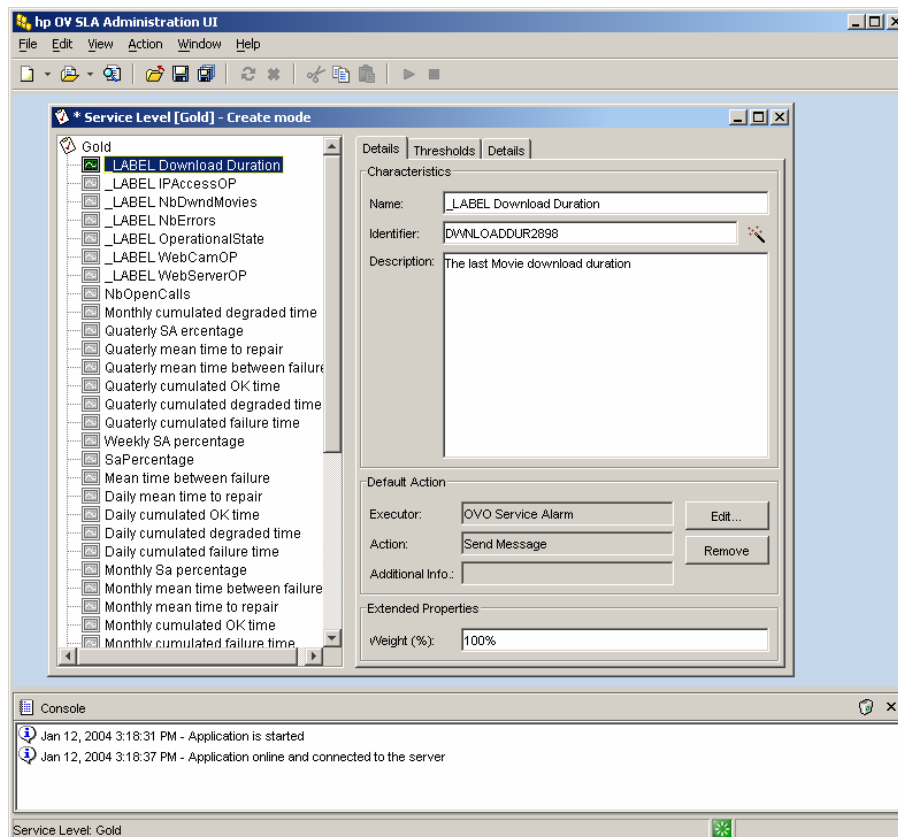
5.2.1.1　Characteristics

The following SLO characteristics can be set in this tab:

- Name: by default, it is set to the parameter Name

- Identifier: by default, it is automatically generated from the Parameter Identifier field.

- Description: a free text field that is set by default to the parameter description.

5.2.1.2　Default Action

When a Service Level Objective is violated, OpenView **Service Quality Manager** is able to call an external Action Executor and perform a predefined action to raise an Alarm to an External system.

The values defined here are used when they are not defined at the Threshold level. See paragraph 5.2.2.2 for more information. The Default Action is set in the same way as Threshold Actions.

5.2.1.3　Weight

The SLO weight, in percent is set in the Weight field of the Extended Properties panel. The SLO weight is the relative impact of the SLO status on the Component Service Level status.

5.2.2 The Thresholds Tab

Thresholds define in what state a Service Level Objective is. A SLO can be in one of the following states: Normal, Degraded or Violated.

The Thresholds Tab allows setting the threshold types and their values. It is the Tab where most tasks are performed. It is illustrated in Figure 35 showing the crossing type Up.

Icons Used in the Parameter Thresholds Panel

Threshold Icons	
🚩	Green Flag: Degradation Clearance Threshold.
🚩	Orange Flag: Violation Clearance Threshold.
✖	Orange Cross: Degradation Threshold.
✖	Red Cross: Violation Threshold.
✖	Delete Selected Threshold

The tab is divided into three main areas:

- The Threshold Crossing type and its preview,

- The Thresholds area that includes a list of the thresholds already existing, with columns for Type, Name, Objective State, Parameter and Degradation. Below, there is the Identifier field, and below this the Description field – a free-text field.

  Each Threshold must have a value.

- The Actions area, where the default actions are displayed if any has been defined for the currently selected Threshold.

Figure 35   Create a Service Level, Thresholds Tab
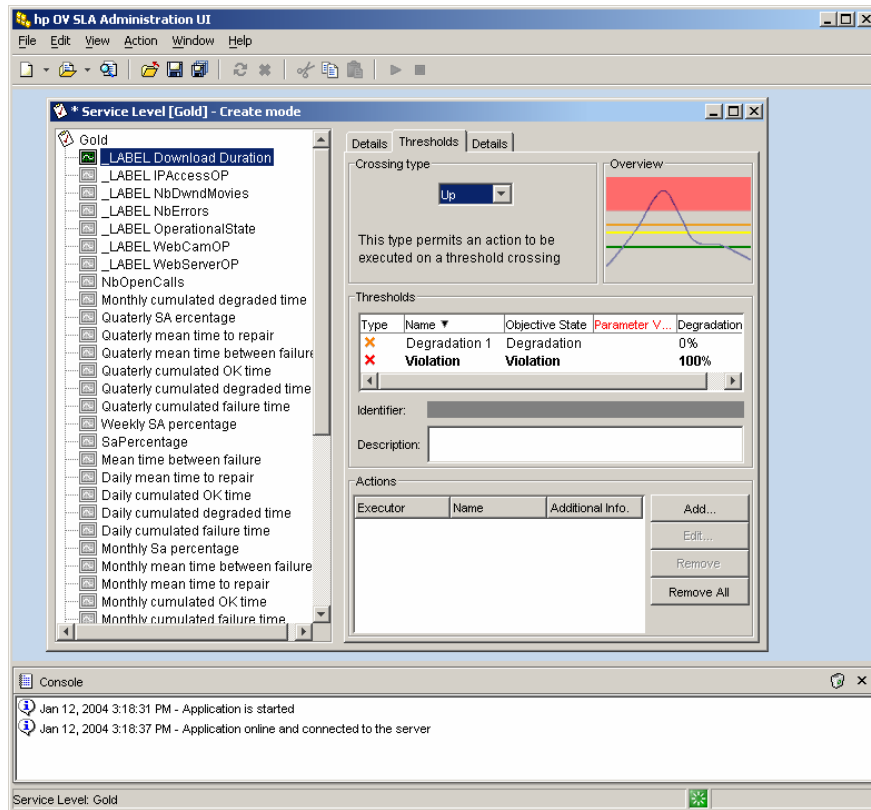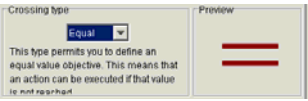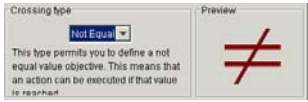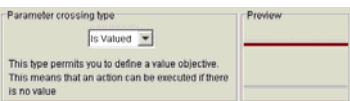

The Crossing Type

For each of the SLO items, the Threshold crossing type (Up, Down, Equal, Not Equal, and Is Valued) should be set. A preview of the type of crossing is given in the panel to the right of the Crossing Type box.

The Threshold Crossing type is chosen using the drop-down menu. The Thresholds panel is updated according to the selected Crossing Type.

Up and Down	
	The Up and Down crossing types allow a more precise control of the Service Level Objective.
	The thresholds are crossed either in an upward or downward direction depending of the selected type (Up or Down).
	This type is used for the definition of a series of Thresholds where the Service Level Objective becomes more and more degraded until it reaches a Violation State. The Clearance Thresholds (Optional) define the parameter values at which the Violation or Degradation state stops when crossed in the opposite direction of the violation.
	The Thresholds definition panel is illustrated in Figure 36. Details are given in Section 5.2.2.
Equal	There is a violation if the Service Level Objective is **not equal** to the

	selected value. Otherwise, the state is Normal.	
Not Equal	This setting is the opposite of Equal. There is a violation if the Service Level Objective is **equal** to the selected value. Otherwise, the state is Normal.	
Is Valued	There is a violation if the Service Level Objective has a value. Otherwise, the state is Normal.	

5.2.2.1   Up and Down Crossing Thresholds

Here is an example:

- To monitor a CPU Load, the Normal state has been set at 60%.

- Therefore, if the CPU Load is below 60%, the state is normal.

- If the CPU Load reaches 60%, but stays below 80%, the state is degraded

- When the CPU Load goes above 80%, the state is violated.

- When the state is Violated, the violation status remains Violated until the CPU load falls below 70%.

To model this CPU Load Objective, the UP crossing type will have to be used with the following Thresholds:

- A Degradation Threshold with a value of 60 (%), and a Degradation Factor between 0 and 100% depending on the severity.

- A Violation Threshold with a value of 80 (%). The Degradation Factor will be 100% as it's a violation.

- A Degradation Clearance of 70% to indicate the end of the Violation

The following rules apply to UP and DOWN Crossing types:

- Violation Threshold is mandatory (it cannot be removed it from the list).

Note

The Violation Threshold cannot be deleted directly. The only way to do this is to delete the Service Level Objective itself.

- Any number of Degradation Thresholds can be defined.

- The threshold list can contain an optional degradation clearance and an optional violation clearance.

In the situation where no clearance exists, the Service Quality Manager considers that the violation or degradation status is cleared when the SLO crosses the same threshold in the opposite direction.

In the example above, no Degradation Clearance has been set, therefore the SLO will return to the Normal state when the CPU Load drops below the 60% threshold.

The **UP** Crossing type is used here to monitor the CPU Load, because the SLO becomes degraded when the value is higher than the specified level.

Other kinds of SLO have the reverse behavior: the problem appears when the value falls below the specified level. A typical example is the Free Space on a hard disk. To monitor such an SLO, use the **Down** crossing type.

For yet other kinds of SLO, the value has to remain between two levels. The temperature is an example of this. In this case, two Service Level Objectives have to be defined, one with the **Up** crossing type to ensure that the temperature is not too high, and the other with the **Down** crossing type to ensure that the temperature is not too low.

Figure 36   SLO Threshold definition area for Up and Down Crossing Types
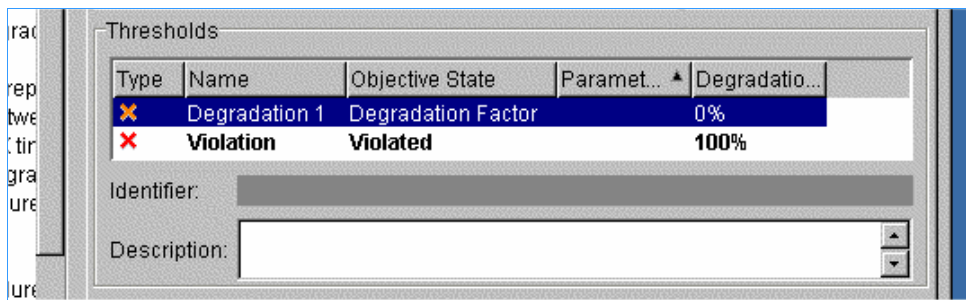
The various columns define the thresholds Type, Name, Objective State, Parameter and Degradation.

Thresholds are added and removed by means of the popup menu that is displayed when right clicking in the Thresholds area.

The popup menu actions are:

- Add a Degradation Threshold

- Add a Degradation Clearance

- Add a Violation Clearance

- Delete a Threshold
  (only available after some values have been created).

Figure 38 illustrates the actions possible for the Threshold selected in Figure 37.

Figure 37   Example of a Thresholds Panel Pop-up Menu for Threshold Selected in Previous figure
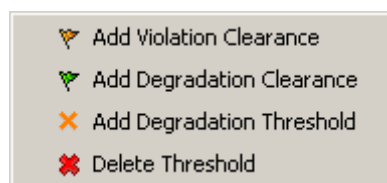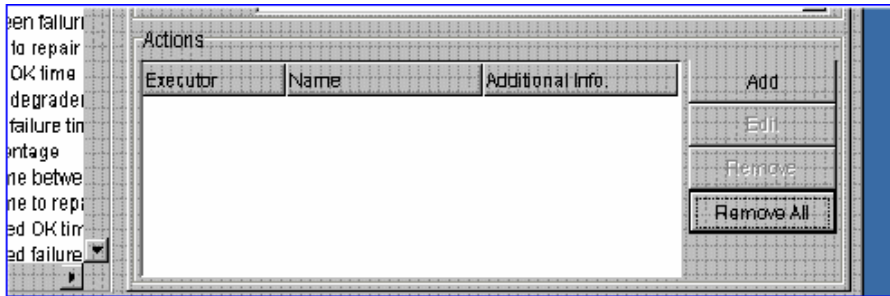
5.2.2.2   Threshold Actions

The Actions Area

When a Service Level Objective is violated, OpenView **Service Quality Manager** is able to call an external Action Executor and perform a predefined action to raise an Alarm to an External system.

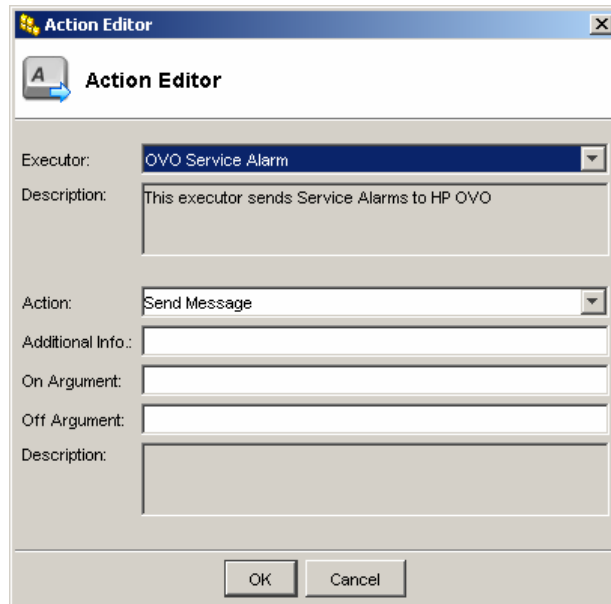The **Actions Area** allows to Add, Edit, or Remove Actions.

Figure 38   The Actions Area

Adding an Action

1. Select a Threshold.

2. Click on the Add button at the right of this area.

3. The Action Editor will open.

Figure 39   The Action Editor

4. Choose the Executor from the drop-down list.

5. Choose the Action Name from the drop-down list.

6. Add any additional information in this free text field.

7. Add optional On/Off Arguments

8. Click on **OK**.

9. The Action is created and the Action information is now displayed in the Action Area.

Editing an Action

Existing Actions details can be edited:

1. Select the Action to Edit.

2. The Edit and Remove buttons become active.

3. Click on the Edit button.

4. The Action Editor is displayed.

5. Follow the procedure described for adding an Action to modify any of the Action details.

Removing One or More Actions

Existing Actions can be removed. The procedure is the same as for Editing an Action.

1. Select the Action to be removed.

2. The Remove and Edit buttons become active.

3. Click the Remove button.

Note: all the actions can be removed at once by clicking on the Remove All button, even if no Action is currently selected.

Action Executors

Action Executors are defined in a properties file (editable). It is stored in:
```
<Installation
Directory>UI\SLAClient\properties\AvailableActions.xml
```

Default Actions

If no Action is associated to a Threshold, SQM executes the default Action defined in the SLO tab.

5.2.3 The Parameter Details Tab

This Tab is an Information Tab, displaying the parameter details pertaining to the Object. These details belong to the Service Definition and cannot be modified here.

This Tab is the only one displayed when no SLO has been defined for the Parameter.

5.2.4 Adding a Component Service Level or Service Level Objective

5.2.4.1 Adding a Component Service Level

Component Service Levels can be added when creating a new Service Level or when modifying an existing one.

1. Right-clicking on the root item in the tree hierarchy will display a pop-up menu, giving the opportunity to **Add a Component Service Level** or to **Add a Service Level Objective**.

2. Click on **Add a Component Service Level** to display the Components available. They will be displayed as shown in Figure 40.

Figure 40   Add a Component Service Level Pop-up
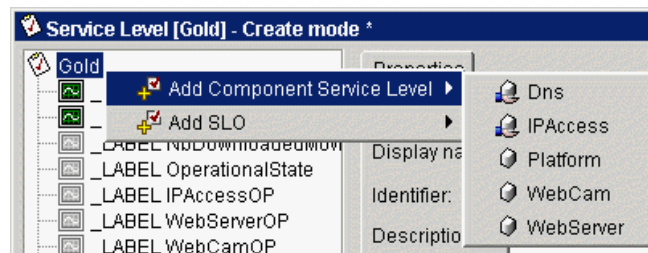

3. Select an Item from the pop-up displayed. **Dns** will be used in the following example. Left-click on **Dns.**

4. The Component **Dns** will be activated in the left-hand tree window. Its icon will change from ○ to ◉ with a red arrow attached to it.

5. Right-click on this Object.

6. The Add Service Level Objective pop-up for this item with its options will be displayed.

7. Select an option, it will be activated in the tree window in the hierarchy and its icon will be green, indicating that the values can be set.

8. Set the values as described in Section 5.2.3.

9. Continue this process with each of the items for Objectives should be added.

10. Save the Service Level.

5.2.4.2   Adding a Service Level Objective

Service Level Objectives can be added in two ways. One way is using the procedure described at paragraph 5.2. The other way is described below:

1. Right-click on the Root Item in the tree window, or on the Component Service Level that contains the Parameter to monitor, to display the pop-up option menu.

2. Select an Item from the pop-up displayed.

Figure 41   Add an Objective Pop-up,
Add a Service Level Objective
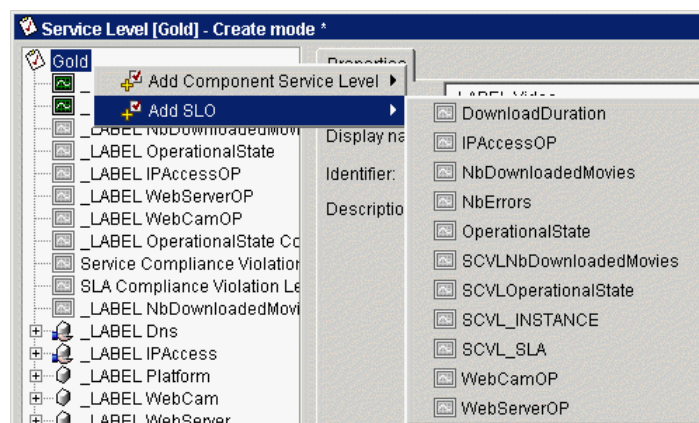
The Objective is added (activated) in the Tree window (The icon is already there, grayed) and its color changes to green.

Note

Up to two Service Level Objectives can be created per Parameter. Creating two Service Level Objectives for a Parameter is mandatory when the value has to remain between two levels. The procedure described above is mandatory for the second SLO.

5.2.4.3 Deleting a Component Service Level or a Service Level Objective

Once a Component Service Level or Service Level Objective has been added, it can be deleted using the pop-up displayed when right clicking on it. There is no confirmation. The only way to recover an inadvertently deleted item is to recreate it or to reload the Service Level from the repository.

5.3 Modifying or Editing a Service Level

Open the Service Level to be modified.

The SLA is opened in Edit mode.

Follow the same procedures described in Section 5.1 for creating a Service Level.

Chapter 6

Service Level Agreements

This chapter describes how to create Service Level Agreements , deploy, use and manage Services.

Service Quality Manager allows to define two types of Service Level Agreements :

- A **Customer SLA**: this is the contract between a *service provider* and a *customer*, which specifies in measurable terms, the quality of service the provider supplies to the customer. Everything is measured in terms of the service provided to the Customer. The OpenView Service Quality Manager **Customer** Object is used to define this type of SLA**.**

  and

- An **Operational SLA**: used to define infrastructure requirements for everything from help desk services, network performance and availability, application performance and availability, and internal processes. The OpenView Service Quality Manager Object **Operation** is used to define this type of SLA.

From the point of view of HP OpenView Service Quality Manager SLA Administration application, there is no difference in the way these SLAs are created, nor in the way they are stored and manipulated.

6.1 Before Creating a Service Level Agreement

Before a Service Level Agreement can be created, certain Objects must already exist: there must be **either** a **Customer** Object or an **Operation** Object. There **must** also be a **Service Instance Group** (SIG) and a **Service Level** (SL). The Service Instance Group must have at least one Service Instance.

Creating Services and Service Groups is described in Chapter 4.

Creating Service Levels is described in Chapter 5.

6.2 Customer

In HP OpenView Service Quality Manager, a **Custome**r is a company or organization that uses the services provided by a service provider, based on a contractual relationship. OpenView Service Quality Manager SLA Administration application enables the establishment and management of this contractual relationship, the **Service Level Agreement** or **SLA**.

6.2.1 Creating a New Customer

To Create a Customer,

1. Follow steps 1 to 3 in section 3.2.1 Creating a New Object from Scratch. The Create a Customer Dialog box will open.

**Figure 42   Create a Customer Dialog Box**
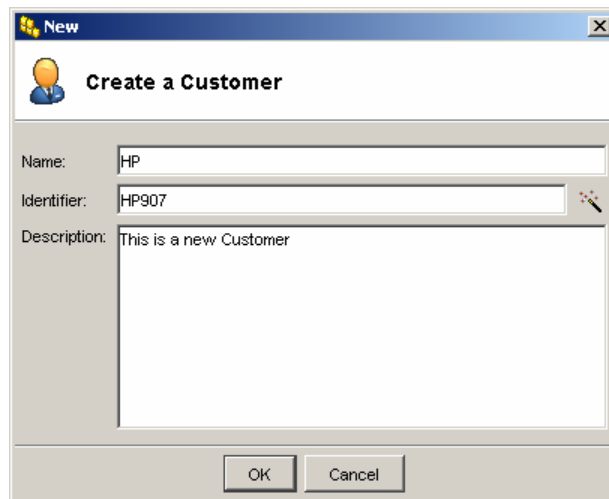
2. Enter the Customer Name.

3. Type in the Customer Identifier, or click on the **Wizard** button to the right of the Identifier field to create an Identifier automatically.

4. Type a Description (optional).

5.   When done, click on **Ok**.

Reminder

There is no need to select a definition when Creating a Customer.

6. The Customer is created and the Editor window is displayed in Create Mode.

Figure 43   Customer Editor Window, Create Mode
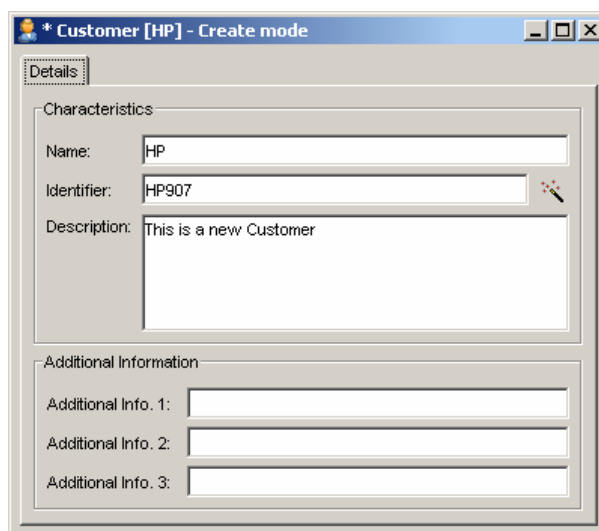
All the displayed text fields can be modified while the Customer Editor remains in Create mode. The Additional Info fields are free to enter supplementary information.

7. Save the Customer.

6.2.2 Modifying or Editing a Customer

After **saving** the Customer Object, it is re-displayed in **Edit** mode. The **Name** and **Description** fields are no more editable**.**

6.3 Operation

A SLA Administration **Operation** is the operational type of SLA that is used to define requirements internally for everything from help desk services, network performance and availability, application performance and availability, and internal processes. These are infrastructure requirements that do not depend on a particular Customer.

The Operation creation process is the same as for a Customer. The Dialog boxes and the Editors, whether in Create or Edit mode, are identical, with the exception that the title is **Operation** and not Customer.

6.4 Service Level Agreement (SLA)

Once all the necessary Objects for a Service Level Agreement are in place, the Service Level Agreement itself can be created.

6.4.1 Introduction

OpenView SQM supports both SLA status and SLA Compliance. If a service has an availability objective defined as "99.5% daily available," then the availability status refers to an instant availability value (e.g.: 99.0%) whereas the compliance refers to the accumulation of time during which the service was not available. Therefore, over the defined time period, the SLA compliance can meet the 99.5% daily average value although some of the SLA status measurement during that day might have been below 99.5%.

6.4.2 Compliance

A Service Level Agreement generally defines "in service" hours for a specific Service or an underlying Service Component. The service hours represent the hours of the day during which the Service availability is relevant. The Service Hours Configuration is available at the SLA level. The Service Hours are expressed as a schedule.

The Service Level compliance is calculated based on the comparison of an SLO with the violation threshold (during "in service" hours).

When the SLO crosses the violation threshold, the Service Level becomes non-compliant. Non-compliance time is accumulated until the SLO is once again below the violation threshold.

The **Compliance Violation Level** (CVL) is expressed as the ratio between the non-compliance accumulated time and the total allowed violation duration for this Service Level.
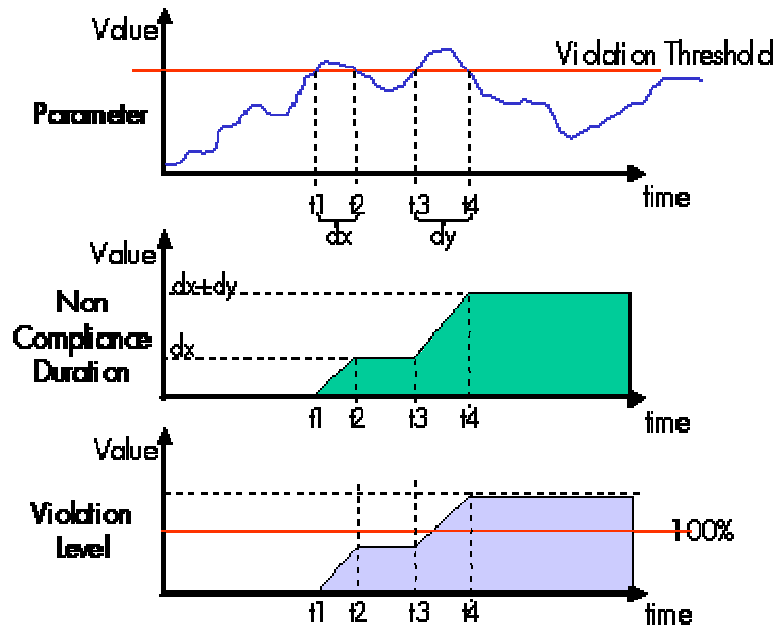
The non-compliance time is accumulated over the contractual reporting period called the **reference period**: for example, one-month. At the end of the reference period, the counter is reset to 0.
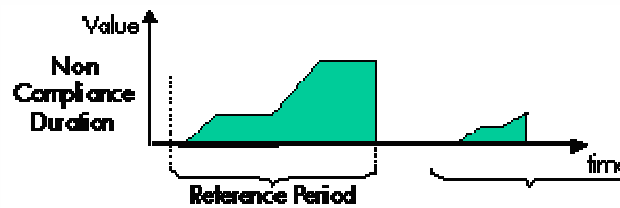
Example

For a reference period of 1 month, the service is offered at 8-8 M-F, meaning from 8:00am until 8:00pm Monday to Friday.

So, the overall in-service time for this reference period is 22 open days, that is, 12 hours (or this can be expressed as 15840 minutes).

Assuming that the targeted **Service Availability (SA%)** defined in the contract is 99%, then the maximum allowed non-compliance duration is 1% of 15840, that is: 158 minutes. If after 11 days and 2 hours of operation, the accumulated non-compliance time is 100 minutes, then the current compliance violation level at that time will be $100/158 = 63\%$.

6.4.3 Creating a New Service Level Agreement

1. Follow steps 1 to 3 in section 3.2.1 Creating a New Object from Scratch..

2. Whichever method used to start the process, choose **Service Level Agreement** from the option box that is displayed.

3. The first SLA Creation window will be displayed.

Figure 44   Create a Service Level Agreement, First Window

4. Choose the Definition from the drop-down list. Definition is a mandatory field and is therefore displayed in red until the choice is made.

5. Enter the optional Name.

6. Either type in an Identifier or click on the **Wizard** button to the right of the Identifier field to automatically create an Identifier. Identifier is a mandatory field and is therefore displayed in red until information is entered in this field.

7. Add a Description (optional).

8. Click on OK.

9. The second Create a Service Level Agreement dialog box will be opened in Create mode.

10. This dialog box has two tabs, **Details** and **Monitoring States**. The dialog box is opened with the Details tab displayed.

Figure 45   Create a Service Level Agreement, Screen 2

The Details tab screen is divided into four areas. The details of the SLA, the Agreement Type area, the Service Group and Service Level selection area, and the Service Hours Configuration area.

The Service Hours Configuration area is dedicated only to SLA compliance.

The Details Area

This area displays the details of the SLA.

The Agreement Type Area

For **Customer dependent services**, choose the **Type** of Service Level Agreement, **Customer** or **Operational**.
 If the Service is **Customer independent**, the only Type of agreement available is **Operational** and this is the only displayed Type.

1. If the type Customer is chosen, the word Customer will be displayed in red to the left of the field.

2. If the type Operational is chosen, the word Operational will be displayed in red to the left of the field.

3. To the right of this field, the Choice button becomes active when the cursor is placed over it.

4. If the Customer type is chosen, the Open a Customer dialog box is displayed and the Customer can be selected from the list displayed.

When the choice is made, the Open a Customer dialog box is closed, and the targeted Customer is displayed (grayed) in the Customer field. The information in this field cannot be edited manually.

5. If the Operational type is chosen, the **Open an Operation** dialog box is displayed and the Operation can be selected from the list displayed. When the choice is made, the Open an Operation dialog box is closed, and the Operation is displayed (grayed) in the Operation field. The information in this field cannot be edited manually.

Associated Service Group and Service Level Area

1. An Associated Service Group has to be chosen. The text is displayed in red until the choice is made.

2. To the right of the Service Group field the Choice button becomes active when the cursor is placed over it.

3. The **Open a Service Group** dialog box is displayed.

4. Choose a Service Group.

5. The Open a Service Group dialog box is closed, and the Service Group is displayed (grayed) in the Service Group information field. The information in this field cannot be edited manually.

6. A Service Level can also be associated, but this is not mandatory. The action has to be performed in the same way as for the Associated Service Group.

7. If a wrong choice of Agreement Type, Service Group or Service Level has been made, repeat the process described above, choosing a different Object. The new choice will be displayed (grayed) in the appropriate information field.

Service Hours Configuration Area

It is now mandatory to configure the service hours and configure the Schedule.

1. Enter the maximum number of minutes permitted for violation.

2. Enter the Reference period by choosing it from the drop-down list: Weekly, Monthly, Quarterly.

3. Set the schedule.

Setting the Schedule

Setting the schedule determines when the SLA is active or not (in or out service hours). When no schedule has been set, the SLA is considered as always active.

A schedule created on a given machine cannot be accessed by another machine, but the schedule file can always be copied to another machine.

There are two ways of setting the Schedule:

- Open the Schedule Editor
  by clicking on the button to the right of the Schedule field and enter all the needed details.

Or

- Import a Schedule.
  The schedule can be either used as it is or modified to your own needs. If a schedule is imported and modified, the original is not modified, only the copy on the local machine is. This process is described in the next section.

A schedule can also be created without associating it to a SLA.

Importing a Schedule

As well as creating schedules from scratch as described in the previous sections, a previously created schedule can be imported. It can then either be used as is or modified at will.

To import a Schedule:

1. Click on the Import button
   in the Service hours configuration area.

2. The Import Dialog box is displayed, giving access directly to the schedule directory.
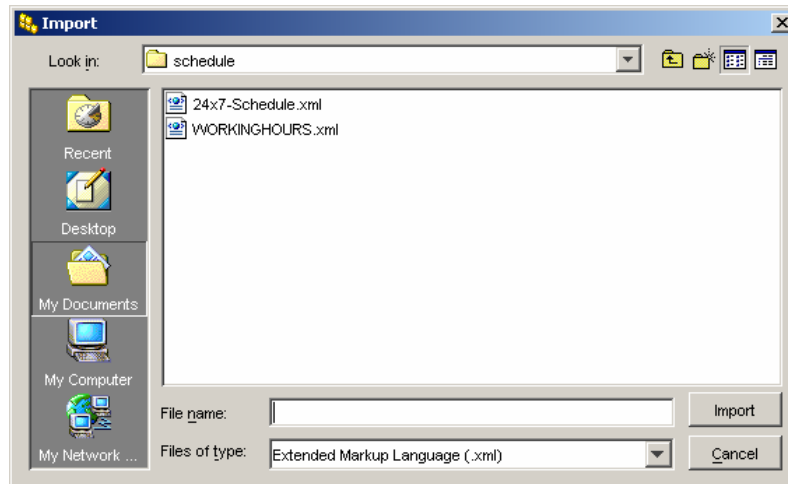
Schedules are stored in the directory **schedule**. The path is:
UI\SLAClient\schedule

3. Once this directory is accessed, select a schedule and click on Import in the Import dialog box.

Removing a Schedule

The schedule currently attached to the SLA can be removed by clicking on the Remove button.

6.4.4   Setting the Schedule with the Schedule Editor

The Schedule Editor is used to create a new Schedule or to modify an existing one.

1. Click on the button   to the right of the Schedule field.

The Schedule Editor will open.

Figure 46   The Schedule Editor
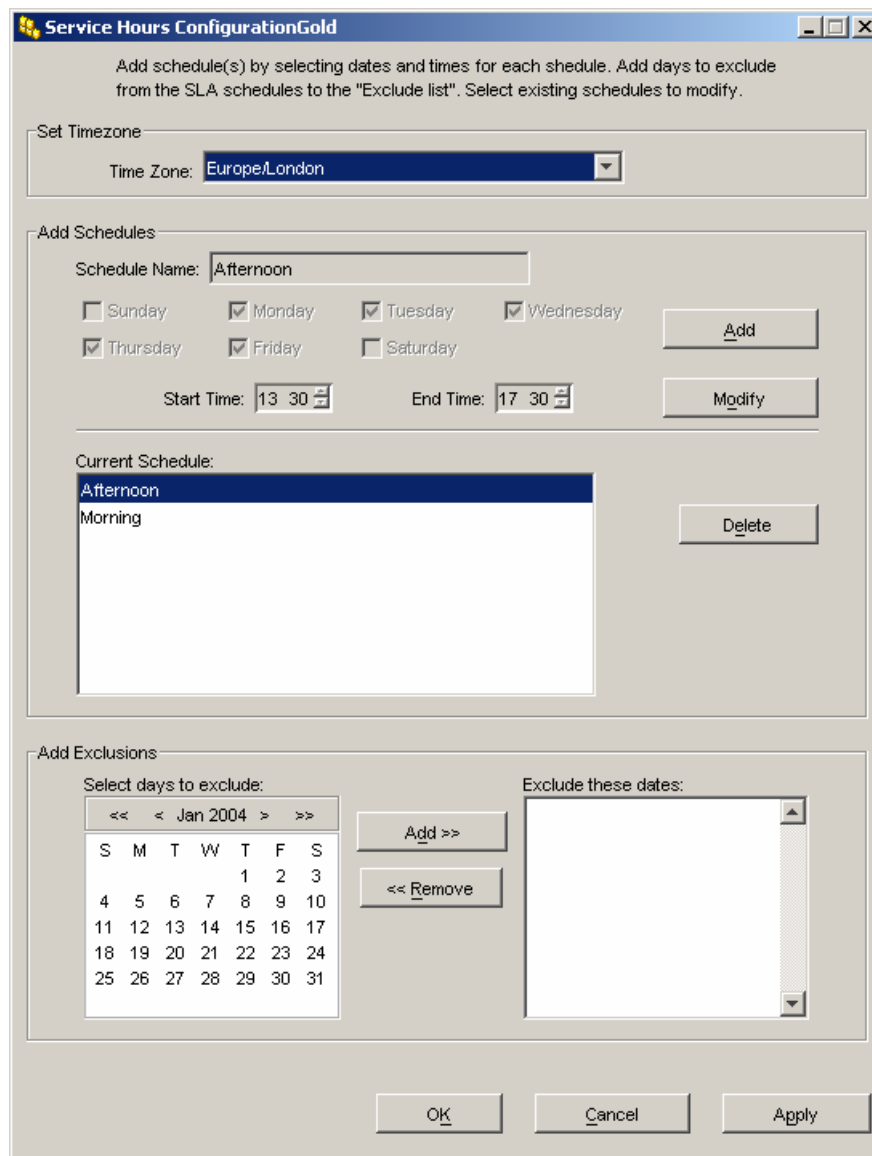
Like other Editors, the window is divided into separate areas for separate activities:
Set Time Zone, Add Schedules, Current Schedule, and Add Exclusions.

Set Time Zone

1. Select a time zone from the drop-down list.

    The time zones are organized under the five major continents as well as some
    special areas. For example: the time zone for New York is America/New_York,
    for Paris it is Europe/Paris. The time zone list can be navigated by typing the
    first letter of the time zone.

Add Schedules

1. To activate the Add Schedules editor, click on the Add button to the right of the
    Add Schedules area. Until then, none of the fields in the area can be edited. They
    display information for the currently selected Schedule in the Current Schedule
    area.

2. Once the Add button has been clicked, it changes to Cancel.

3. Enter a name for the Schedule. Note that this Schedule is in fact a Schedule element that is part of the whole edited Schedule.

4. Select one or more days for which the schedule applies.

5. Enter the time for the schedule to start and for it to finish.

6. The up and down arrows to the right of the fields can be used to set the Start Time and End Time values. The time value can also be manually in entered.

7. When the OK button is clicked, the schedule is created and the name of the schedule displayed in the Current Schedule area.

8. When a schedule has been added and displayed in the Current Schedule area, it can be modified. The OK button becomes a Modify button. The schedule must be selected in order to be modified.

Note

To validate the modification, click on the OK button that has replaced the Modify button. Otherwise, the update will not be taken into account.

Current Schedule Area

Selecting a schedule in the Current Schedule area activates the Delete button to the right of the display list, allowing the removal of this schedule.

When the schedule is displayed in the list, the selection remains on the first schedule entered, therefore make sure that the right schedule is selected before deleting it.

Add Exclusions Area

This area allows specifying dates on which the schedule is not operational.

Figure 47   Add Exclusions Area of Scheduler
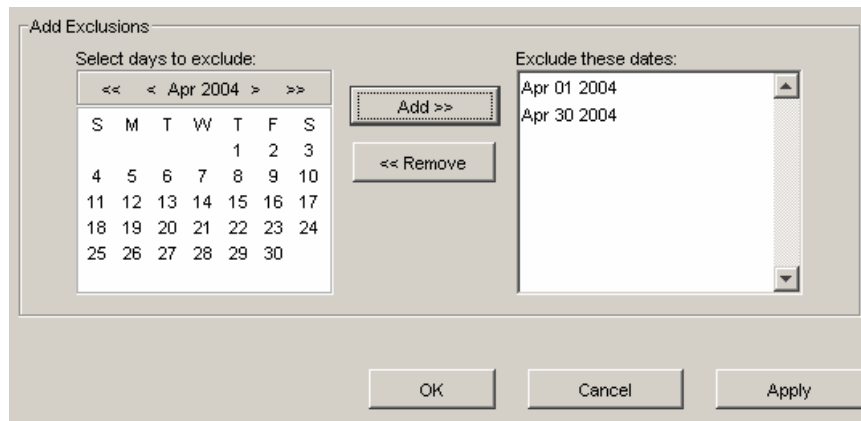
1. In order to add an exclude date, select it in the left-hand side calendar and click on the Add button.
    The calendar can be navigated by using the arrows at the top of it.
    Several dates can be selected at once by maintaining the keyboard shift key pressed while selecting them.

2. The date is displayed in the Exclude these dates panel.

3. Exclude dates can be removed by selecting them and clicking on the Remove button.
    Several dates can be selected at once by maintaining the keyboard shift key pressed while selecting them.

Validating a Schedule

After all the Schedule details have been entered, the schedule must be validated.

Use the buttons at the bottom of the Scheduler window:

*   **Apply**,
    applies the modification without exiting from the Scheduler Editor.

*   **Cancel,**
    cancels all the modifications and exits from the Scheduler

*   **OK,**
    applies the modifications and exits the scheduler in one operation.

The position of these buttons is illustrated in Figure 46 and Figure 47.

Creating a schedule from scratch

In order for a schedule to be shared between SLAs, it must be created from the Create menu. It is then saved into a file and can be imported in the various SLAs.

1. Click on the new button from the Toolbar.

2. The Create a Schedule dialog box is displayed. In the same way as for Creating a Service, type a Name and an Identifier, or click on the **Wizard** button 🪄 to create the Identifier automatically. Enter a Description (optional) and click on OK.

Figure 48   Create a schedule dialog box
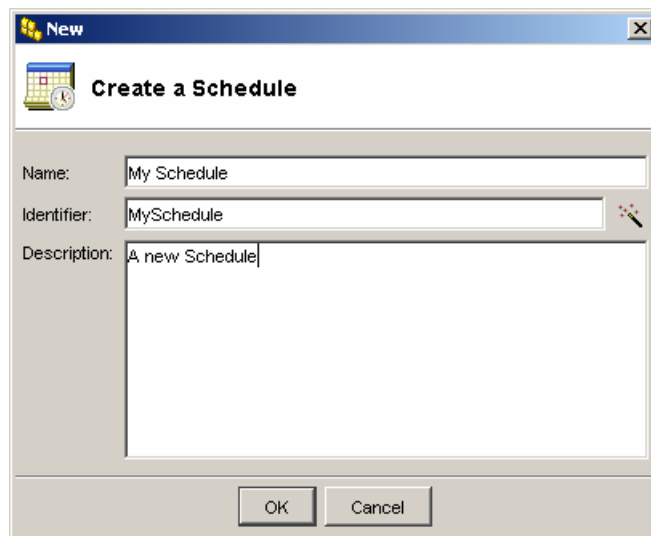
3. Click on Edit to edit the schedule (see details in Section 6.4.4).

Figure 49   Schedule creation details
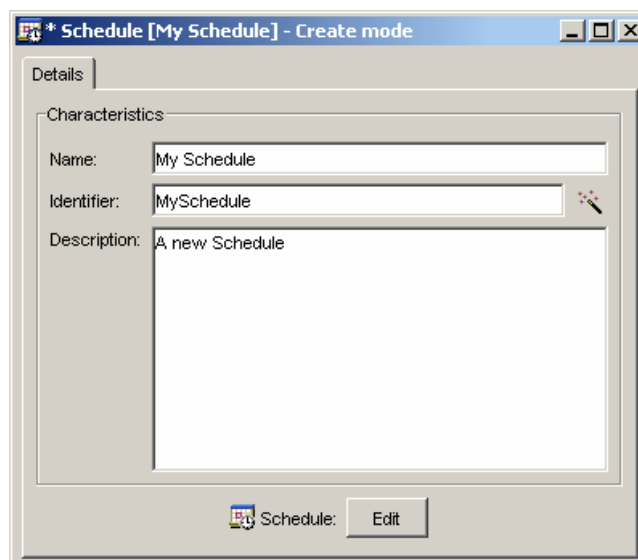
4. When the schedule has been edited, save the schedule with the Save button from the Tool bar.

5. The schedule is then saved in UI\SLAClient\schedule with the file name (in our example) *MySchedule.xml*

6.4.5 Modifying or Editing a Service Level Agreement

Open the Service Level Agreement to modify as described in Section 3.4.

The Service Level Agreement Editor opens in Create mode. The modifications are performed in the same way as when creating a new SLA. After having made the changes, save the Agreement.

6.4.6 How to Make a Service Level Agreement Operational

The Administrative State of an SLA controls the behaviour of the SLA and all its elements (Service and Service Component Instances) in term of data collection, parameters, statuses and compliance calculation.

When a SLA is Locked, SQM suspends all the services, service component instances and Data feeders used in the SLA, provided these objects are not involved in the data collection chain of another unlocked SLA or Service. For all these objects, the data collection is stopped, and the parameter values are not published anymore. Also, when a SLA is locked, the compliance and the statuses calculation is suspended for all the objects of the SLA, even for the one that remains unlocked. When a SLA is locked, the SLA is not reset, it is just suspended: the SLA and all its elements keep their current statuses during the locked period.

When a SLA is Unlocked, SQM resumes all the services, service instances and Data feeder used in the SLA. The collection, the parameters calculation, the statuses calculation and the compliance calculation are available for all these objects. When the SLA is resumed, the statuses of the all the elements of SLA are updated in accordance to the current parameter values, in order to resynchronize it.

Note

Due to the fact that some components can be part of several services or SLA, it is possible to have some parameter values updated during the locked period of a SLA, but as the SLA is locked, the statuses are not updated. For this reason, you can have some inconstancies when you chart parameters while the SLA is locked (status not in accordance with parameter value).

It is also possible to continue data collection for a locked service component instance in the following situation: the same DFI is used in locked and in unlocked service component instances. In this case, SQM stores the collected values for each component, but nothing will be published for locked components.

Lock/Unlock Impact on the compliance

The default behaviour is to consider Locked period as Off Duty period. This platform wide behaviour can be changed: it is possible to reset all compliance parameters to 0 when resuming an SLA (see "Administration Guide" section 3.3.3 Service Performance Data Manager for more details).

Lock/Unlock Impact in DataMart

In the DataMart, the locked periods are considered as Off Duty periods, and are not taken in account for service heath and status history indicators.

Locking/Unlocking an SLA

To unlock an SLA, open the SLA and from the menu bar, click on the Green ▶ Resume triangle.

To lock the SLA, click on the Red ■ Suspend button.

These buttons are also available in the **States Tab** of the Service Level Agreement Editor.

Chapter 7

Troubleshooting

This chapter provides assistance about how to troubleshoot HP OpenView Service Quality Manager **SLA Level Administration User Interface**.

7.1 Help

There is no **Context-Sensitive** Help provided with this version of the HP OpenView Service Quality Manager SLA Administration application. **Help** can be obtained from the On-line version of this manual.

7.2 On-line Manual

This manual is available on-line.

To display it:

1. From the **Help** menu, choose **Content**

or

2. Press F1.

The search facilities can be used to find Help on a specific subject.

7.3 Information and Error Display

The Service Quality Manager SLA Administration User Interface **Console** displays messages that provide information about the actions performed.

Messages and tips are also displayed on the appropriate screen relating to the actions to be performed, or just performed.

7.4 Connection and Timeout Problems

If there are problems when connecting to the SQM Repository server (the Connection Icon is red when the application is started) or communicating with the SQM Repository (timeout messages are received in the console and on the bottom bar of the application window), the configuration of the SQM Repository should be checked.

How to correct this is described in the *HP OpenView Service Quality Manager Administration Guide*.

It explains how to change the connection parameters, and also how to configure the timeout value.

7.5 Object Identifiers (IDs)

All **Objects** must have an **Identifier**, and the Identifier must be **unique**.

If an Object with is created with a duplicate ID, it is not saved and a message is displayed indicating that the ID must be changed.

To easily retrieve it in the different SQM GUIs, it is recommended to not use the automatic generation.

We recommend that a list of Identifiers be kept in a separate file to which to refer when creating a new one, to avoid wasting time in entering an Identifier which will be impossible to save.

7.6 SQM Repository Errors

It is possible that some errors related to the SQM Repository can occur. If this occurs, refer to the *HP OpenView Service Quality Manager Administration Guide.*

Appendix A

Service Level Administration User Interface Icons

This appendix is a glossary of the icons used in OpenView Service Quality Manager SLA Administration User Interface.

There are some icons that are only seen when they pop up during an action, allowing the user to perform the action which the icon represents. These icons are indicated with an asterisk in parentheses **(*)**.

Some icons are used in the OpenView Service Quality Manager SLA Administration UI, but are also Service Quality Manager Core icons. This is indicated in the description of the icon.

The icons are presented here in the alphabetical order of their filename.

Icon	Description
	Add Existing Service Component **(*)**
	Add New Component **(*)**
	Assign Existing Component **(*)**
	Assign Existing Service Component **(*)**
	Auto Instantiate **(*)**
	Close
	Console
	Copy
	Critical (Icon used in the Console) Also used as Stop.
	Customer (Service Quality Manager core icon)
	Cut

	Data Feeder (Service Quality Manager core icon)
	Data Feeder, Bind (*)
	Data Feeder, Unbind (*)
	Delete
	Duplicate Component (*)
	Help
	Help, Context Sensitive
	Information (Icon used in the Console)
	Instantiate (*)
	Maximize
	Minimize
	New
	New Line
	Off Line: displayed on the bottom bar of the SLA Administration User Interface Window when the SLA Administration application is not available
	On Line: displayed on the bottom bar of the SLA Administration User Interface Window when the SLA Administration application is available.
	Open
	Operation (Service Quality Manager core icon)
	Paste
	Confirmation (*)
	Refresh
	Resume

Icon	Description
💾	Save
	Save All
	Search
	Service Component Definition (Grey Cube) (Service Quality Manager core icon)
	Service Component Definition, Shared Component (Service Quality Manager core icon)
	Service Component Instance (Golden Cube) (Service Quality Manager core icon)
	Service (Service Quality Manager core icon)
	Service Group (Service Quality Manager core icon)
	Service Level Objective (Service Quality Manager core icon)
	SLA Administration User Interface
	Service Level Agreement (Service Quality Manager core icon)
	Service Level (Service Quality Manager core icon)
	Suspend
	Warning (Icon used in the Console)
	Wizard

Appendix B

Keyboard Shortcuts

This appendix provides a list of the keyboard shortcuts used in HP Service Quality Manager **SLA Administration User Interface**.

For example **Ctrl/N** indicates that the **Control** key and **N** have been pressed at the same time.

Key Stroke(s)	Action Performed
Ctrl/C	Copy
Ctrl/D	Delete
Ctrl/E	Export
Ctrl/F	Find
Ctrl/N	Creates a New Object
Ctrl/O	Opens an Object
Ctrl/S	Save
Ctrl/V	Paste
Ctrl/W	Cut
Ctrl/F4	Close
F1	Help
F5	Refresh

Appendix C

Strings Length Limitations

The length limitations for the editable fields of type string in the SLA Administration UI are indicated in the table below.

Field	Length
Label	512
Description	1024
Additional Information	1024
Action On / Action Off	1024
Property Values	1024

Glossary

This glossary defines terminology commonly used in HP OpenView Service Quality Manager.

Auto instantiate (SLA Administration)

This action automatically creates an Instance of the Object selected. When the instance is created, the initial values of its instance variables are assigned.

BI

See business intelligence.

Business intelligence (BI)

A broad category of applications and technologies for gathering, storing, analyzing, and providing access to data that helps users make better business decisions.

Collected binding

Describes how *collected parameters* are filled from *measurement parameters*: either directly assigned or through a more complex expression.

Collected parameters

Known as KPI in the TMF, they represent the parameters collected from the Service Adapters (*measurement parameters*) and mapped into SQM *service component* parameters.

Computed binding

Describes how *computed parameters* are filled from *collected parameters*: either directly assigned or through a more complex expression.

Computed parameters

Known as KQI in the TMF, they represent the parameters calculated from *collected parameters*.

CNM

See customer network management

Customer

Companies or organizations that make use of the *services* offered by a *service provider*, based on a contractual relationship.

Customer network management

Customer network management is enabled by means of tools that provide business customers with access to management information originating from the service provider.

Data collection interval

The interval of time over which performance parameters are retrieved from the monitored service resources. This interval does **not** have to be the same as the

measurement interval because *service adapters* or service resources may buffer statistics.

Data feeder

OpenView Service Quality Manager's source of data. A data feeder models service resources by defining one or more service parameters.

Data feeder definition

The static definition of a data feeder that models service resources by defining one or more service parameters.

Degraded service

The presence of anomalies or defects that cause degradation of the *quality of service*, but do not result in the total failure of the *service*.

Instantiate (SLA Administration)

Instantiate differs from Auto Instantiate in that items are instantiated individually.

Measurement interval

The interval of time over which each service parameter is measured. For example, a parameter may be the number of discarded packets, measured over a 15-minute measurement interval.

Measurement parameters

They represent the parameters directly collected by the Service Adapters. These parameters are defined in the *Data Feeders*.

Measurement Reference Point (MRP) naming scheme

This is the formal description of how the measurement point name is built, that is, by concatenating the values of Data Feeder properties and fixed strings.

Mobile virtual network operator

A mobile operator that does not own its own spectrum and usually does not have its own network infrastructure. Instead, MVNOs have business arrangements with traditional mobile operators to buy **minutes of use** for sale to their own customers.

MRP

See Measurement Reference Point.

MVNO

See mobile virtual network operator.

Parameter

A value or set of values that are periodically updated and that help determine the quality of service.

Parameter objective

A set of objectives for the parameters belonging to a service.

Property

Special static parameters that are given a value only when an instance of an OpenView Service Quality Manager **Object** is created. For example, a Service Component can have a property called "location".

QoS

See quality of service.

Quality of service (QoS)

The ITU-T has defined quality of service as "the collective effect of service performances that determine the degree of satisfaction of a user of the service".

Service

A Service is a set of independent functions (Service Components) that consist of hardware and software elements and an underlying communications medium. A Service can include anything from a single leased-line service, to a complex application, such as vision conferencing.

Service availability

A measurement made in the context of a *service level agreement* that is expressed as a percentage. This percentage indicates the time during which the *service* is operational at the respective *service access points*.

ServiceCenter Repository

The ServiceCenter Repository is the storage center for all Service Quality Manager data. It receives data from the various Service Quality Manager interfaces and each interface can request information from the Repository.

Service component

An independent function that is part of a *service*, such as a hardware or software element, or the underlying communications medium.

Service component instance

The instance of a Service Component Definition that is active in the network, such as an instance of the IPAccess Service Component definition called "pop".

Service level (SL)

Defines Service Parameters and operational data enforced by the Service Level Agreement (for example, Max Jitter < 10 ms).

Service level agreement (SLA)

There are two type of Service Level Agreement, the **Customer** Agreement: a contract between a *service provider* and a *customer*, which specifies in measurable terms what the service provider supplies to its customers, and the Operational Service Level Agreement, which specifies in measurable terms the operational levels of the Service. A *service level agreement* is composed of individual objectives.

Service level objective (SLO)

The set of objectives for the parameters belonging to a Service or Service Component.

Service parameter

See *parameter*.

Service provider

A company or organization that provides *services* as a business. Service providers may operate networks or may integrate the services of other providers.

Service instance (SI)

The instantiated service definition that is active in the network, such as an instance of the video service definition called "Paris".

Service instance group (SIG)

A **group** of *service instances* against which the *service availability* must be reported. Each *service instance* belongs to one or more Service Instance Groups and each SIG

contains at least one Service Instance. The relationship between the SIG and the Service Instances is defined in their *service level agreement*.

Service quality parameters

They represent *computed* and *collected* parameters

SI

See Service Instance.

SIG

See Service Instance Group.

SL

See Service Level

SLA

See Service Level Agreement.

SLO

See service level objective.

Subscriber

The entity responsible for the payment of charges incurred by one or more users.

User

An entity designated by a customer to use the services of a telecommunication network, such as a person using a UMTS mobile station as a portable telephone.

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