# HP Business Availability Center

for the Windows and Solaris operating systems

Software Version: 7.50

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## Using Service Level Management

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# Table of Contents

# PART II: SERVICE LEVEL MANAGEMENT REPORTS

# Welcome to This Guide

This guide describes how to use HP Business Availability Center Service Level Management to monitor the contracts your organization has with service providers and customers, both internal and external, and produce reports that measure service level agreement (SLA) compliance.

**This chapter includes:**

➤ How This Guide Is Organized on page 9

➤ Who Should Read This Guide on page 10

➤ Getting More Information on page 10

## How This Guide Is Organized

The guide contains the following parts:

**Part I    Service Level Management Administration**

Describes how to work with the Service Level Management Administration component to define Business Service CIs and agreements mapped to IT metrics, that represent the business services and business SLAs maintained by your organization.

**Part II    Service Level Management Reports**

Describes how to work with the Service Level Management application to produce reports that track and analyze service levels, and check compliance with business objectives.

# Who Should Read This Guide

This guide is intended for the following users of HP Business Availability Center:

➤ HP Business Availability Center administrators

➤ HP Business Availability Center application administrators

➤ HP Business Availability Center end users

Readers of this guide should be knowledgeable about navigating and using enterprise applications, and be familiar with HP Business Availability Center and enterprise monitoring and management concepts.

# Getting More Information

For a complete list of all online documentation included with HP Business Availability Center, additional online resources, information on acquiring documentation updates, and typographical conventions used in this guide, see the *HP Business Availability Center Deployment Guide* PDF.

# Part I

## Service Level Management Administration

# 1

# Service Level Management Introduction

This chapter introduces Service Level Management and discusses general topics that relate to working with Service Level Management.

**This chapter includes:**

**Concepts**

➤ Service Level Management - Overview on page 13

➤ The Audit Log on page 17

➤ Data Purging on page 17

## Service Level Management - Overview

In Service Level Management, an administrator defines service agreements that represent the formal and informal contracts your organization has with your service providers, customers, and with internal business units. Service agreements include Service Level Agreements (SLAs), Operational Level Agreements (OLAs), and underpinning contracts (UCs).

Service Level Management determines compliance with your service agreements by measuring your business applications. You can define business service entities (CIs) that represent the service offerings in your service catalog, and map measurements for service-related processes and network components to each Business Service CI.

The data produced by these measurements helps you determine whether the availability and performance requirements of users and infrastructure are being met. Service Level Management compares KPIs for availability percentages and performance times with service levels, and displays the results in reports.

You begin by examining performance trends and setting baselines for a variety of business processes. These baselines in turn enable you to establish realistic service level objectives for system availability and performance, within the different subsidiaries, geographical locations, or organizations that you serve.

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**Note:** The terms **Agreement** and **SLA** are both generally used to include SLAs, OLAs, and UCs; the main exception to this is in certain places in the user interface where you specifically select **SLA** as the agreement type.

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Service Level Management administration and reporting are accessed from two different areas of HP Business Availability Center:

## Service Level Management Administration

To access the Service Level Management administration pages, select **Admin** > **Service Level Management**.

Service Level Management Administration includes the following tabs:

➤ **Agreements Manager.** From this tab, you can create an agreement and recalculate existing agreements.

   ➤ **Agreements.** You manage SLAs, OLAs, and UCs that reflect actual agreements you have with your service providers or with internal business units. The agreements enable you to build reports showing the level of service management. For details, see "Building Agreements with the Agreements Wizard" on page 23.

   ➤ **Recalculations.** You can run recalculations on an SLA, usually after making retroactive changes. For details, see "Recalculation for Agreements" on page 42.

➤ **Services Manager.** In this tab, you define business service CIs to represent services provided and consumed by your department, and service offerings that set service objectives. For details, see "Services Manager and Business Services" on page 97.

➤ **Downtime Events.** In this tab, you can define downtime or incidents that represent actual event occurrences that may skew results and which you may want to exclude from reports. For details, see "Downtime Events" on page 145.

➤ **Repositories.** From this tab, you can define global service offerings, calendars, and outage categories, and edit or create KPIs and rules.

> ➤ **Global Service Offerings.** Global service offerings are service offerings that are available to associate with any Business Service CI. For details, see "Global Service Offerings" on page 121.
>
> ➤ **Calendars.** Calendars specify periods during which objectives must be checked. Service Level Management provides two default calendars (**24x7** and **Business Hours**); you can define more if needed. For details, see "Calendars" on page 161.
>
> ➤ **Outage Categories.** Outage categories can be used in Service Level Management reports, to make results more meaningful. Service Level Management provides default categories (Database, Network, Undefined, and Webserver); you can define more outages categories if needed. For details, see "Status Alerts for Agreements" on page 44.
>
> ➤ **KPIs.** Service Level Management includes default KPIs that you use when defining agreements and service offerings. For details, see "KPIs" on page 205.
>
> ➤ **Business Rules.** Service Level Management includes default business rules (also known as business logic) that you use when defining agreements and service offerings. For details, see "Rules" on page 205.

## Service Level Management Application

To access the Service Level Management application pages, select
**Applications** > **Service Level Management**.

The Service Level Management application includes the following tabs:

➤ **Status Snapshot.** In this tab, you view current and forecast status for the worst-performing agreements, and a summary of status in previous periods. For details, see "Status Snapshot Report" on page 285.

➤ **SLA Management.** In this tab, you select service-related views to view information about the connections between your business services, business units, and agreements. You can link to related reports that will assist you in understanding the connection. For details, see "About SLA Management" on page 217.

➤ **SLA Reports.** From this tab, you can access Service Level Management reports that show you results for KPIs, enable you to see how well service levels compare with your goals, and provide information on current, forecast, and over-time statuses for agreements and CIs. For details, see "Service Level Management Reports - Overview" on page 210.

➤ **Outage Reports.** From this tab, you can access reports that show data on outages that have occurred for CIs included in agreements. For details, see "Outage Reports" on page 217.

# 🔩 The Audit Log

You use the audit log to track configuration changes to your agreements and services. The audit log displays all configuration changes that can affect reports.

As the audit log can become very long, you can use filters to display only those agreements and services in which you are interested.

The audit log tracks the following changes:

➤ creation or deletion of an agreement

➤ any changes made to an agreement

➤ the addition of a configuration item (CI) to, or removal from, an agreement

➤ any changes made to a CI included in an agreement

➤ any changes made to business services, service offerings, and business units

➤ any changes to downtime or event scheduling, including the creation, editing, and removal of SLM and BPM events

➤ any changes to the calendars

➤ any changes to user permissions

For details on using the audit log, see "Audit Log" in *Platform Administration*.

# 🔩 Data Purging

Data collection tables can grow to a very large size, and thus need occasional purging. For details on managing historical data and the Purging Manager, see "Partitioning and Purging Historical Data from Profile Databases" in *Platform Administration*.

Service Level Management calculates aggregated data for agreement reports, and this aggregated data is stored for long periods. However, the raw data from the various monitoring sources is stored in the database for limited periods, according to the purging policy for each data type (see the settings on the **Admin** > **Platform** > **Setup and Maintenance** > **Data Partitioning and Purging** page).

If you want to re-aggregate data (when doing agreement recalculations) from earlier periods, you need to make sure that the raw data is available to do the calculations for those periods. For example, if there is a two week purging policy for SiteScope data, but your organization sometimes needs to recalculate agreements 4 weeks retroactively, then you need to change the purging policy for SiteScope to 4 weeks so that SiteScope data is available for the calculations.

If you need to re-aggregate data for further back than three months, then as well as making sure that the raw data is available, you must also change the default three month limit for the recalculation policy. To modify the limit, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, choose **Applications**, select **Service Level Management**, and locate the **Recalculation period limit** entry. Modify the value according to the period you need. (It is not recommended to lengthen the period because of the increased time required for the recalculation task.)

For information on recalculation, see "Recalculation for Agreements" on page 42.

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**Important:**

➤ If you recalculate an agreement for a period when the raw data has already been purged, you lose the previously calculated data for that period.

➤ Increasing the data stored in the database can impact on system performance. Changes to the purging policy and recalculation policy settings are advanced tasks that should be performed only by an administrator or HP Software Support.

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# 2

# Agreements in Service Level Management

This chapter describes the main concepts and administration for agreements in Service Level Management.

**This chapter includes:**

**Concepts**

**Tasks**

➤ Define a Service Agreement - Workflow on page 45

➤ Dynamically Update Locations in Agreements on page 55

➤ Display Hidden Rule Parameters for KPIs on page 60

➤ Customize Target Names on page 62

**Reference**

➤ Agreements Manager User Interface on page 63

**Troubleshooting and Limitations** on page 96

# 🔵 Agreements Manager - Overview

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**Note:** The terms **Agreement** and **SLA** are both generally used to include SLAs, OLAs, and UCs; the main exception to this is in certain places in the user interface where you specifically select **SLA** as the agreement type.

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You use the Agreements Manager to create and manage your agreements, and to recalculate existing agreements.

You create service level agreements (SLAs, OLAs, and UCs) that represent contracts entered into by your department with service providers, customers, and internal business units. You define the agreements by extracting information from actual service agreements and duplicating the information in Service Level Management.

Service Level Management monitors the agreements to check compliance with your service contracts. Your users can view Service Level Management reports to see how well actual service levels compare with agreement goals.

The agreements are based on Business Service CIs representing the services you need to monitor. You build the Business Service CIs by mapping them to the service-related CI topology that supports the service; these are the CIs that actually measure the performance of your network components and business applications. (You also have the option to add the service-related CIs directly to an agreement.)

Before you start defining business services and agreements, the Business Availability Center views containing the service-related CIs must be set up. For details, see "IT Universe Manager" in *Model Management*.

Compliance with agreement objectives is measured using Key Performance Indicators (KPIs). Service Level Management includes default KPIs and KPI rules that are attached automatically to the CIs in agreements, and you can attach additional KPIs.

If you want to use your own custom KPIs and rules with the CIs, you should define them before creating agreements. For details, see "Repositories" in *CI Attribute Customization*.

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**Note:** Service Level Management uses its own KPIs and rules, and not those of Dashboard.

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## Example of Interpreting a Service Level Agreement

The following is an example of clauses in a service level agreement:

> Users will be able to access the HP Web site within 8 seconds for 98% of the time during West Coast business hours. After business hours, they will be able to access the site within 12 seconds for 95% of the time.
>
> ...
>
> The average round-trip transmission between a UUNET-designated Hub Router in the Sunnyvale metropolitan area and a UUNET-designated Hub Router in the Chicago metropolitan area will take 120 milliseconds or less during business hours and 150 milliseconds or less after business hours.

When defining an agreement in Service Level Management to represent this SLA, the clauses are interpreted as the following calendars and KPI objectives (for previously created Business Process Monitor, SiteScope, and Real User Monitor CIs):

| Term | During Business Hours | After Business Hours |
| --- | --- | --- |
| **Calendar** | 9 AM to 5 PM, Monday to Friday PST | 5 PM to 9 AM, Monday to Friday PST<br><br>5 PM Friday to 9 AM Monday PST |
| **CI 1 (measures availability objective)** | 98% | 95% |
| **CI 2 (measures performance objective)** | Home page must download within 8 seconds. | Home page must download within 12 seconds. |
| **CI 3 (measures network performance)** | 120 milliseconds from hub router in Sunnyvale to hub router in Chicago | 150 milliseconds from hub router in Sunnyvale to hub router in Chicago |

# Building Agreements with the Agreements Wizard

The Create Agreement Wizard provides two alternative wizard processes for building your agreement, service-based or CI-based.

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**Note to HP Software-as-a-Service users:** By default, you can create up to ten agreements. To increase this number, contact HP Software-as-a-Service Support.

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Building agreements is described in the following sections:

➤ "Building Agreements—Service-Based Process" on page 23

➤ "Workflow for Using the Service-Based Process" on page 24

➤ "Building Agreements—CI-Based Process" on page 26

➤ "Workflow for Using the CI-Based Process" on page 26

## Building Agreements—Service-Based Process

The Create Agreement Wizard has the option to use a service-based process to build your agreement, and this is the recommended process to use. The service-based option enables you to build an agreement based on defined business services. This service-oriented approach bases your agreements on ITIL standards, and facilitates integration with other service-based solutions.

Each business service is represented by a Business Service CI. You can define the Business Service CIs in the Services Manager tab, or define them while creating a service-based agreement in the Create Agreement Wizard.

A Business Service CI contains all the CIs in the CMDB that are related to that service. For example, you might create a Business Service CI called Online Payment Service, and attach all CIs in the system that are related to the online payment service to that Business Service CI. The Online Payment Service CI can then be added to any agreement you create that involves the online payment service.

After adding a Business Service CI to your agreement in the Create
Agreement Wizard, you have the option to filter the service-related CIs that
are included in the business service topology. For example, the Online
Payment Service CI includes all CIs that monitor a particular Web server.
This Web server is not applicable for the agreement you are creating, so you
filter the Online Payment Service topology to exclude the unnecessary CIs.
All other service-related CIs that are part of the Online Payment Service CI
topology remain attached to the agreement.

When there is a need to fine-tune information for the CIs (KPIs, objectives,
outages, weights), you can do this after the agreement has been added to the
Agreements Manager tab, in the Advanced Agreement Options Wizard
(intended for users with advanced understanding of CI and KPI
functioning).

See "Workflow for Using the Service-Based Process" on page 24.

## Workflow for Using the Service-Based Process

The following provides a suggested workflow for working with Service Level
Management to build agreements based on business services. Many of the
steps shown are optional, and do not need to be performed in the order
shown. For an explanation, see "Building Agreements—Service-Based
Process" on page 23. For more detailed information on the steps involved,
see "Define a Service Agreement - Workflow" on page 45.

```
┌─────────────────────────┐
│  CMDB populated with    │
│  service-related CIs    │
└─────────────────────────┘
             │
Universal CMDB Administration >
      IT Universe Manager
             │
             ▼
┌─────────────────────────┐
│  Define service providers│
│  and customers in Business│
│       Units view        │
└─────────────────────────┘
             │
   Service Level Management
       Administration >
       Repositories tab
             │
             ▼
┌─────────────────────────┐
│ Define custom calendars and│
│    outage categories    │
└─────────────────────────┘
             │
      Services Manager
            tab
             │
             ▼
┌─────────────────────────┐
│ Define Business Service CIs│
│  and their service topology│
└─────────────────────────┘
             │
             ▼
┌─────────────────────────┐
│     Define offering     │
│  levels and associate with│
│   Business Service CIs  │
└─────────────────────────┘
             │
     Agreements Manager
            tab
             │
             ▼
┌─────────────────────────┐
│ Define agreement in Create│
│    Agreement Wizard     │
└─────────────────────────┘
             │
             ▼
┌─────────────────────────┐
│ Add Business Service CIs to│
│ agreement and select offering│
│        levels           │
└─────────────────────────┘
             │
             ▼
┌─────────────────────────┐
│ Fine-tune KPIs and weights in│
│ Advanced  Agreement Options│
│         Wizard          │
└─────────────────────────┘
             │
   Platform Administration >
   Users and Permissions tab
             │
             ▼
┌─────────────────────────┐
│ Assign user permissions for│
│        agreement        │
└─────────────────────────┘
             │
   Service Level Management
         Application
             │
             ▼
┌─────────────────────────┐
│ View data for agreement in│
│ Service Level Management │
│        reports          │
└─────────────────────────┘
```

## Building Agreements—CI-Based Process

The Create Agreement Wizard offers an option to use a CI-based process to build your agreement (this is the process that was used in previous Business Availability Center versions). The CI-based version enables you to build an agreement by adding all CIs relating to the agreement services, and then fine-tuning the information for the CIs (KPIs, objectives, outages, weights).
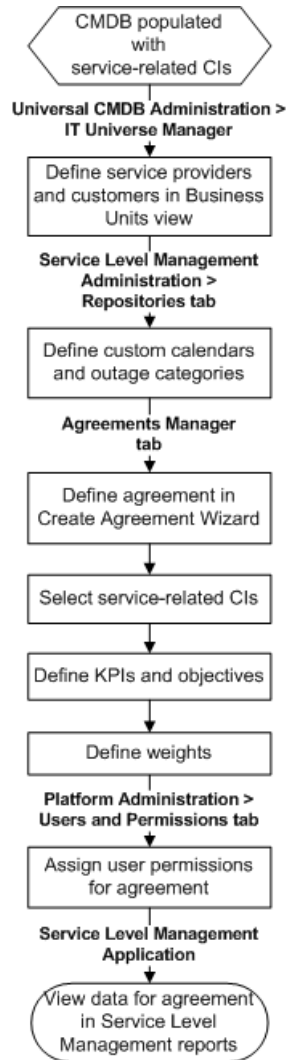
The CI-based version of the Create Agreement Wizard does not support the new features offered with the service-based version, such as service offerings and imported transaction thresholds. It is recommended that you use the service-based wizard to build agreements, in order to provide better ITIL management for your service contracts. (For details, see "Building Agreements—Service-Based Process" on page 23.)

See "Workflow for Using the CI-Based Process" on page 26.

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**Note:** The CI-based process should be used for building agreements for HP Business Process Insight data. For more information, see "Agreements for Business Process and Business Transaction CIs - Overview" on page 188.

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## Workflow for Using the CI-Based Process

The following provides a suggested workflow for working with Service Level Management to build agreements using the CI-based process. Many of the steps shown are optional, and do not need to be performed in the order shown. For an explanation, see "Building Agreements—CI-Based Process" on page 26. For more detailed information on the steps involved, see "Define a Service Agreement - Workflow" on page 45.

CMDB populated
with
service-related CIs

**Universal CMDB Administration >
IT Universe Manager**

Define service providers
and customers in Business
Units view

**Service Level Management
Administration >
Repositories tab**

Define custom calendars
and outage categories

**Agreements Manager
tab**

Define agreement in
Create Agreement Wizard

Select service-related CIs

Define KPIs and objectives

Define weights

**Platform Administration >
Users and Permissions tab**

Assign user permissions
for agreement

**Service Level Management
Application**

View data for agreement
in Service Level
Management reports

# Business Units for Services and Agreements

You create business units to manage business entities such as service providers, customers, and any other entities with which you conduct business. They can be part of your internal IT department or external. For each business unit, you can build a hierarchy of components.

Business Unit CIs representing your providers and customers are defined in the Business Units view in the **Admin** > **Universal CMDB** > **Modeling** > **IT Universe Manager** page. After they are added to the Business Units view, they are available for associating with agreements (providers and customers) and business services (providers only). If required, you can associate a provider with each business service, and associate a different provider with the agreement that contains those services.

You associate providers with business services in the Create Business Service Wizard (see "Define Business Service Properties Page" on page 108), and associate providers and customers with agreements in the Create Agreement Wizard (see "Define Agreement Properties Page" on page 68).

After linking business units to your agreements, you can see information organized by providers and customers in some of the Service Level Management reports and in the SLA Management tab. You can also see information on the business services associated with providers in the Service Providers view (available in the SLA Management tab and in Dashboard).

# SLAs, OLAs, and UCs

When defining an agreement in Service Level Management, you can classify it as one of the following agreement types:

➤ **OLA (Operational Level Agreement).** An internal agreement covering the delivery of services which support the IT organization in their delivery of services. OLA is usually used to indicate that the contract addresses system hardware (machines, routers, and so on).

➤ **SLA (Service Level Agreement).** Written agreement between a service provider and the customer(s), that documents agreed service levels for a service. SLA is usually used to indicate that the contract addresses services (applications, services, business processes, and so forth).

➤ **Underpinning contract.** A contract with an external supplier covering delivery of services that support the IT organization in their delivery of services.

These classifications are used to filter and organize agreement data in Service Level Management reports.

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**Note:** The terms **Agreement** and **SLA** are both generally used to include SLAs, OLAs, and UCs; the main exception to this is in certain places in the user interface where you specifically select **SLA** as the agreement type.

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# CIs and KPIs in Agreements

Service Level Management agreements are based on the CIs that measure the performance of your service-related network components and applications. The KPIs attached to each CI compare the data received for the CI with defined objectives, to provide an indication of how well agreement goals are being met.

For example, you might add the following CIs to your agreements, to check if availability percentages and performance times reflect the terms of the agreement:

➤ A Business Process Monitor CI that measures the time taken to add a purchase to a shopping cart.

➤ A SiteScope CI that measures runtime for a servlet on a WebLogic 6.x application server.

➤ A SiteScope Monitor CI that measures the percentage of free disk space on a database server.

The following sections describe adding CIs and KPIs to agreements:

➤ "Adding CIs to Agreements" on page 30

➤ "KPI Assignment" on page 31

## Adding CIs to Agreements

You add service-related CIs to agreements by selecting them directly (when defining a CI-based agreement) or by adding a Business Service CI that contains all the service-related CIs. For details, see "Building Agreements with the Agreements Wizard" on page 23.

By default, you can define up to 500 CIs in an agreement. To increase this value, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, choose **Applications**, select **Service Level Management**, and locate the **Maximum number of CIs for SLA** entry. Modify the value as required; however, be aware that increasing the number of CIs may impact on performance.

Some CIs cannot be added to an agreement. For example, monitoring CIs that are defined to receive non-persistent samples cannot be included in an agreement. (Persistent data refers to data that is stored in the database, while non-persistent data is reported only to the bus.) When working in the CI-based Agreement Wizard, if you try to add prohibited CIs to the agreement, you get an error message on the Select CIs Page. When working in the service-based Agreement Wizard, if a business service containing a prohibited CI is added to the agreement, the prohibited CI is automatically excluded from the agreement.

The non-persistent CITs are defined in the **Prohibited configuration item types** XML file, accessed from the Infrastructure Settings Manager (**Admin > Platform** > **Setup and Maintenance** > **Infrastructure Settings** > **Applications** > **Service Level Management**).

## KPI Assignment

Service Level Management includes default KPIs and business rules that are automatically attached to the CIs that you add to an agreement. The functionality for attaching the KPIs depends on whether the agreement is built using the service-based process or the CI-based process. (For information on the different processes, see "Building Agreements with the Agreements Wizard" on page 23.)

➤ **KPI assignment for service-based process.** KPI assignment is determined by the service offering for the parent Business Service CI, provided that each assignment is valid for the CI type. The valid mapping of KPIs and rules to CI types is defined in the **KPIs valid assignments** XML file. For more information, see "How KPI Assignment Works" on page 127.

➤ **KPI assignment for CI-based process.** The mapping of default KPIs and rules to CIs, for various monitor and group CITs, is defined in the **Default KPIs** XML file. The KPIs are only attached to the CIs in the agreement if **Automatically define default KPIs for new CIs** is selected in the Select CIs page of the Agreement Wizard.

To view and edit the Default KPIs XML definitions, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, choose **Applications**, select **Service Level Management**, and locate the **Default KPIs** entry in the table. If you need to edit the file, it is recommended that you copy the file contents to an XML editor.

For general information on KPI functionality, see "KPI Configuration Overview" in *Using Dashboard*. For details on Service Level Management KPIs, see "List of Service Level Management KPIs and Details" in *CI Attribute Customization*.

**Note the following:**

➤ You can manually attach additional KPIs to the CIs in an agreement, and edit the attached KPIs. You can attach a KPI to any CI, at any level in the agreement hierarchy. For details on attaching and editing KPIs, see "KPI Definition Dialog Box" on page 87.

➤ Manually attached KPIs do not automatically propagate up to the parent CI. If you want the KPI to also appear for the parent CI, you must manually attach it to the parent.

➤ A maximum of 6 KPIs can be attached to any CI.

➤ The KPIs that you attach to a CI, or changes that you make to a KPI for a CI, are only active within the current agreement. These changes have no affect on the CI or KPIs within other agreements.

➤ During agreement creation, Service Level Management displays only applicable rules for each KPI, in the KPI Definition window. An empty Business rule field signifies that there are no applicable rules for the selected KPI, for the CI associated with the agreement. (That is, the same KPI, when used with another CI, may have applicable rules.)

➤ Service Level Management uses its own KPIs, only viewable in Service Level Management reports. The exception to this is the PNR KPI, which is used to show agreement data in Dashboard. For details, see "Viewing PNR Data for Agreements in Dashboard" on page 39.

➤ When the Performance KPI and BPM Percentile rule are used for a BPM Transaction from Location CI in a service-based agreement, the definition for the rule includes an import mechanism that imports the transaction threshold settings. For details, see "Imported Transaction Thresholds" on page 37.

# 🔩 Dynamic Update of Business Process Locations to Agreements

The Agreement Wizard includes an **Include Locations** option, enabling the agreement to be dynamically updated with the results from all current and future locations for a Business Process Monitor transaction.

This option is applicable only when Business Availability Center is set to work in **Transaction/Location** hierarchy structure (defined in **Admin > Universal CMDB > Source Manager > Business Process Monitoring** source adapter). When working with a transaction/location hierarchy, the source adapter creates a BPM Transaction from Location CI for each Business Process Monitor location running the transaction. The BPM Transaction from Location CIs are added under the relevant Business Process Step CI.

In Service Level Management, when you add a Business Process Step CI to an agreement (either directly, in a CI-based agreement, or as part of a business service, in a service-based agreement), the BPM Transaction from Location CIs that are currently under the Business Process Step CI are automatically included in the agreement. However, if you want the agreement to be dynamically updated with results for new BPM Transaction from Location CIs that are added in the future (or that have been added since you defined the agreement), you must select the Include Locations option.

When the Include Locations option is applied, Service Level Management aggregates the Business Process Monitor transaction data from all locations under each relevant Business Process Step CI. The KPIs and rules that are normally applied at the BPM Transaction from Location CI level are applied instead to the Business Process Step CI. (A consequence of this is that you cannot view a breakdown by locations for the agreement in the Service Level Management reports.)

**Note:**

➤ If you have changed the default rule or modified rule parameters for a Business Process Step KPI, your changes are overridden when the KPI rule is changed by the Include Locations option.

➤ The Include Locations option does not work with Business Process Step CIs that are created manually in IT Universe Manager.

If you choose not to select the Include Locations option, then any BPM Transaction from Location CIs that are added under the Business Process Step in the future are not automatically included in the agreement—they must be added manually.

For more information on applying and removing the Include Locations functionality, see "Dynamically Update Locations in Agreements" on page 55.

## Outages in Agreements

An outage is a period of time during which a measurement fails. Service Level Management calculates outages using the Outages KPI attached to a CI: a CI is considered to have failed if it does not meet the criteria defined in the KPI rule. For example, a CI can fail because the failure has a duration of at least the minimum duration defined in the outage rule. A CI can also fail if a minimum number of failures has been reached.

You define the Outages KPI for CIs in agreements, in the Add Outage dialog box, described in "Add Outage Dialog Box" on page 63. You can change the rule for the Outages KPI, modify the rule parameters, and define an outage category (see "Outage Categories" on page 35).

For information on the outage rules, see "Service Level Management Rules" in *CI Attribute Customization*.

You can attach one Outages KPI only for each CI. Monitoring CIs generally have the Outages KPI attached automatically, using a default outage rule. The Outages KPI then propagates up the tree using the default group rule, like other KPIs.

The Outages KPI does not itself appear in reports; however, it must be attached to a CI in order to view data in the outage reports (for details, see "Outage Reports" on page 217). If you want to view outage information in other Service Level Management reports, you can attach outage-connected KPIs to the CI, such as Number of Outages, Outage Duration, and Time Between Outages. These KPIs can be displayed in many of the reports in the SLA Reports tab.

---

**Note:** Changing the rule for the Outages KPI may affect results for the other outage-connected KPIs.

---

## Outage Categories

Outage categories are used in Service Level Management reports, to make results more meaningful. The outage categories enable you to categorize the probable outage cause for a CI.

You can assign an outage category to a CI as part of the Outages KPI definition (see "Add Outage Dialog Box" on page 63); you can also assign an outage category to an outage in the Outage Summary report (see "Outage Summary Report" on page 270). However, it is recommended to categorize outages during agreement creation.

Service Level Management contains preconfigured outage categories for **Database**, **Network**, **Webserver,** and **Undefined** (for outages from non-defined sources). You can create your own additional outage categories. For details, see "Outage Categories Page" on page 91.

---

**Note:** You cannot delete any outage categories, whether preconfigured or user-created.

---

# Weights for KPI Calculations

You can define weights for CIs included in agreements, either in the Agreement Wizard for CI-based agreements (see "Define Weights Page" on page 80) or in the Advanced Agreement Options Wizard for service-based agreements (see "Define Weights Page" on page 66).

You define weights on child CIs, so that the weighted child CI has more impact on the KPI calculations for the parent CI. The weights are only applied for KPIs that have a rule that uses weights, for example, if the rule calculates a percentage.
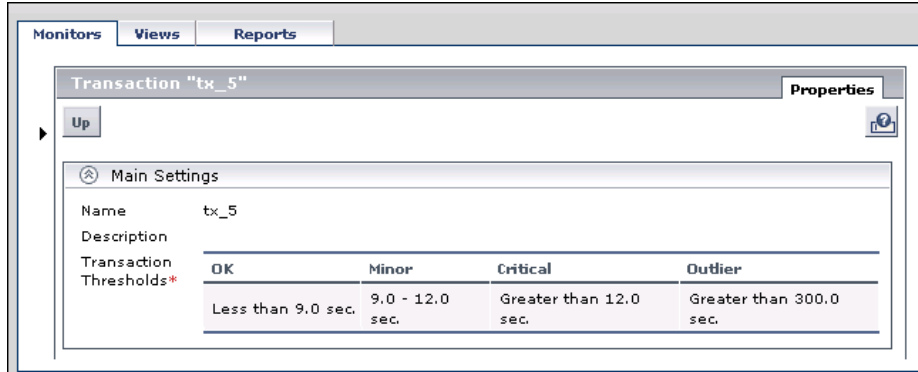
For example, your agreement includes a Business Process Group CI that contains two Business Process Step CIs. One child CI simulates a user buying a product at one location and the other CI simulates a user at a second location. You decide that availability and performance at the first location are more important than at the second, and so you give the CIs weights of 2 and 1. When Service Level Management calculates the Availability and Performance KPI values for the Business Process Group CI, child CI 1 contributes two thirds of the overall score and CI 2 contributes one third.

---

**Tip:** When assigning weights to CIs, it may be helpful to consider the percentage weight you want to give each CI. For example, say you have two CIs and you think one should carry 40% of the weight and the other 60%, you could set their weights at 40 and 60 respectively.

---

By default, Six Sigma calculations do not take weighting into account.

# 🍀 Imported Transaction Thresholds

BPM Transaction from Location CIs are created based on the transaction monitors defined in **Admin** > **End User Management**. The transaction monitors include transaction threshold settings, defining OK, Minor, and Critical statuses for the monitor.

| Monitors | Views | Reports |
|---|---|---|

**Transaction "tx_5"**      **Properties**

| Up | | | | 🗗 |
|---|---|---|---|---|
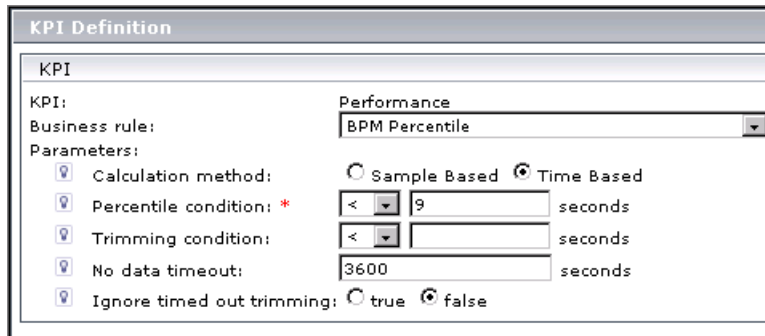
⊗ **Main Settings**

Name      tx_5

Description

Transaction Thresholds*

| OK | Minor | Critical | Outlier |
|---|---|---|---|
| Less than 9.0 sec. | 9.0 - 12.0 sec. | Greater than 12.0 sec. | Greater than 300.0 sec. |

When the Performance KPI and BPM Percentile rule is used for a BPM Transaction from Location CI in a service-based agreement, the definition for the rule includes an import threshold mechanism that imports the value defined for the monitor's **OK** threshold into the **Percentile Condition** parameter for the rule. (For information on the rule, see "BPM Percentile"in *CI Attribute Customization*.)

**KPI Definition**

**KPI**

KPI:                         Performance

Business rule:          BPM Percentile

Parameters:

   ❓   Calculation method:      ○ Sample Based   ◉ Time Based

   ❓   Percentile condition: *    < ▾   9             seconds

   ❓   Trimming condition:      < ▾                seconds

   ❓   No data timeout:       3600          seconds

   ❓   Ignore timed out trimming: ○ true   ◉ false

Note the following:

➤ The import mechanism is only for Transaction from Location CIs in service-based agreements.

➤ You can override the imported threshold by editing the KPI in the Advanced Agreement Options Wizard.

➤ If the monitor does not have a threshold value in End User Management, or if the import mechanism fails, the threshold defined for the Percentile Condition parameter in the Rule repository is used.

➤ If you want to hard code a different value for the Percentile Condition parameter, you can do so in the KPIs Valid Assignments XML file. To edit the file, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, choose **Applications**, select **Service Level Management**, and locate the **KPIs valid assignments** entry. Click the **Edit** button to view the assignments. It is recommended that you copy the file contents to an XML editor to make changes.

```
<CMDB_Classes>
        <CMDB_Class Name="bpm_tx_from_location"/>
</CMDB_Classes>
<KPIs>
        <KPI Id="101">
                <Rule Id="200"/>
        </KPI>
        <KPI Id="103">
                <Rule Id="201"/>
        </KPI>
        <KPI Id="106">
                <Rule Id="204">
                        <Rule_parameters>
                                        <Parameter Key="Percentile condition" Value="&lt;XXX{0}">
                                                <attribute Key="0" Value="rank_1_from"
                                                method="convertMilisecToSec"/>
                                        </Parameter>
                        </Rule_parameters>
                </Rule>
        </KPI>
```

For example, you might change the Percentile condition to **Value="10"**.

# Six Sigma for Agreements

You can produce certain Service Level Management reports that show data from a Six Sigma perspective. To see Six Sigma data for a CI, you associate a Six Sigma KPI with the CI in the agreement (either in the Agreement Wizard or in the Advanced Agreement Options Wizard). Service Level Management uses two KPIs for measuring Six Sigma compliance, Availability Six Sigma and Performance Six Sigma.

When defining the Six Sigma KPI, you enter Six Sigma objective values between 0 and 6 with up to three decimal points. This defines the objective against which Service Level Management measures the time taken to execute a CI, or the time that a business application or a service is up and running.

For details on Six Sigma KPIs and rules, see "Six Sigma Rules" in *CI Attribute Customization*.

# Viewing PNR Data for Agreements in Dashboard

In the Dashboard views, you can display PNR (point of no return) data for CIs that are included in your agreements.

The PNR KPI enables you to view how well agreement objectives are being met. When the PNR KPI is defined for a CI, a bar is displayed in Dashboard indicating how much more time (in percentages) the CI can be unavailable before the agreement is in breach of contract.

The PNR KPI is defined for the CI in Dashboard Administration, and is calculated based on the Availability KPI attached to the CI in Service Level Management. For details on configuring the PNR KPI, see the example in "Configure a KPI – Workflow" in *Using Dashboard*.

# ♣ Integration with HP SOA Systinet

If Business Availability Center is integrated with HP SOA Systinet, you can drill down to HP SOA Systinet during agreement creation or editing to view contract information for Web services in HP SOA Systinet. This information can then be used when configuring the agreement, enabling you to monitor the contract details in Service Level Management.

To enable the linkage with HP SOA Systinet, you must include in your agreement a CI that represents an HP SOA Systinet Web service. You can then drill down to HP SOA Systinet from the Define KPIs page, by first selecting the Web service CI, then clicking the **Drill down to Systinet** link that is displayed under the Outages KPI section. HP SOA Systinet opens in a new window.

➤ For service-based agreements, the linkage is from the Define KPIs Page in the Advanced Agreement Options Wizard (see "Define KPIs Page" on page 66).

➤ For CI-based agreements, the linkage is from the Define KPIs Page in the Agreement Wizard (see "Define KPIs Page" on page 77).

For more information on the integration, see "Integration of HP SOA Systinet" in *Solutions and Integrations*. For details on working with HP SOA Systinet, see the HP SOA Systinet documentation.

# Integration with HP OVO

If Business Availability Center is integrated with HP OVO, you can include EMS Monitor CIs for the monitored HP OVO system in your agreements. For information on setting up the integration, see "HP OVO Integration" in *Solutions and Integrations*.

Service Level Management contains KPIs and rules specifically configured for the HP OVO EMS Monitor CIs. There are four KPIs that are attached by default to the CIs: **Application**, **Network**, **Security**, and **System**.

➤ **Application.** Displays information on the status of the HP OVO application, as supplied by the Application field in the HP OVO sample. This KPI uses the **Application Quality** monitor rule.

➤ **Network.** Displays information on the status of the network in the HP OVO application, as supplied by the Network field in the HP OVO sample. This KPI uses the **Network Quality** monitor rule.

➤ **Security.** Displays information on security in the HP OVO application, as supplied by the Security field in the HP OVO sample. This KPI uses the **Security Quality** monitor rule.

➤ **System.** Displays information on system status in the HP OVO application, as supplied by the System field in the HP OVO sample. This KPI uses the **System Quality** monitor rule.

For more information on the KPIs, see "List of Service Level Management KPIs and Details" in *CI Attribute Customization*.

# Permissions for Working with Agreements

After defining an agreement, the HP Business Availability Center administrator must give users permission to work with the agreement. Users with view permission can view or generate reports for their agreements. You define permissions in **Admin** > **Platform** > **Users and Permissions**.

For general information on defining permissions, see "Permissions Overview" in *Platform Administration*.

**Note:** If you change a user's permissions for a specific agreement, the user must log out and log in again to view the changes.

# Recalculation for Agreements

**Note for HP Software-as-a-Service customers:** HP Operations administers the recalculation task functionality. For information about recalculation, contact HP Software-as-a-Service Support.

Service Level Management automatically recalculates the agreement data once an hour, for the data received two hours ago. That is, if the time is now 07:30 AM, Service Level Management recalculated the data at 7:00 AM for data that was received between 05:00 AM and 06:00 AM.

**Note:** If you create a new agreement for a period in the past, then Service Level Management automatically runs recalculation.

In addition, you can schedule recalculation tasks to update the data in your agreements. You generally use recalculation after making retroactive changes. For example:

➤ After defining a downtime event for the previous week, you should run the recalculation process to show the effect of the event on results.

➤ In the case of a connection problem with a site where data is sent after a one day delay, you should run recalculation so that this data is also included in calculations. (Service Level Management automatically supports "late arrivals," that is, data that reaches the database up to one hour after the data is recorded. However, for data reaching the database after a longer period of time, you must run the recalculation function.)

➤ After viewing the reports of a specific agreement, you notice that the objective definition was set too high. You edit the objective and run recalculation so that the change is reflected in the historical data.

Service Level Management performs aggregation retroactively on existing data only when an agreement is recalculated. If the agreement is not recalculated, previous data is displayed in the report even though it may not answer the criteria set by the changes.

Recalculation tasks are scheduled from the "Agreements Manager Page" on page 83. Recalculation is only enabled if an agreement can be recalculated. The functionality is disabled for agreements with state **Preliminary** or **Pending**, and for **Terminated** agreements that ended too long ago for recalculation.

After scheduling a recalculation task, you can cancel the scheduled task if has not yet begun running. Once the task is running, a message is displayed in the **State** column on the Agreements Manager page, for example, Recalculation Progress: 25%.

By default, the earliest date at which the recalculation process can begin running is three months back (default set in the Infrastructure Settings Manager). For details, see "Data Purging" on page 17.

---

**Important:** If you recalculate an agreement for a period when the raw data has already been purged, you lose the data that was already calculated for that period. For more information, see "Data Purging" on page 17.

---

# 🔵 Status Alerts for Agreements

You can create alert schemes to notify users if an agreement is not reaching its targets, or if its status is changing for the worse. You can also create alert schemes based on changes in the forecasted status.

The SLA Alerts report provides information on triggered alerts.

For details, see "SLA Alerts" in *Alerts*.

# 🔧 Define a Service Agreement - Workflow

This task describes a suggested working order for setting up an agreement in Service Level Management, either based on Business Service CIs (the recommended method) or using the CI-based process.

---

**Note:**

➤ Some of the steps are optional.

➤ The optional steps can generally be performed at any point after you have created the agreement.

---

To view a workflow for creating an agreement based on business services, see "Workflow for Using the Service-Based Process" on page 24.

To view a workflow for creating a agreement using the CI-based process, see "Workflow for Using the CI-Based Process" on page 26.

This task includes the following steps:

➤ "Define Calendars" on page 46

➤ "Define Business Units - Optional" on page 46

➤ "Define Outage Categories - Optional" on page 47

➤ "Define Services and Service Offerings" on page 47

➤ "Define an Agreement" on page 49

➤ "Fine-Tune KPIs and Weights" on page 51

➤ "Grant Permissions" on page 53

➤ "Define Downtime Events - Optional" on page 53

➤ "View Agreement Data in Reports" on page 54

### 1 Define Calendars

If you require custom calendars for your organization, to calculate data for periods other than those defined in the default calendars, define them using the Calendar Wizard. For details, see "Calendar Wizard" on page 168.

For examples of setting up a calendar, see "Calendar Examples" on page 164.

#### Example

Acme Publishing house has an internal contract between the IT and eBusiness departments for a database service with a required service offering (offering level). The Service Level Administrator wants to set up a service level agreement in Service Level Management to monitor compliance for the contract.

Acme has business hours that differ from the predefined Business Hours calendar, so the administrator creates a custom calendar for the company hours:

| Agreements Manager | Services Manager | Downtime Events | Repositories |
| --- | --- | --- | --- |

**Calendars**

| Name ▲ | Period Type | Description |
| --- | --- | --- |
| 24×7 | Weekly | 24 hours, 7 days a week |
| Acme business week | Weekly | 9:00-18:30, Monday to Friday |
| Business Hours | Weekly | 8:00-17:00, Monday-Friday |

### 2 Define Business Units - Optional

Create Business Unit CIs in the Business Units view to represent your service providers and customers. The Business Unit CIs are then associated with the business services and agreements that you define. For more information, see "Business Units for Services and Agreements" on page 28.

For details on how to add a CI to a view, see "Populate an Instance View".
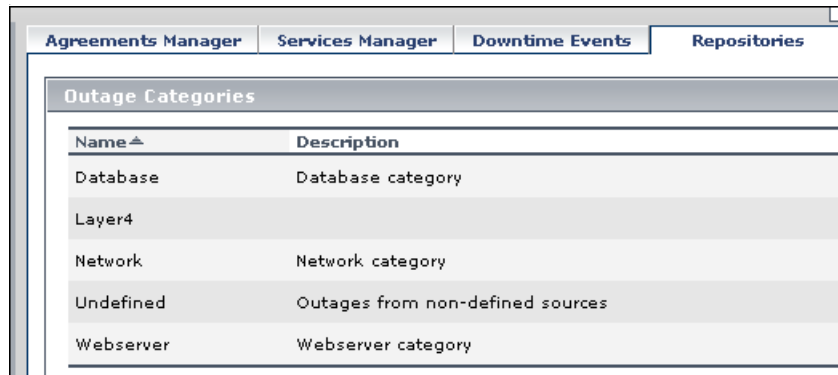
## 3 Define Outage Categories - Optional

Define custom outage categories (to add to the preconfigured ones) to help categorize probable outage causes for the service-related CIs when generating Outage reports.

For details, see "Outage Categories Page" on page 91.

### Example

The Service Level Administrator adds a custom outage category, Layer4, that he wants to use for the Outage reports:

| Agreements Manager | Services Manager | Downtime Events | Repositories |
|---|---|---|---|

**Outage Categories**

| Name ▲ | Description |
|---|---|
| Database | Database category |
| Layer4 | |
| Network | Network category |
| Undefined | Outages from non-defined sources |
| Webserver | Webserver category |

## 4 Define Services and Service Offerings

(This step is only applicable if you are creating an agreement based on Business Service CIs.)

Create Business Service CIs in the Services Manager to represent your IT services, and associate service offerings with each business service. Each Business Service CI is mapped to the service topology that supports the service, and the service offerings define the KPI objectives to be used with the service topology.

For task details on defining Business Service CIs, see "Define Business Services for Agreements" on page 100.

For task details on associating service offerings, see "Create and Apply Service Offerings for Service-Based Agreements" on page 130.

### Example

The Service Level Administrator accesses the Services Manager page and creates the two Business Service CIs, FTP Server and Web Management, that the agreement is to monitor, and defines the service-related CIs that support the services:
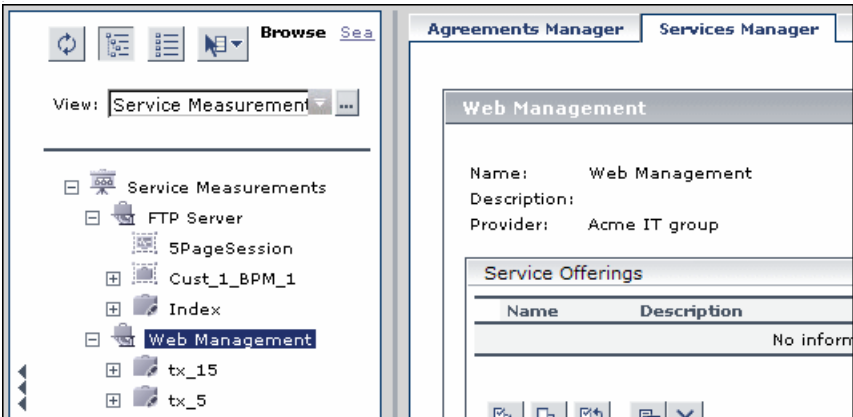


The administrator associates the **Gold** global service offering, and a private service offering called Level_2 (which includes the Acme business week calendar), with the FTP Server and Web Management Business Service CIs:
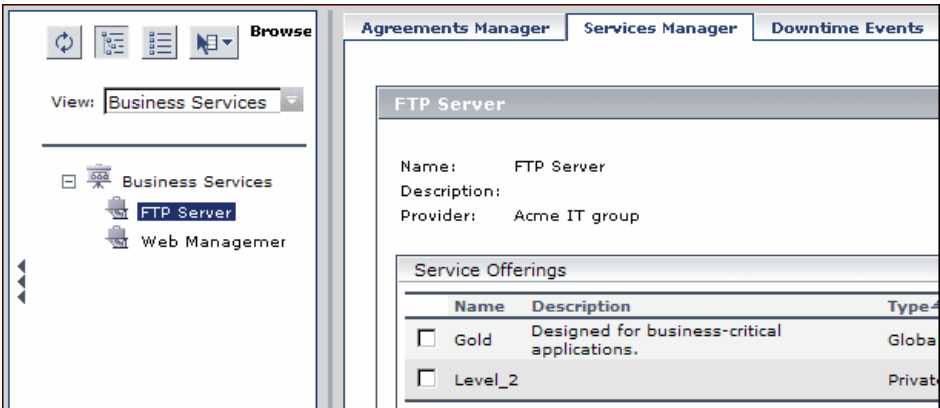
## 5 Define an Agreement

Create an agreement in the Create Agreement Wizard, using the service-based or CI-based process as required.

For details, see "Agreement Wizard" on page 67.

### Example

The Service Level Administrator opens the Create Agreement Wizard to define the agreement, IT-eBusiness SLA. He selects the service-based process, and defines the agreement properties, including the tracking periods and target objectives for which he wants to see data in the reports:

In the Select Services page of the wizard, the administrator adds the two
Business Service CIs to the agreement:
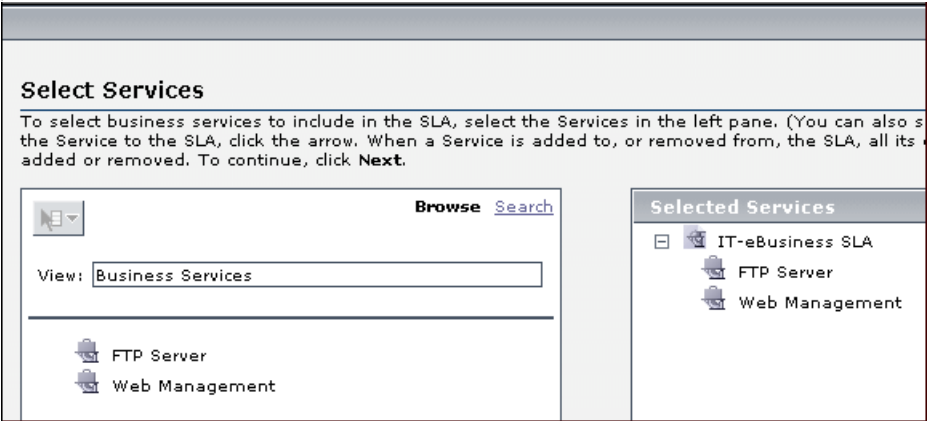


In the Select Service Offerings page of the wizard, the administrator selects
the Level_2 service offering for the business services:
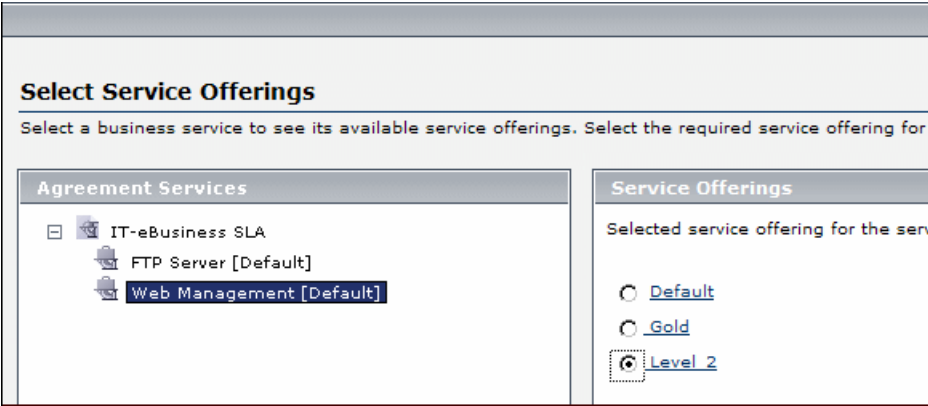
In the Select Calendars page of the wizard, the administrator selects both the 24x7 and the Acme business week (included in the Level_2 service offering) calendars for monitoring by the agreement:



## 6 Fine-Tune KPIs and Weights

(Optional step, only applicable if you are editing an agreement based on Business Service CIs, intended for users with advanced understanding of CI and KPI functioning.)

If required, open the Advanced Agreement Options Wizard for the agreement you created, to fine-tune the KPIs, objectives, and weights.

For details, see "Advanced Agreement Options Wizard" on page 65.

### Example
The Service Level Administrator opens the Advanced Agreement Options Wizard for the new agreement in order to fine-tune some of the agreement details.

In the Define KPIs page, the administrator changes the default Outage rule for some of the CIs:



In the Define Weights page, the administrator adds weights for some of the CIs:

## 7 **Grant Permissions**

Grant permission to users for the created agreement, so that other users can can view, modify, or generate reports for the agreement. For details, see "Permissions for Working with Agreements" on page 42.

### **Example**

In the Platform Administration Users and Permissions page, the Service Level Administrator sets permissions for the new agreement, IT-eBusiness SLA:
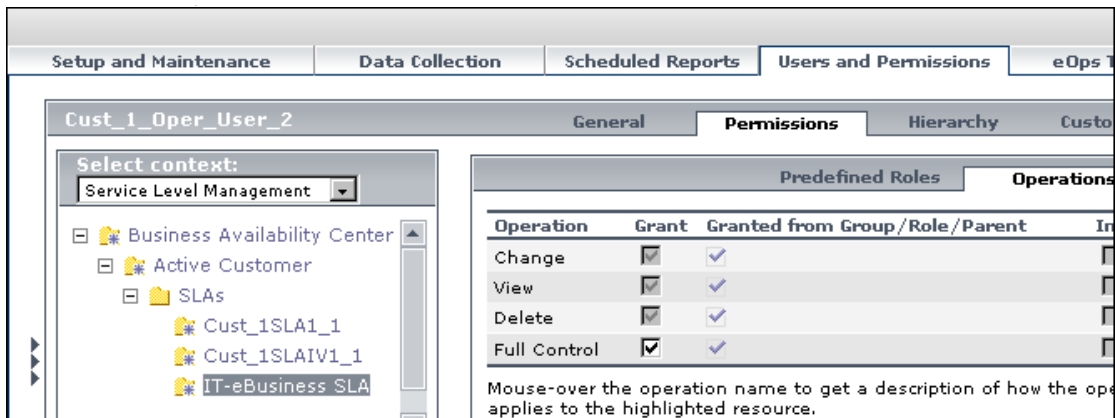


## 8 **Define Downtime Events - Optional**

Define downtime events to exclude periods of planned downtime or scheduled events from the agreement calculations.

For details, see "Downtime Event Schedule Dialog Box" on page 155.

### Example

In the Downtime Events page, the Service Level Administrator defines an event for the weekly downtime of the FTP server for maintenance purposes:
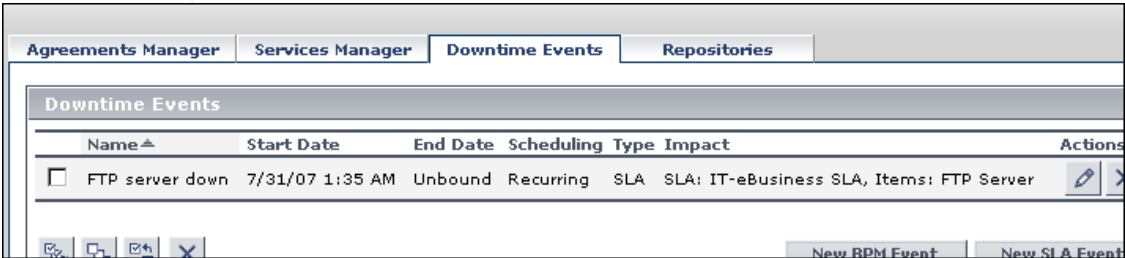


## 9 View Agreement Data in Reports

Once data has been collected and aggregated for the agreement, you can view performance results in the various report tabs of the Service Level Management application.

For details, see "View SLA and Outage Reports" on page 236.

### Example

Users can see status for the IT-eBusiness SLA agreement in the Status Snapshot page:
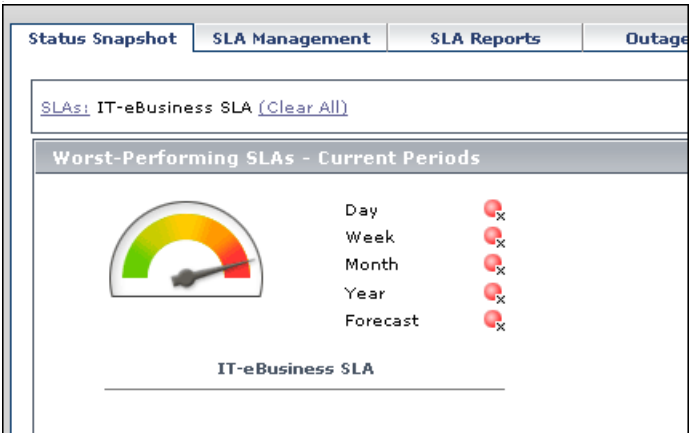
# ◆ Dynamically Update Locations in Agreements

The following tasks describe how to use the Include Locations option, to enable your agreements to be dynamically updated with the results from future added Business Process Monitor transaction locations. For more information, see "Dynamic Update of Business Process Locations to Agreements" on page 33.

This section includes the following tasks:

➤ "To apply Include Locations functionality:" on page 55

➤ "To remove Include Locations functionality from a service-based agreement:" on page 58

➤ "To remove Include Locations functionality from a CI-based agreement:" on page 59

**To apply Include Locations functionality:**

**1** From the Agreements Manager page (**Admin** > **Service Level Management** > **Agreements Manager**), open the Create Agreement Wizard or Edit Agreement Wizard. (See "Define a Service Agreement - Workflow" on page 45.)

**2** At the bottom of the Define Agreement Properties page, select the **Include Locations** check box.

**3** Continue defining or editing the agreement requirements in the wizard.

➤ If you are editing an existing agreement, save your changes and exit the wizard. Service Level Management automatically updates the Business Process Monitor CIs.

➤ If you are defining a service-based agreement, then after saving the agreement Service Level Management automatically updates the Business Process Monitor CIs included in the Business Service CIs.

➤ If you are defining a CI-based agreement, then when you add the required Business Process Groups/Steps to the right pane in the Select CIs page, the tree displays the child BPM Transaction from Location CIs.

When you move to the Define KPIs page, the Business Process Monitor branches are automatically updated, as described in the following step.

**4** After applying the **Include Locations** option, you can see the following changes to the Business Process Monitor branches in the Define KPIs page of the Agreement Wizard (for CI-based agreements) or in the Define KPIs of the Advanced Agreement Options Wizard (for service-based agreements):

➤ All child BPM Transaction from Location CIs that are under Business Process Step CIs are removed from the agreement.

➤ The rule for each KPI attached to a Business Process Step CI is changed from a group rule to a monitor (leaf) rule. (Service Level Management defines a selector expression on the Business Process Step CI.)

➤ The Response Time KPI is added to each Business Process Step CI.

Define KPIs window before applying Include Locations:

Define KPIs window after applying Include Locations:

**To remove Include Locations functionality from a service-based agreement:**

**1** From the Agreements Manager page (**Admin** > **Service Level Management** > **Agreements Manager**), open the Edit Agreement Wizard.

**2** At the bottom of the Define Agreement Properties page, clear the **Include Locations** check box.

**3** In the Select Services page, open the **SLA Fine Tuning** dialog box and select the check boxes for all required BPM Transaction from Location CIs.

---

**Note:** An alternative method is to remove the business services containing BPM Transaction from Location CIs from the agreement, save the changes, then add the business services back into the agreement.

---

**4** Save and close the Edit Agreement Wizard.

**5** Open the Advanced Agreement Options Wizard for the agreement. In the Define KPIs page, make the following changes for each Business Process Step CI:

➤ Delete the Response Time KPI.

➤ Change the rule for the Availability and Performance KPIs to the Group Average Value Rule.

**6** Save your changes.

**To remove Include Locations functionality from a CI-based agreement:**

1 From the Agreements Manager page (**Admin** > **Service Level Management** > **Agreements Manager**), open the Edit Agreement Wizard.

2 At the bottom of the Define Agreement Properties page, clear the **Include Locations** check box.

3 In the Select CIs page, re-add to the agreement all relevant Business Process Steps. The right-pane tree displays the child BPM Transaction from Location CIs under each Business Process Step CI that you add again.

4 The updates are shown in the Define KPIs page, as follows:

➤ The child BPM Transaction from Location CIs are included under the Business Process Step CIs, with all their KPIs.

➤ The rule for each KPI attached to a Business Process Step CI is changed from a monitor rule to a group rule. (Service Level Management clears the selector expression defined for the Business Process Step CI.)

➤ The Response Time KPI is removed from each Business Process Step CI.

# 🔧 Display Hidden Rule Parameters for KPIs

This task describes how to display the rule parameters that, by default, are hidden from view.

When editing KPIs in an agreement, the KPIs Definition dialog box and Add Outage dialog box display parameters used by the business rule, enabling users to modify the default parameter values or define new values, for that specific instance of the KPI. Parameters that are intended for users with an advanced knowledge of Service Level Management are not displayed. To display these hidden parameters, follow the instructions below.

**To display hidden rule parameters:**

1 Open the **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings** page.

2 Select the context **Applications**, then select **Service Level Management** from the dropdown list.

3 Locate the **Display advanced business logic parameters** entry. Change the value to **True**.

### Example

The following example shows the BPM Percentile rule before and after changing the flag to display the advanced parameters. In the second picture, the parameter **No data timeout** has been added to the displayed parameters.

# ⚒ Customize Target Names

This task describes how to change the names used for the Service Level Management targets, for example, if you want to change the name of the Breached SLA target.

**To customize target names:**

 1 Open the **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings** page.

 2 Select the context **Applications**, then select **Service Level Management** from the dropdown list.

 3 Locate the **Targets** entry. Modify the values in the file as required.

For example, to change the default name of **Breached SLA** to **Contravened SLA**, change:

```
<Target Color="ff3333" Default="true" Id="0"
Name="settings.slm.targets.def.target.breached.text"/>
```

to:

```
<Target Color="ff3333" Default="true" Id="0" Name="Contravened SLA"/>
```

# ❧ Agreements Manager User Interface

**This section describes:**

# ❧ Add Outage Dialog Box

| | |
|---|---|
| **Description** | Enables you to define the business rule and parameters for an Outage KPI attached to a CI in an agreement. |
| | **To access:** In the Agreement Wizard or Advanced Agreement Options Wizard, click **Add Outage** in the Define KPIs page. |
| **Included in Tasks** | "Define a Service Agreement - Workflow" on page 45 |
| **Useful Links** | "Status Alerts for Agreements" on page 44 |
| | For information on outage business rules and parameters, see "Outage Business Rules" in *CI Attribute Customization*. |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **Business Rule** | Select the business rule that you want to use for the outage KPI. Only the rules appropriate to the CI are included in the dropdown list.<br><br>**Tooltip:** For a short explanation of the business rule, place the cursor over the icon to the right of the box. |
| **Default Category** | Select the outage category that defines the most probable cause of an outage for this CI, or leave the category as **Undefined**. The outage categories can be used to filter and organize data in the outage reports.<br><br>You can also assign an outage category after an outage occurs, in the Outage Summary report page (see "Outage Summary Report" on page 270). However, it is recommended to categorize outages during agreement creation. |
| **New Outage Category** | Click to open the Outage Category dialog box, where you define a name and description for the new outage category. The new outage category is automatically added to the list on the **Admin** > **Service Level Management** > **Repositories** > **Outage Categories** tab. |
| **Parameters** | Edit the rule parameters as required.<br><br>**Tooltip:** For a short explanation of the parameters, place the cursor over the parameter name. |

# 🔍 Advanced Agreement Options Wizard

| | |
|---|---|
| **Description** | Enables you to fine-tune KPIs and weights for the CIs included in the service topologies in a service-based agreement. |
| | **To access:** On the **Admin** > **Service Level Management** > **Agreements Manager** page, click the **Define advanced options for agreement** button. |
| **Important Information** | ➤ The Advanced Agreement Options Wizard is only applicable for service-based agreements. |
| | ➤ All fine-tuning functionality provided in the wizard is optional. |
| | ➤ Fine-tuning should be performed by users with advanced knowledge of CI processes. |
| **Included in Tasks** | "Define a Service Agreement - Workflow" on page 45 |
| **Wizard Map** | The Advanced Agreement Options Wizard contains: |
| | Define KPIs Page > Define Weights Page |
| **Useful Links** | "Building Agreements—Service-Based Process" on page 23 |

## Define KPIs Page

| | |
|---|---|
| **Description** | Enables you to edit the KPIs (including the Outage KPI) that were automatically assigned to the CIs in the agreement, and define new KPIs. |
| **Important Information** | ➤ General information about the wizard is available in "Advanced Agreement Options Wizard" on page 65.<br>➤ This page contains the same elements as the Define KPIs page in the Agreement Wizard. For an explanation, see "Define KPIs Page" on page 77.<br>➤ A maximum of 6 KPIs can be attached to a CI.<br>➤ The service offering attached to a CI has no influence on the thresholds of new KPIs that you define for the CI. For more information, see "Creating and Editing Service Offerings" on page 124.<br>➤ If Business Availability Center is integrated with HP SOA Systinet, you can drill down from certain CIs to view Web service information in HP SOA Systinet. Right-click a CI in the left pane of the Define KPIs page, and select **Drill down to Systinet** to open HP SOA Systinet in a new window. For more information, see "Integration with HP SOA Systinet" on page 40. |
| **Wizard Map** | The Advanced Agreement Options Wizard contains:<br>**Define KPIs Page** > Define Weights Page |
| **Useful Links** | "CIs and KPIs in Agreements" on page 29 |

## Define Weights Page

| | |
|---|---|
| **Description** | Enables you to define a weight for each CI to reflect its relative importance in KPI calculations. |
| **Important Information** | This page contains the same elements as the Define Weights page in the Agreement Wizard. For an explanation, see "Define Weights Page" on page 80. |
| **Wizard Map** | The Advanced Agreement Options Wizard contains:<br>Define KPIs Page > **Define Weights Page** |

| Useful Links | "Weights for KPI Calculations" on page 36 |
| --- | --- |

# 🔍 Agreement Wizard

| Description | Enables you to define and edit entities representing your service contracts: Service Level Agreements (SLAs), Operational Level Agreements (OLAs), and underpinning contracts (UCs).<br><br>**To access:**<br><br>➤ On the **Admin** > **Service Level Management** > **Agreements Manager** page, click **New Agreement**, or click the **Edit** button for an existing agreement.<br><br>➤ On the **Admin** > **Service Level Management** > **Services Manager** page, right-click a service and select **Create new SLA from Business Service**. |
| --- | --- |
| **Important Information** | There are two modes for the Agreement Wizard:<br><br>➤ **Service-based process.** Define an agreement based on business services. For details, see "Building Agreements—Service-Based Process" on page 23.<br>**Note:** You can select existing business services, or define new business services during the creation of the agreement.<br><br>➤ **CI-based process.** Define an agreement by adding service-related CIs (this is the process used in previous versions). For details, see "Building Agreements—CI-Based Process" on page 26.<br><br>You select the process you want on the Welcome page (if you are creating an agreement from a business service, the wizard is automatically set to the service-based process). The pages included in the wizard depend on the process that is selected. See the appropriate **Wizard Map**, below. |
| **Included in Tasks** | "Define a Service Agreement - Workflow" on page 45 |

| Wizard Map - Service-Based Process | The Agreement Wizard contains: **Welcome** > Define Agreement Properties Page > Select Services Page > Select Service Offerings Page > Select Calendars Page > Summary Page |
|---|---|
| Wizard Map - CI-Based Process | The Agreement Wizard contains: **Welcome** > Define Agreement Properties Page > Select CIs Page > Define KPIs Page > Define Weights Page > Summary Page |
| Useful Links | "Agreements in Service Level Management" on page 19 |

## Define Agreement Properties Page

| Description | Enables you to define properties for the agreement, and set criteria for data storage and calculations. |
|---|---|
| Important Information | Much of the information defined in the Define Agreement Properties page can be displayed in Service Level Management reports; for details, see "Advanced Options Dialog Box" on page 241. |
| Wizard Map - Service-Based Process | The Agreement Wizard contains: Welcome > **Define Agreement Properties Page** > Select Services Page > Select Service Offerings Page > Select Calendars Page > Summary Page |
| Wizard Map - CI-Based Process | The Agreement Wizard contains: Welcome > **Define Agreement Properties Page** > Select CIs Page > Define KPIs Page > Define Weights Page > Summary Page |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
| --- | --- |
| **Agreement details** | Enter details about the agreement that you want available to Service Level Management users, for example, the agreement aims, provisioning, and special information. The length of the string must not be longer than 600 characters. |
| **Calendar(s)** (Previously called Time Intervals) | (Only displayed for CI-based agreements) Click the link to open the Calendars dialog box where you select the calendars to be monitored by the agreement. |
| **Classification** | Select how you want the agreement classified: <br> ➤ **Formal.** <br> ➤ **Informal.** <br><br> **Default value:** Formal |
| **Creator** | Displays the user name of the person that defined the agreement. |
| **Customer** | The customer associated with the agreement. Click the **Select customer** (ellipsis) button to open the Select Customer dialog box, where you can select a customer from the Business Units view. |
| **Description** | Enter a description of the agreement. The length of the string must not be longer than 600 characters. |
| **End date** | The date and time that the agreement stops calculating, according to the time zone selected for the agreement. To change the date, click the date link to open a calendar, and select the date and time you require. <br><br> **Default value:** 10 years after the current date and time. |
| **Include Locations** | Select the check box to set the agreement to dynamically include new locations for Business Process Monitor transactions. For more information, see "Dynamic Update of Business Process Locations to Agreements" on page 33. |

| GUI Element (A–Z) | Description |
|---|---|
| **Name** | Define a name for the agreement. The name must be unique and must not be longer than 100 characters. |
| **Provider** | The service provider associated with the agreement. Click the **Select provider** (ellipsis) button to open the Select Provider dialog box, where you can select a provider from the Business Units view. |
| **Start date** | The date and time from which the agreement starts calculations, according to the time zone selected for the agreement.<br><br>To change the date, click the date link to open a calendar, and select the date and time you require. The start date cannot be more than 3 months prior to the current date. (If you need longer than 3 months, the data purging policy for Service Level Management must be changed. For details, see "Data Purging" on page 17.)<br><br>**Default value:** The current date and time (to the nearest hour).<br><br>**Note:** When a new agreement starts running from the current date and time, Service Level Management immediately begins calculations. However, the agreement will not have results of value until at least an hour after raw data is available in the database for calculations. |
| **Target(s)** | Click the link to open the Targets dialog box, where you select the KPI statuses to be used with this agreement. KPI target objectives are only defined for these statuses, within the current agreement. |
| **Time zone** | Specify the time zone for the agreement. Service Level Management calculates the data in reports according to this time zone.<br><br>**Default value:** The time zone of the user. |

| GUI Element (A–Z) | Description |
|---|---|
| **Tracking period(s)** | Click the link to open the Tracking Periods dialog box where you select the tracking periods for compiling agreement data, and for viewing data in Service Level Management reports.<br><br>**Default value:** Day, Week, Month |
| **Type** | Select the type of agreement:<br><br>➤ **OLA** (Operational Level Agreement)<br>➤ **SLA** (Service Level Agreement)<br>➤ **UC** (Underpinning contract)<br><br>**Default value:** SLA<br><br>For more information, see "SLAs, OLAs, and UCs" on page 28. |

## Select Services Page

| | |
|---|---|
| **Description** | **Important:** Part of service-based wizard.<br><br>Enables you to select the business services to include in the agreement. |
| **Important Information** | This page is included in the Agreement Wizard if you selected the **Service-based** process on the Welcome page. |
| **Wizard Map - Service-Based Process** | The Agreement Wizard contains:<br><br>Welcome > Define Agreement Properties Page > **Select Services Page** > Select Service Offerings Page > Select Calendars Page > Summary Page |
| **Useful Links** | "View Explorer" in *Model Management*<br><br>"Services Manager and Business Services" on page 97<br><br>"Building Agreements—Service-Based Process" on page 23<br><br>"CIs and KPIs in Agreements" on page 29 |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
| --- | --- |
| **<Left pane>** | Enables you to select the business services on which the agreement is based. The pane displays the contents of the Business Services view, and uses View Explorer functionality. |
| | Add services from the Business Services view to the **Selected Services** list: |
| | ➤ To add a Business Service CI to the Selected Services list, select the Business Service CI in the left pane and use the upper arrow. |
| | ➤ To remove a Business Service CI from the Selected Services list, select the service in the list and use the lower arrow. |
| | ➤ Select multiple CIs by holding down the Ctrl key while making your selections. |
| **Create New Business Service** | Opens the Business Service Wizard, where you can define a new business service without exiting the Agreement Wizard. The new Business Service CI is automatically added to the Business Services view and displayed in the left pane. |
| **Selected Services pane** | Lists the business services included in the agreement. |
| **SLA Fine Tuning** | Opens the SLA Fine Tuning dialog box, where you can add and remove CIs included in the business service topologies. |

## Select Service Offerings Page

| Description | **Important:** Part of service-based wizard. |
|---|---|
| | Enables you to select the service offering to be applied for each business service. |
| **Important Information** | This page is included in the Agreement Wizard if you selected the **Service-based** process on the Welcome page. |
| **Wizard Map - Service-Based Process** | The Agreement Wizard contains: |
| | Welcome > Define Agreement Properties Page > Select Services Page > **Select Service Offerings Page** > Select Calendars Page > Summary Page |
| **Useful Links** | "Service Offerings and KPI Assignment" on page 119 |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **Agreement Services** | Lists the business services included in the agreement. Select a service to view its service offerings in the **Service Offerings** pane. |
| **Service Offerings** | Displays the service offerings associated with the selected service. Select the radio button for the service offering you want to apply to the service within the current agreement. |
| | Click a service offering name to open the relevant Service Offering Definition window, where you can view the thresholds set for each KPI (non-editable). |
| | **Default value:** The **Default** service offering is selected. |
| | **Tooltip:** Hold the cursor over a service offering name to display its description. |

## Select Calendars Page

| | |
|---|---|
| **Description** | **Important:** Part of service-based wizard.<br><br>Enables you to select the calendars that are monitored by the agreement. |
| **Important Information** | ➤ This page is included in the Agreement Wizard if you selected the **Service-based** process on the Welcome page.<br>➤ Only calendars that are included in at least one of the selected service offerings are listed.<br>➤ If any of your selected calendars are not used by one or more of the included services, an information message is displayed. |
| **Wizard Map - Service-Based Process** | The Agreement Wizard contains:<br>Welcome > Define Agreement Properties Page > Select Services Page > Select Service Offerings Page > **Select Calendars Page** > Summary Page |
| **Useful Links** | "Calendars" on page 161 |

## Select CIs Page

| Description | **Important:** Part of CI-based process wizard. |
|---|---|
| | Enables you to select configuration items (CIs) to include in the agreement, representing the services on which the agreement is based. |
| **Important Information** | ➤ This page is included in the Agreement Wizard if you selected the **CI-based** process on the Welcome page. |
| | ➤ After selecting CIs, you can click **Finish** to move directly to the Summary page; Service Level Management applies default KPIs and weights to the selected CIs (the **Automatically define default KPIs for CIs** option must be selected). |
| | ➤ If you clear the **Automatically define default KPIs for CIs** option and move forward in the wizard, the functionality cannot be applied later for the CIs you have already added to the agreement, only for new CIs that you add. |
| **Wizard Map - CI-Based Process** | The Agreement Wizard contains: |
| | Welcome > Define Agreement Properties Page > **Select CIs Page** > Define KPIs Page > Define Weights Page > Summary Page |
| **Useful Links** | "View Explorer" in *Model Management* |
| | "CIs and KPIs in Agreements" on page 29 |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **<Left pane>** | Enables you to select the CIs to include in the agreement. The pane uses View Explorer functionality. Select the view containing the required CIs from the **View** list, or use the **Search** option to search for the required CIs. (You can select CIs from more than one view to include in the agreement.) |
| | Add CIs from the left pane to the **Selected Configuration Items** list: |
| | ➤ To add a CI to the **Selected Configuration Items** list, select the service in the left pane and use the upper arrow. |
| | ➤ To remove a CI from the **Selected Configuration Items** list, select the CI in the list and use the lower arrow. |
| | ➤ Select multiple CIs by holding down the CTRL key while making your selections. |
| | If you select a parent CI, all descendants are automatically selected. (This is known as recursive selection.) |
| **Automatically define default KPIs for new CIs** | Instructs Service Level Management to add the relevant default KPIs to all CIs included in the agreement. |
| **Selected Configuration Items** | Displays the CIs added to the agreement. |

## Define KPIs Page

| Description | **Important:** Part of CI-based process wizard. Enables you to define and edit KPIs and outage conditions for the CIs in the agreement. |
|---|---|
| **Important Information** | ➤ This page is included in the Agreement Wizard if you selected the **CI-based** process on the Welcome page. <br> ➤ From this page, you can click **Finish** to move directly to the Summary page (in which case Service Level Management applies default weights to the CIs in the agreement). <br> ➤ A maximum of 6 KPIs can be attached to a CI. <br> ➤ If Business Availability Center is integrated with HP SOA Systinet, you can drill down from certain CIs to view Web service information in HP SOA Systinet. For more information, see "Integration with HP SOA Systinet" on page 40. |
| **Wizard Map - CI-Based Process** | The Agreement Wizard contains: <br> Welcome > Define Agreement Properties Page > Select CIs Page > **Define KPIs Page** > Define Weights Page > Summary Page |
| **Useful Links** | "CIs and KPIs in Agreements" on page 29 <br> "Status Alerts for Agreements" on page 44 |

## Left Pane: SLA Tree

| Description | Enables you to select a CI or multiple CIs in the agreement, so that you can view and edit KPI and outage information for those CIs in the right pane. |
|---|---|
| **Important Information** | The left pane uses partial View Explorer functionality, enabling you to search for CIs within the agreement. |
| **Useful Links** | "View Explorer" in *Model Management* |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **<SLA tree>** | Displays the hierarchy of CIs that are associated with the current agreement (according to your selections on the Select CIs page). |
| | ➤ Select a CI to display information for that CI in the right pane. For details, see "Right Pane: Single CI Settings" on page 79. |
| | ➤ Select multiple CIs by holding down the CTRL key while making your selections. After selecting multiple CIs, the right pane changes to display the **Global Settings** area. For details, see "Right Pane: Global Settings" on page 80. |
| | **Context Menu:** Right-click a CI to view menu options. For certain CIs, the menu options include **Drill down to Systinet**. Select this option to open HP SOA Systinet in a new window. |
| **SLA** | Displays the name of the current agreement. |

## Right Pane: Single CI Settings

| Description | Displays KPI and outage information for a single CI selected in the left pane, and enables you to add and edit KPIs and outage settings. |
| --- | --- |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
| --- | --- |
| ✕ | Click the **Delete** button for a KPI or for **Outage** to remove the KPI from the CI; or you can remove multiple KPIs from the CI by selecting the relevant check boxes and clicking the **Delete** button under the KPIs list. |
| ✎ | Click the **Edit** button for a KPI or for **Outage** to edit the KPI rule and parameters. |
| **Add KPI** | Opens the KPI Definition dialog box, where you can define a new KPI to attach to the CI. |
| **Add Outage** | Click to open the Add Outage dialog box, where you can define parameters for the Outage KPI for the CI. |
| **KPIs** | Lists the KPIs associated with the CI, together with the Business Rule for each KPI. |
| **Outage** | Describes the outage rule that is used with the Outage KPI for the CI. |

### Right Pane: Global Settings

| | |
|---|---|
| Description | Enables you to edit the KPIs and outage settings for multiple CIs. Displayed by selecting more than one CI in the left pane. |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| Add/Replace KPI | Opens the KPI definition dialog box, where you can define a new KPI to attach to all selected CIs. If the KPI is already attached to one of the selected CIs, then the new KPI definition replaces the previous one (for example, the new KPI definition may use a different business rule than the old one). |
| Add/Replace Outage | Opens the Add Outage dialog box, where you can define Outage KPI parameters for all selected CIs. The defined parameters replace any previous outage definition. |
| Delete KPI | Opens the Delete KPI dialog box where you select the KPI to delete from all selected CIs. |
| Delete Outage | Click to remove the Outage KPI from all selected CIs. |

### Define Weights Page

| | |
|---|---|
| Description | **Important:** Part of CI-based process wizard. <br><br> Enables you to define a weight for each CI to reflect its relative importance in KPI calculations. |
| Important Information | ➤ This page is included in the Agreement Wizard if you selected the **CI-based** process on the Welcome page. <br> ➤ This page is optional. All CIs are given a weighting of 1 by default. |

| Wizard Map - CI-Based Process | The Agreement Wizard contains:<br><br>Welcome > Define Agreement Properties Page > Select CIs Page > Define KPIs Page > **Define Weights Page** > Summary Page |
|---|---|
| **Useful Links** | "Weights for KPI Calculations" on page 36 |

### Left Pane: SLA Tree

| Description | Select a CI in the current agreement, so that you can view and edit (in the right pane) the weights assigned to the children of that CI. For details, see "Right Pane: CI Weights Information," below. |
|---|---|
| **Important Information** | The left pane uses partial View Explorer functionality, enabling you to search for CIs within the agreement. |
| **Useful Links** | "View Explorer" in *Model Management* |

### Right Pane: CI Weights Information

| Description | Displays weights information for the children of the CI selected in the left pane. |
|---|---|
| **Important Information** | If you set all weights to zero, KPIs are marked with a hyphen for all calculated reports. |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **All CIs** | To assign the same weight to all the displayed CIs, enter the value in the **All CIs** box and click **Apply**. |
| **Name** | Lists the child CIs of the CI currently selected in the left pane. |
| **Weight** | Displays the weight assigned to each CI. Enter a new weight in the box. Weights can be between 0 and 100, with up to 3 digits after the decimal point. |

## Summary Page

| | |
|---|---|
| **Description** | Displays a summary of the agreement details, and enables you to start running the agreement. |
| **Important Information** | ➤ Use the **Back** button to modify the agreement details. You cannot change the wizard process used for the agreement.<br>➤ You can display most of the information on this page in Service Level Management reports. For details, see "Additional Values in Reports" on page 229.<br>➤ After creating the agreement, you must verify that users are granted permissions to work with it. |
| **Wizard Map - Service-Based Process** | The Agreement Wizard contains:<br>Welcome > Define Agreement Properties Page > Select Services Page > Select Service Offerings Page > Select Calendars Page > **Summary Page** |
| **Wizard Map - CI-Based Process** | The Agreement Wizard contains:<br>Welcome > Define Agreement Properties Page > Select CIs Page > Define KPIs Page > Define Weights Page > **Summary Page** |
| **Useful Links** | "Permissions for Working with Agreements" on page 42 |

The following element is included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **Start SLA** | Select this check box for Service Level Management to begin running the agreement immediately. If you clear this check box, the agreement is at preliminary state, and you can manually start the agreement at a later time from the Agreements Manager Page. |

# 🔍 Agreements Manager Page

| Description | You use this page to create agreements or to perform actions on existing agreements. Service Level Management displays those agreements which you, the logged-in user, have permissions to change or delete. |
|---|---|
| | **To access:** Select **Admin** > **Service Level Management** > **Agreements Manager** |
| **Important Information** | **Note for HP Software-as-a-Service users:** By default, you can create up to ten agreements. To increase this number, contact HP Software-as-a-Service Support. |
| **Included in Tasks** | "Define a Service Agreement - Workflow" on page 45 |
| | "Recalculation for Agreements" on page 42 |
| **Useful Links** | "Agreements in Service Level Management" on page 19 |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| 🕐 🕐ₓ | Click the **Schedule recalculation task** button to open the Recalculation Task dialog box where you can schedule recalculation of the agreement. Click the **Cancel scheduled recalculation task** button to cancel the recalculation. For details, see "Recalculation for Agreements" on page 42. |
| | **Tooltip:** Displays the date and time of the last calculation for the agreement data. Service Level Management recalculates the agreement data once an hour, for the previous hour. That is, if the time is now 07:30 AM, Service Level Management recalculated the data at 7:00 AM for data that was received between 05:00 AM and 06:00 AM. |

| GUI Element (A–Z) | Description |
|---|---|
| ▶ | Click to begin running the agreement. You can use this button to immediately start running an agreement, even when it is set to begin running in the future. |
| ■ | Click to terminate the agreement. A terminated agreement cannot be restarted. |
| ✎ | Opens the Edit Agreement Wizard, where you can modify most agreement properties.<br><br>Note the following:<br><br>➤ If the agreement to be edited is not in a preliminary state, the agreement start date and time zone cannot be changed and the agreement end date can be changed only to a future date.<br>➤ If the changes you make to the agreement affect historical data, you must run the recalculation process. |
| ✎ | Opens the Advanced Agreement Options Wizard, where you can modify KPIs and weights for an agreement created using the service-based process.<br><br>**Note:** This button is only enabled for service-based agreements. |

| GUI Element (A–Z) | Description |
|---|---|
| □=□ | Click to clone the agreement. A copy of the agreement is added to the list of agreements, named **Copy of <name>**. You can then edit the details of the copy, including renaming it<br><br>The cloned agreement inherits all the properties of the existing agreement. The creator of the new agreement is the user who cloned it.<br><br>The start date of the clone is the present date and time. If the start and end dates of the original agreement are no longer valid (for example, the agreement terminated a week ago or the start date falls before the allowed start date of the cloned agreement), then Service Level Management sets the following default dates: The start date is the original start date or three months before the current date, and the end date is the original end date.<br><br>**Note:** You can clone an agreement on condition that you are an administrator or have been given change permissions on the agreement. |
| ✕ | Click to delete the agreement. This completely removes the agreement, and all calculations for it, from Service Level Management. |
| ▶ ■ ✕ | To perform an action on more than one agreement simultaneously, select the check boxes of the relevant agreements, and click the relevant button to start, stop, or delete the agreements. |
| **Description** | The description of the agreement. Hold the cursor over the description to view the complete text in a tooltip. |
| **Name** | The name of the agreement. For a long name, hold the cursor over the name to view it in full in a tooltip. |
| **New Agreement** | Click to open the Agreement Wizard where you define a new agreement. |
| **Start date** | The date when Service Level Management began/will begin calculating the agreement.<br><br>**Note:** This date is not the agreement creation date. |

| GUI Element (A–Z) | Description |
|---|---|
| **State** | The current state of the agreement. Can be one of the following: |
| | ➤ **Preliminary.** The agreement has not begun running. The agreement is at this state if you did not select the **Start SLA** check box on the Summary page of the Create Agreement Wizard. Click the **Start** button to start calculations for the agreement. |
| | ➤ **Pending.** The agreement has been started, but its start date is in the future. You can terminate a pending agreement (click the **Stop** button). |
| | ➤ **Recalculation Process:<x>%.** The agreement is in the process of being recalculated. The progress of the recalculation is shown in percentages. For details, see "Recalculation for Agreements" on page 42. |
| | ➤ **Running.** The agreement begins collecting data. You cannot change the start date and time zone, but you can change the end date to any future end date. That is, the end date cannot be in the past. You can terminate a running agreement (click the **Stop** button). |
| | ➤ **Scheduled for <date and time>:** The agreement is scheduled for recalculation at the displayed date and time. |
| | ➤ **Terminated.** The agreement finished running and no longer collects data. A terminated agreement cannot be restarted. (However, you can click the **Clone** button to clone a terminated agreement.) |
| | An agreement is terminated in one of two ways: By manually stopping it (clicking the **Stop** button), or when its end date has passed. The agreement terminates on the next hour after it is stopped. |
| | **Note:** You can recalculate a terminated agreement, up to the termination date. |
| **Type** | Whether the agreement is an SLA, OLA, or UC. For an explanation of these agreement types, see "SLAs, OLAs, and UCs" on page 28. |

# Calendars Dialog Box

| | |
|---|---|
| **Description** | Enables you to select the calendars that are monitored by the agreement. |
| | **To access:** Click the **Calendars** link in the Define Agreement Properties page of the Agreement Wizard. |
| **Important Information** | ➤ The two default calendars are always included, **24x7** and **Business Hours**. Additional calendars are defined in the **Service Level Management Administration** > **Repositories** > **Calendars** tab. |
| | ➤ You can select up to three calendars per agreement. |
| **Included in Tasks** | "Define a Service Agreement - Workflow" on page 45 |
| **Useful Links** | "Calendars" on page 161 |

# KPI Definition Dialog Box

| | |
|---|---|
| **Description** | Enables you to define and edit KPIs and KPI objectives for CIs in agreements. |
| | **To access:** Click **Add KPI** or the **Edit** button for a KPI in the Define KPIs page of the Create Agreement Wizard or the Advanced Agreement Options Wizard. |
| **Important Information** | The KPI definitions apply only to the KPI within the current agreement; different definitions can be applied to the same KPI defined for the same CI in a different agreement. |
| **Included in Tasks** | "Define a Service Agreement - Workflow" on page 45 |
| **Useful Links** | "CIs and KPIs in Agreements" on page 29. |
| | For information on the KPIs used in Service Level Management, see "List of Service Level Management KPIs and Details" in *CI Attribute Customization*. |
| | For general information on working with KPIs and business rules, see "Repositories" in *CI Attribute Customization*. |

### KPI Area

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
| --- | --- |
| **Business rule** | Select the business logic to be used for calculating the KPI value. |
| | **Tooltip:** Hold the pointer over the icon to the right of the box to display a short explanation of the business rule. |
| | **Note:** If no business rule is displayed for a KPI, this indicates that the selected KPI is not applicable for the current CI. |
| **KPI** | Select a KPI from the list. Service Level Management displays only those KPIs that have not yet been attached to the CI. |
| **Parameters** | Define or edit the parameter values, as required. Parameters are generally displayed for monitor rules, and for some group rules. |
| | A red asterisk after a parameter name signifies that this parameter is mandatory. |
| | **Tooltip:** Hold the pointer over the icon to the left of the parameter to display a short explanation of the parameter. |

## Objectives Area

| Description | Enables you to define the objective thresholds to be used during each calendar and tracking period, for the KPI. |
|---|---|
| **Important Information** | ➤ The displayed calendars, tracking periods, and objective categories (targets) depend on the definitions for the agreement that contains the KPI. |
| | ➤ If you do not define objectives, Service Level Management still performs calculations for the agreement and Service Level Management reports include data. However, reports do not show status by colors. |
| | ➤ Service Level Management includes default objective values for all KPIs, via an XML file for agreements created using the CI-based Agreement Wizard, and via the service offerings for agreements created using the service-based Agreement Wizard. |
| | ➤ The objective thresholds must be logical; Service Level Management does not validate the entered values. |
| | ➤ For information on defining objectives for Six Sigma KPIs, see "Six Sigma for Agreements" on page 39. |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **<Objective targets>** | Displayed below the Calendar table. Each row displays an objective category (target) defined for the agreement, with its corresponding color. |
| | When a timeslot(s) is selected in the Calendar table: |
| | ➤ Select the relevant operator to use with the thresholds. |
| | ➤ Enter the required threshold value for each objective in the appropriate box. |
| | **Note:** The units that are displayed for the objectives (for example, **%**) are defined by the selected business rule. |
| **Calendar** | Displays a table of the agreement calendars broken down by tracking periods, so that each cell represents a timeslot. |
| | Click the appropriate cell, then define objective values for it (below the Calendar table). After entering the values in the objective boxes, click any other cell in the Calendar table; the defined cell changes from empty to selected, and the cell's tooltip changes to **Defined**. |
| | To add the same objective values to all tracking periods of a calendar, click the calendar name, enter the objective values in the target boxes, then click the calendar again (or click any cell). |

# 🔍 Outage Categories Page

| | |
|---|---|
| **Description** | Lists the outage categories defined for Service Level Management and enables you to create and edit outage categories. The outage categories enable you to categorize the probable outage cause for a CI.<br><br>**To access:** Select **Admin** > **Service Level Management** > **Repositories** > **Outage Categories** |
| **Important Information** | ➤ You cannot delete an outage category.<br>➤ New outage categories can also be defined from the Add Outage Dialog Box described on page 63. |
| **Useful Links** | "Status Alerts for Agreements" on page 44 |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| ✏️ | Click to edit the outage category name or description. The new name is automatically updated in agreements that use the outage category. |
| **New Outage Category** | Click to open the Outage Category dialog box, where you define a new outage category. Enter a name and description for the new outage category. |
| **Outage Categories table** | Lists the default and user-defined outage categories. |

# 🔍 Recalculation Task Dialog Box

| | |
|---|---|
| **Description** | Enables you to run the recalculation process to update the data in your agreements. You generally run recalculation tasks after making retroactive changes.<br><br>**To access:** Click the **Schedule recalculation task** button for an agreement on the **Admin** > **Service Level Management** > **Agreements Manager** page. |
| **Important Information** | **Note for HP Software-as-a-Service customers:** HP Operations administers the recalculation task functionality. For information about recalculation, contact HP Software-as-a-Service Support. |
| **Useful Links** | "Recalculation for Agreements" on page 42 |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **Recalculate from** | Click the date and time link to open the calendar, where you define from when the Service Level Management should recalculate the agreement.<br><br>➤ The selected date and time must be later than the start date and time for the agreement (this is the date and time displayed by default for the **Recalculate from** parameter).<br><br>➤ The selected date and time should be earlier than the **Last Calculation** date and time (which you can view from the tooltip for the **Schedule recalculation task** button in the Agreements Manager page).<br><br>➤ The selected date and time cannot be more than the default recalculation period (3 months). For information on changing the default, see "Data Purging" on page 17. |

| GUI Element (A–Z) | Description |
| --- | --- |
| **Schedule the task to start** | Click the date and time link to open the calendar, where you define when the recalculation task should start. <br><br> ➤ If you select a date and time that has already passed, the recalculation tasks starts immediately. <br><br> ➤ If the recalculation date and time are in the future, the scheduling information is displayed in the State column on the Agreements Manager page. |

## Select Customer Dialog Box

| | |
| --- | --- |
| **Description** | Enables you to select the customer associated with the agreement from the Business Units view. <br><br> **To access:** Click the **Select customer** button in the Create Agreement Wizard. |
| **Important Information** | ➤ You can add customers to the Business Units view in **Admin** > **Universal CMDB** > **Modeling** > **IT Universe Manager**, by defining a new CI of type Business Unit to represent each provider. <br><br> ➤ The Select Customer dialog box provides View Explorer search functionality, enabling you to search for CIs within the Business Units view. |
| **Useful Links** | "Business Units for Services and Agreements" on page 28 <br><br> "View Explorer" in *Model Management* |

# Select Provider Dialog Box

| Description | Enables you to select the service provider associated with the agreement or business service from the Business Units view. |
| :--- | :--- |
| | **To access:** Click the **Select provider** button in the Create Agreement Wizard or the Create Business Service Wizard. |
| **Important Information** | ➤ You can add service providers to the Business Units view in **Admin > Universal CMDB > Modeling > IT Universe Manager**, by defining a new CI of type Business Unit to represent each provider. |
| | ➤ The Select Provider dialog box provides View Explorer search functionality, enabling you to search for CIs within the Business Units view. |
| **Useful Links** | "Business Units for Services and Agreements" on page 28 |
| | "View Explorer" in *Model Management* |

# SLA Fine Tuning Dialog Box

| Description | Enables you to fine tune the service topology included in the agreement. |
| :--- | :--- |
| | **To access:** Click the **SLA Fine Tuning** link in the Select Services page of the Create Agreement Wizard. |
| **Important Information** | At least one leaf (monitoring) CI must be selected for each business service branch. |
| **Included in Tasks** | "Define Business Services for Agreements" on page 100 |
| **Useful Links** | "Changes to the Business Service Topology" on page 98 |

The following element is included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **<Service topology tree>** | Displays the service topology for each selected business service. Each CI with a selected check box is included in the agreement. |
| | You can select or clear the check box for each CI to include it in, or remove it from, the current agreement. When you clear the check box for a CI, all its subtree is removed (even if it has selected children). |
| | **Example:** If a new monitor CI is added to a service, the new CI is not automatically included in an agreement containing the service—you must open the agreement for editing and select the check box for the new CI in the SLA Fine Tuning dialog box, to include the CI in the agreement. |

## Targets Dialog Box

| Description | Enables you to select the target (objective) categories associated with the agreement. Only the selected targets are available for defining KPI objectives, for the KPIs within this agreement. |
|---|---|
| | **To access:** Click the **Targets** link in the Define Agreement Properties page of the Agreement Wizard. |
| **Important Information** | ➤ The **Exceeded** and **Failed** targets are always selected by default. |
| | ➤ You can change the default names used for the targets. For details, see "Customize Target Names" on page 62. |
| **Included in Tasks** | "Define a Service Agreement - Workflow" on page 45 |
| **Useful Links** | "KPI Objectives" in *Using Dashboard* |

# Tracking Periods Dialog Box

| Description | Enables you to select the tracking periods that are used to track agreement status and compile data. The tracking periods define the granularity for calculation in Service Level Management reports. For example, data can be compiled per hour or per week.<br><br>**To access:** Click the **Tracking periods** link in the Define Agreement Properties page of the Agreement Wizard. |
|---|---|
| Important Information | ➤ Select **SLA period** to enable users to view reports that include data from the start date of the agreement until the present.<br>➤ You must select at least one tracking period (not including **SLA period**). |
| Included in Tasks | "Define a Service Agreement - Workflow" on page 45 |
| Useful Links | "Tracking Range and Granularity in Service Level Management" on page 227 |

# Troubleshooting and Limitations

➤ **Profile database missing:** Some pages in Service Level Management cannot be displayed until a default profile database is set. For details on setting profile databases, see Database Administration in *Platform Administration*.

➤ **Data continuity issue:** If a transaction in an HP Virtual User Generator script is renamed, Business Availability Center considers it as a new transaction. A new BPM Transaction from Location CI is created in the CMDB using the new name, and the CI with the old transaction name is removed after it stops receiving samples. If the CI is included in a Service Level Management agreement, you will not see historical data for it (from before the transaction name change).

# 3

# Services Manager and Business Services

This chapter describes the administration of business services in Service Level Management.

**This chapter includes:**

**Concepts**

➤ Business Services - Overview on page 98

➤ Changes to the Business Service Topology on page 98

**Tasks**

➤ Define Business Services for Agreements on page 100

**Reference**

➤ Services Manager User Interface on page 107

# 🍥 Business Services - Overview

Services Manager (**Admin** > **Service Level Management** > **Services Manager**) provides service-level management for the IT services provided by, or consumed by, your organization, such as project management services, application development for departmental applications, Web development services, publishing services, and so forth.

You document each IT service as a Business Service CI, creating a catalog of IT services for internal and external customers in the CMDB. A Business Service CI has a service topology that supports the business service, created by mapping to the CI the key business processes, applications, and infrastructure that the service depends on.

The monitoring metrics collected for the CIs in the service topology propagate up to the Business Service CI, enabling you to see the impact of performance problems on the service, and to analyze trends and performance objectives from a service level.

The Business Service CIs are used as the foundation for service-based agreements, working with defined service offering packages to measure compliance with service level management goals.

For a workflow for working with Business Service CIs, see "Define Business Services for Agreements" on page 100.

# 🍥 Changes to the Business Service Topology

After creating a Business Service CI, you can change the service topology by editing the CI from the Services Manager page. In addition, the service topology is dynamically updated when changes are made in the CMDB, for example, if a monitor is added to, or removed from, a service-related branch.

When a CI is removed from the service topology, this change is automatically updated to the agreements containing the Business Service CI. However, CIs that are added to the service topology are not automatically added to agreements. In this case, follow these instructions to update the agreement.

**To update a service-based agreement with an addition to the service topology:**

**1** In the **Service Level Management** > **Agreements Manager** page, open the Edit Agreement Wizard.

**2** In the Select Services page, click **SLA Fine Tuning**. In the SLA Fine Tuning dialog box, select the check boxes for the added CIs.

In the example below, the CI Node 7 transaction has been added to the service topology for the CI my service, but is not included in the XYZ agreement as long as the check box for the CI is not selected.
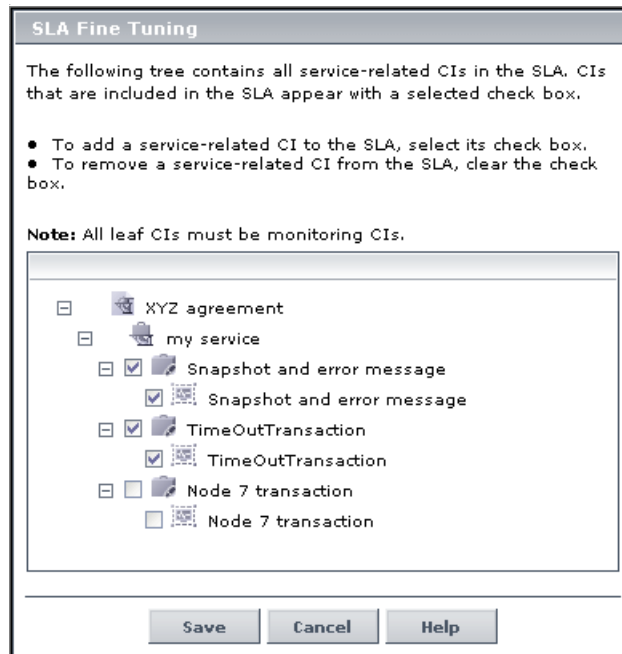


**3** Save the changes in the SLA Fine Tuning dialog box, and save the Edit Agreement Wizard, to update the new CIs to the agreement.

**4** Run recalculation for the agreement. For details, see "Recalculation for Agreements" on page 42.

# ⚒ Define Business Services for Agreements

This task describes how to define a business service to use in a service-based agreement, and a service provider to associate with the service.

This task includes the following steps:

- ➤ "Define a Service Provider - Optional" on page 100
- ➤ "Customize Custom Global Service Offerings" on page101
- ➤ "Define a Business Service CI" on page 101
- ➤ "Add the Business Service CI to an Agreement" on page 105
- ➤ "View Business Service and Provider Information in SLA Management" on page 105

## 1 Define a Service Provider - Optional

If you want to associate a service provider with your business service, you must define a Business Unit CI representing the provider. For details about service providers, see "Business Units for Services and Agreements" on page 28.

To define providers, select **Admin** > **Universal CMDB** > **Modeling** > **IT Universe Manager** and display the Business Units view. Add a Business Unit CI to the view for every provider. For details on adding CIs, see "New CI Wizard".

The provider is associated with the business service in the Business Service Wizard (described in the next step).

**Example**

In IT Universe Manager, Business Unit CIs are added to the Business Units view to represent two service providers: ABC_Bank is an external provider, and XYZ_Management is a provider of services within the organization:
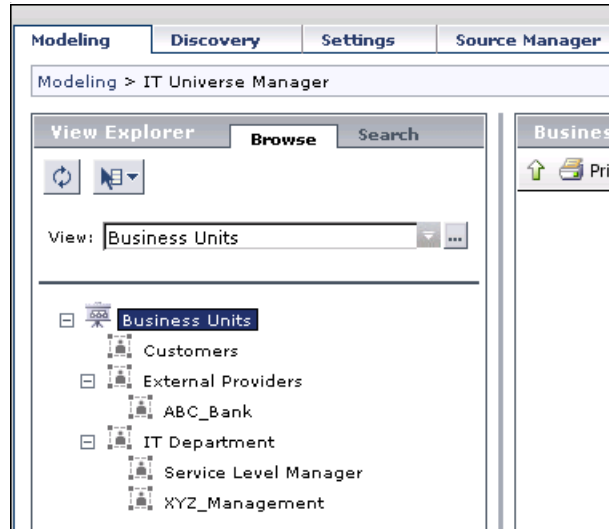


## 2 Customize Custom Global Service Offerings

If you want to associate global service offerings with the Business Service CI, you should check the preconfigured global service offerings and modify them as required. You can also define new custom global service offerings. For details, see "Global Service Offerings Page" on page 141.

## 3 Define a Business Service CI

Open the **Admin** > **Service Level Management** > **Services Manager** page, and display either the Service Measurements or Services Manager view in the View Explorer pane.

Right-click the view name or the **Services** CI, to add the new service as a root node, or right-click an existing Business Service CI to add the service as the child of that CI. Select **Create new Business Service** to open the Business Service Wizard, and fill in the required information. For details, see "Business Service Wizard" on page 107.

**Example**

A new Business Service CI, My_Service, is defined in the Business Service Wizard. In the Define Business Service Properties Page, the Business Unit CI XYZ_Management is selected as the **Provider**:

The service-related CIs that monitor the machines and processes related to the service are added in the Add Service Related CIs Page, by selecting the relevant views and dragging the CIs to the right pane. All descendants of the dragged CIs are added automatically to the service, as long as each branch contains at least one monitoring CI.
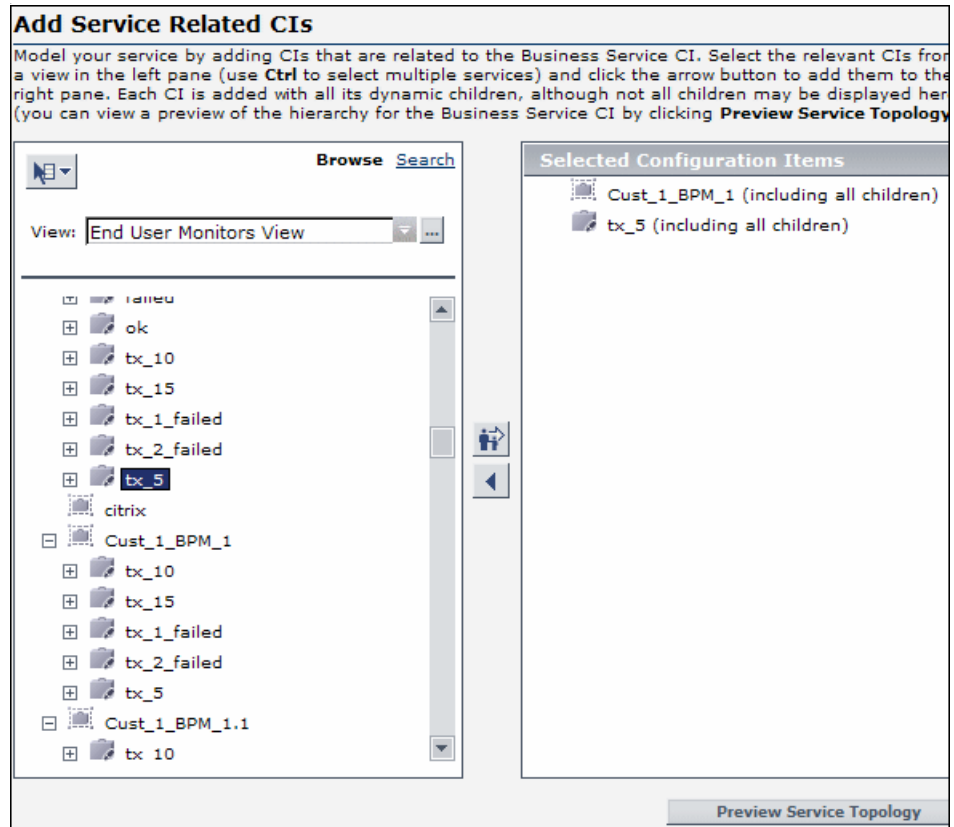
In the Service Topology Preview Dialog Box (opened by clicking the **Preview Service Topology** button), the branch under the CI labm1 is not included, because the branch did not contain any monitoring CIs (the labm1 CI is automatically reactivated if monitoring CIs are added to the branch):
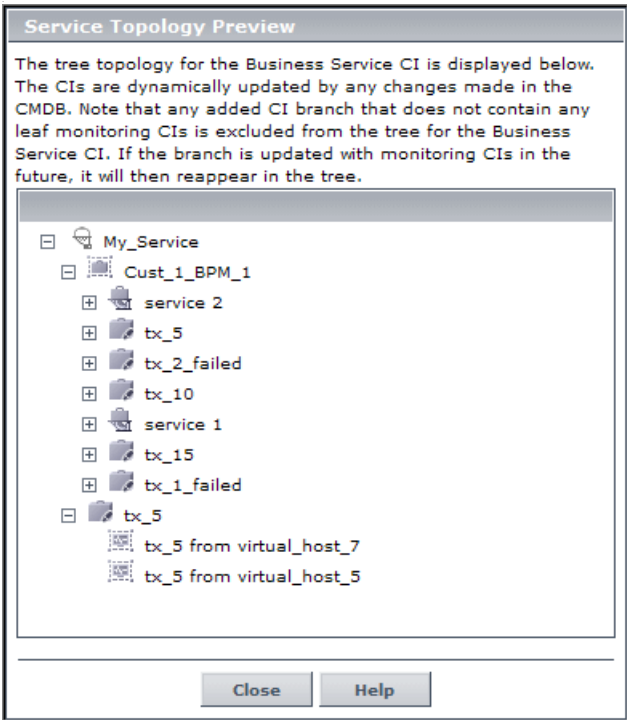
In the Add Service Offerings Page, the custom global service offering Grade1 is attached to the Business Service CI, along with a private service offering My_service_offering. These service offerings will be available for the My_Service Business Service CI when it is added to an agreement.

**Add Service Offerings**

A service offering defines the expected level of service for a business service. You define here the possible service offerings that can be used when your business service is offered within an agreement.

Use the **Attach Global** button to associate global service offerings with the service, or create private serv offerings for the service using either the **New Offering** button (to define a new private service offering) o the **Copy from Global** button (to define a private service offering based on one of the global offerings).

| | Service Offering Name | Description | Type▲ | Actions |
|---|---|---|---|---|
| ☐ | Grade1 | | Global | |
| ☐ | My_service_offering | | Private | |

## 4 Add the Business Service CI to an Agreement

You add the Business Service CI to an agreement using the Agreement Wizard, opened in one of the following ways:

➤ On the Services Manager page, right-click the CI and select **Create new SLA from Business Service**.

➤ On the Agreements Manager page, click **New Agreement** or open an existing agreement for editing.

For task details, see "Define a Service Agreement - Workflow" on page 45.

## 5 View Business Service and Provider Information in SLA Management

You can view data for the business service in the SLA Reports tab, and view provider information in the **Service Providers** view in the SLA Management tab (both accessible from **Applications** > **Service Level Management**).

### Example

The Service Providers view displays the Business Service CI My_Service
under the provider XYZ_Management:
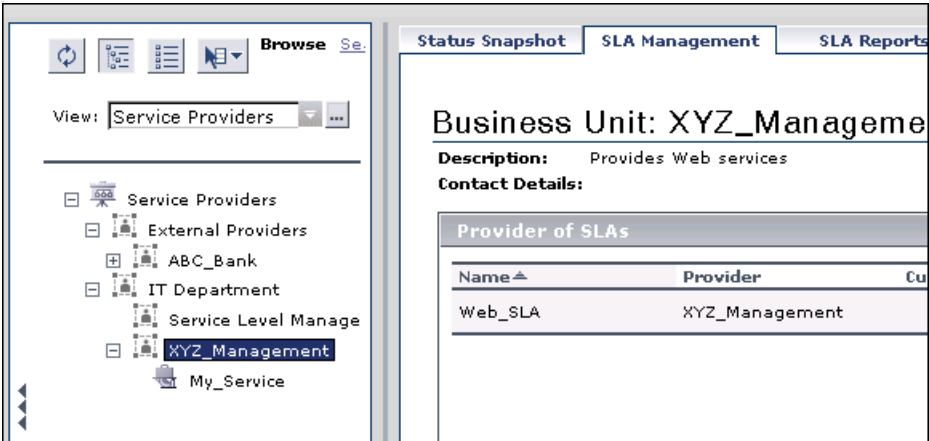


The CI Impact report displays data for the My_Service Business Service CI:
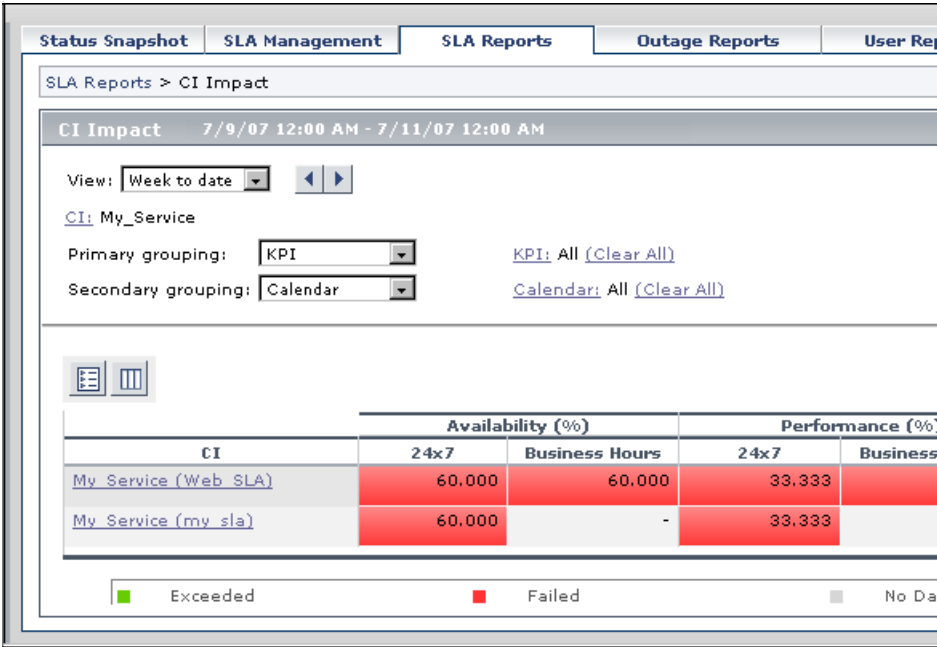
# Services Manager User Interface

**This section describes:**

➤ Business Service Wizard on page 107

➤ Service Topology Preview Dialog Box on page 113

➤ Services Manager Page on page 114

# Business Service Wizard

| | |
|---|---|
| **Description** | Enables you to define a Business Service CI representing a service provided by or consumed by your organization. |
| | **To access:** In Services Manager, click the **Create new Business Service** link, or select **Create new Business Service** or **Edit Business Service** from the context menu for a CI. |
| **Included in Tasks** | "Define Business Services for Agreements" on page 100 |
| **Wizard Map** | The Create Business Service Wizard contains: |
| | Welcome Page > Define Business Service Properties Page > Add Service Related CIs Page > Add Service Offerings Page > Summary Page |
| **Useful Links** | "View Explorer" in *Model Management* |

## Define Business Service Properties Page

| | |
|---|---|
| **Description** | Enables you to define properties for the Business Service CI. |
| **Important Information** | The Description, Provider, and Provision information are displayed for the business service in the **Service Level Management Application** > **SLA Management** page. |
| **Wizard Map** | The Business Service Wizard contains: |
| | Welcome Page > **Define Business Service Properties Page** > Add Service Related CIs Page > Add Service Offerings Page > Summary Page |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **City** | Select the city name. The list is automatically updated when you select a country (or state, when applicable). |
| **Country** | Select the country relevant to the business service. |
| | You must define a geographical location—country, state (if applicable), and city—if you want the Business Service CI to appear on the Geographical Map in Dashboard. For more information, see "Geographical Maps" in *Using Dashboard*. |
| **Description** | Enter a description for the business service. The length of the string must not be longer than 600 characters. |
| **Name** | Enter a unique name for the business service, up to 50 characters. |
| **Provider** | Defines the service provider. Click the ellipsis button (...) to open the Select Provider dialog box, where you can select the relevant provider from the Business Units view. |

| GUI Element (A–Z) | Description |
|---|---|
| **Provision** | Enter information on the provision used by the service. The length of the string must not be longer than 600 characters. |
| **State** | Select the name of the state, when applicable for the selected country. The list is automatically updated when you select a country. |

## Add Service Related CIs Page

| | |
|---|---|
| **Description** | Enables you to define the service topology that supports the Business Service CI. |
| **Important Information** | ➤ You do not need to define the service-related CIs when defining the Business Service CI; the service-related CIs can be added at a later time. |
| | ➤ If service-related CIs are added to the service topology for a Business Service CI *after* it has been included in an agreement, you must edit the agreement if you want the agreement to include the new CIs. For details, see "Changes to the Business Service Topology" on page 98. |
| **Wizard Map** | The Business Service Wizard contains: |
| | Welcome Page > Define Business Service Properties Page > **Add Service Related CIs Page** > Add Service Offerings Page > Summary Page |
| **Useful Links** | "View Explorer" in *Model Management* |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **<Left pane>** | Enables you to select service-related CIs to add to the business service. The pane uses View Explorer functionality. |
| | Select the view containing the required CIs from the **View** list (or use the **Search** option to search for the required CIs), then add CIs from the left pane to the **Selected Configuration Items** list (this adds them to the service topology): |
| | ➤ To add a CI to the service topology, select the CI in the left pane and use the upper arrow. |
| | The CI is added to the **Selected Configuration Items** list. |
| | ➤ To remove a CI from the service topology, select the CI in the list and use the lower arrow. |
| | ➤ Select multiple CIs by holding down the CTRL key while making your selections. |
| | If you select a parent CI, all descendants for that CI are automatically selected (recursive selection.) |
| | You can select CIs from more than one view to include in the service topology. |
| **Preview Service Topology** | Click to open the Service Topology Preview window, where you can view the full topology for the business service. |
| **Selected Configuration Items** | Lists the CIs added under the business service. If the added CI has child CIs, the child CIs are added to the topology, but are not displayed in the Selected Configuration Items list; you can view them in the full topology by clicking **Preview Service Topology**. |

## Add Service Offerings Page

| Description | Enables you to associate global and private service offerings with the business service. |
|---|---|
| **Wizard Map** | The Business Service Wizard contains:<br><br>Welcome Page > Define Business Service Properties Page > Add Service Related CIs Page > **Add Service Offerings Page** > Summary Page |
| **Included in Tasks** | "Create and Apply Service Offerings for Service-Based Agreements" on page 130 |
| **Useful Links** | "Service Offerings and KPI Assignment" on page 119 |

The following elements are included in the Service Offerings table (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
|  | Opens the Service Offering Definition dialog box for a private service offering, enabling you to edit the service offering details. |
|  | Opens the Service Offering Definition dialog box for a global service offering in read-only format. You edit details for a global service offering on the **Admin > Service Level Management** > **Repositories** > **Global Service Offerings** page. |
|  | Clones the service offering. The copy of the service offering is added to the table with the name "Copy of <name>". You can then edit the copy as required and rename it. |
| **Actions** | The action buttons for a service offering associated with this business service. |

| GUI Element (A–Z) | Description |
|---|---|
| **Attach Global** | Click to open the Add Global Service Offerings dialog box, where you select global service offerings to attach to the business service. (The dialog box includes only those global service offerings that have not yet been attached to the service.) |
|  | **Note:** The **Default** global service offering is not included in the dialog box, because the **Default** offering is automatically available within agreements to use with every business service. |
| **Copy from Global** | Click to open the Add Global Service Offerings dialog box, where you select the global service offerings that you want to clone. (The dialog box includes only those global service offerings that have not been assigned using the **Attach Global** option.) |
|  | The copies of the selected global service offerings are added to the table as **Private** type, and with the name "Copy of <name>." You can then edit the copy as required and rename it. |
| **Description** | Description of the service offering. |
| **New Offering** | Click to open the Service Offering Definition dialog box, where you define a new private service offering for the business service. |
| **Service Offering Name** | Name of a service offering associated with this business service. |
| **Type** | Displays **Global** if the service offering is one of the Global Service Offerings and **Private** if the service offering is specific to this business service. |

# 🔍 Service Topology Preview Dialog Box

| | |
|---|---|
| **Description** | Provides a preview of the CI topology for a business service.<br><br>**To access:** Click the **Preview Service Topology** button in the Add Service Related CIs Page of the Business Service Wizard. |
| **Important Information** | ➤ The topology for each CI included in the tree is automatically updated when a change is made in the CMDB, for example, when a new child CI is added.<br><br>➤ Each branch in the tree for the business service should contain at least one monitoring CI (a CI that is receiving monitoring data from the samples on the bus). If a branch does not contain a monitoring CI, then the contents of the branch are hidden in the Service Topology Preview dialog box, and none of the CIs in the branch are attached to the created business service.<br><br>If a monitoring CI is later added to the branch in the CMDB, then the entire branch is automatically reactivated in the business service tree. |
| **Included in Tasks** | "Define Business Services for Agreements" on page 100 |
| **Useful Links** | "Changes to the Business Service Topology" on page 98<br><br>"The Role of Monitor CIs in a View" in *Model Management* |

# Services Manager Page

| Description | Enables you to manage your business services and associated service offerings. |
|---|---|
| | **To access:** Click **Admin > Service Level Management > Services Manager** |
| **Important Information** | Each business service can be linked to a service provider. For details, see "Business Units for Services and Agreements" on page 28. |
| **Included in Tasks** | "Define Business Services for Agreements" on page 100 |
| **Useful Links** | "Business Services - Overview" on page 98 |
| | "View Explorer" in *Model Management* |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **Left Pane: View Explorer** | In View Explorer for Services Manager, you can display one of the following views:<br><br>➤ **Business Services view.** Contains the Business Service CIs.<br><br>➤ **Service Measurements view.** Contains the Business Service CIs, and the service-related CIs that are part of the topology for each Business Service CI.<br><br>**Context Menu:** Right-click a CI to view menu options. For details on the context menu items see "CI Context Menu" on page 118. |
| **Right Pane: Services Manager** | The right pane displays the following information, according to your current selection in View Explorer:<br><br>➤ When the view name is selected, the right pane displays introductory information about Services Manager, and links to IT Universe Manager and the Global Service Offerings page. It also includes a link to create a new business service.<br><br>➤ When a Business Service CI is selected, the right pane displays information for that Business Service CI, and the service offerings associated with the service. You can define new service offerings for the service, or attach global service offerings. For more information, see "Business Service Information Area" on page 116.<br><br>➤ When a service-related CI is selected (in the branch for a Business Service CI in the Service Measurements view), the right pane displays properties for the CI (in read-only format). For information on the properties, see "Properties Dialog Box" in *Model Management*. |

### Business Service Information Area

| Description | When a business service is selected in View Explorer, the right pane displays the name, description, and provider for the business service; and displays the Service Offerings table, containing the service offerings associated with the business service. |
| --- | --- |
| **Included in Tasks** | "Create and Apply Service Offerings for Service-Based Agreements" on page 130 |
| **Useful Links** | "Service Offerings and KPI Assignment" on page 119 |

The following elements are included in the Service Offerings table (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
| --- | --- |
| ✎ | Opens the Service Offering Definition dialog box for a private service offering, enabling you to edit the service offering details. |
| 🗗 | Opens the Service Offering Definition dialog box for a global service offering in read-only format. You edit details for a global service offering on the **Admin > Service Level Management > Repositories > Global Service Offerings** page. |
| 🗐 | Click the **Copy** button to copy the service offering (or to copy multiple service offerings, if you select the check boxes for multiple entries in the Service Offerings table, and use the **Copy** button below the table) to the clipboard. You can then attach the service offerings to another business service, by using the **Paste** button. |
| ▯▪▯ | Clones the service offering. The copy of the service offering is added to the table with the name "Copy of <name>". You can then edit the copy as required and rename it. |
| **Actions** | The action buttons for a service offering associated with this business service. |

| GUI Element (A–Z) | Description |
|---|---|
| **Attach Global** | Click to open the Add Global Service Offerings dialog box, where you select global service offerings to assign to the business service. (Only global service offerings that have not yet been assigned to the service are listed.)<br><br>**Note:** The **Default** global service offering is not included in the dialog box, because the **Default** offering is automatically available within agreements to use with every business service. |
| **Copy from Global** | Click to open the Add Global Service Offerings dialog box, where you select the global service offerings that you want to clone. (The dialog box includes only those global service offerings that have not been assigned using the **Attach Global** option.)<br><br>The copies of the selected global service offerings are added to the table as **Private** type, and with the name "Copy of <name>." You can then edit the copy as required and rename it. |
| **Description** | Description of the service offering. |
| **Name** | Name of a service offering associated with this business service. |
| **New Offering** | Click to open the Service Offering Definition dialog box, where you define a new private service offering for the business service. |
| **Paste** | Click the **Paste** button to add the service offerings on the clipboard to the Service Offerings table, as type **Private**. Service offerings can be copied to the clipboard from any Service Offerings table. |
| **Type** | Displays **Global** if the service offering is one of the Global Service Offerings and **Private** if the service offering is specific to this business service. |

### CI Context Menu

A context menu is displayed when you right-click an item in the View Explorer pane. The options included in each context menu vary, depending on the selected item.

| Menu Items (A–Z) | Description |
| --- | --- |
| **Create new Business Service** | Opens the Business Service Wizard, where you create a new Business Service CI. |
| | **Note:** You can add a new Business Service CI as a child of an existing Business Service CI; the new CI is included in the service-related CIs that form the foundation of the original service. |
| **Create new SLA from Business Service** | Opens the Agreement Wizard in service-based mode, where you can create a new agreement that includes the selected Business Service CI. |
| **Delete Business Service** | Deletes the Business Service CI. |
| | **Note:** This also deletes the Business Service CI from any agreement in which it is included. |
| **Edit Business Service** | Opens the Business Service Wizard in edit mode, where you can modify the business service details. |
| **Properties** | Displays the General Properties window for the CI. |
| **Show Related CIs** | Displays related CIs in the View Explorer search pane. |

# 4

# Service Offerings and KPI Assignment

This chapter describes service offerings in Service Level Management.

**This chapter includes:**

**Concepts**

➤ Service Offerings - Overview on page 120

➤ Global Service Offerings on page 121

➤ Creating and Editing Service Offerings on page 124

➤ How KPI Assignment Works on page 127

**Tasks**

➤ Create and Apply Service Offerings for Service-Based Agreements on page 130

**Reference**

➤ Service Offerings User Interface on page 141

**Troubleshooting and Limitations** on page 144

# 🔹 Service Offerings - Overview

A service offering is a set of defined objectives for multiple KPIs, designed for use in service-based agreements. Applying service offerings to Business Service CIs avoids the need to edit individually each KPI attached to each service-related CI (in order to assign objectives to the KPIs).

Service Level Management provides predefined service offerings, called global service offerings. You can edit the global service offerings or define new custom global service offerings on the Global Service Offering page. For details, see "Global Service Offerings Page" on page 141.

You can also define a private service offering for a specific Business Service CI. The private service offering can be based on an existing global or private service offering, or you can define a totally new service offering. See "Service Offering Definition Dialog Box" on page 142.

You can associate multiple service offerings (global or private) with each Business Service CI. When you create a service-based agreement, you define one of the associated service offerings to be used in the agreement for the Business Service CI. (See "Select Service Offerings Page" on page 73.) The objectives specified in the service offering are then applied to that business service and all its children, within the confines of the agreement. Only calendars included in the selected service offerings are available for use with the agreement.

If you do not associate any service offerings with a Business Service CI, then the **Default** global service offering is automatically used for that Business Service CI in an agreement.

For information and examples on the task flow for defining and applying an offering, see "Create and Apply Service Offerings for Service-Based Agreements" on page 130.

---

**Note:** Service offerings are only used for service-based agreements. If you want to use service offerings with your CI-based agreements, you must redefine the agreements in the Create Agreement Wizard, using the service-based process.

---

# 🔷 Global Service Offerings

Global service offerings are defined service offerings that are available to associate with any Business Service CI. You associate a global service offering with a Business Service CI in the Business Service Wizard (see "Add Service Offerings Page" on page 111), or in the Services Manager page when a Business Service CI is selected (see "Services Manager Page" on page 114).

Once a global service offering is associated with a Business Service CI, it is added to the Service Offerings table for the CI as type **Global**. It can be opened from the table for viewing, but cannot be edited.

You can view and edit all available global service offerings in the Global Service Offerings page. This page lists the preconfigured global service offerings provided by Service Level Management, and any user-defined global service offerings that your organization adds.

This section contains the following topics:

➤ "Preconfigured Global Service Offerings" on page 121

➤ "User-Defined Global Service Offerings" on page 123

## Preconfigured Global Service Offerings

The **Admin** > **Service Level Management** > **Repositories** > **Global Service Offerings** page lists the four out-of-the-box service offerings provided by Service Level Management. These contain preconfigured objectives for different quality of service.

The preconfigured service offerings are:

➤ **Platinum.** This service offering is designed for mission-critical applications, and systems that must function more or less continuously. Thresholds are set at high levels, for example, the threshold for **Exceeded** status for the **Availability**, **Performance**, and **System** KPIs is set at > **99%**.

➤ **Gold.** This service offering is designed for business-critical applications. Thresholds are set at moderately high levels, for example, the threshold for **Exceeded** status for the **Availability**, **Performance**, and **System** KPIs is set at > **97%**.

➤ **Silver.** This service offering is designed for infrastructure with less demanding availability requirements, such as test and development servers or non-mission critical websites. Thresholds are set at a moderate levels, for example, the threshold for **Exceeded** status for the **Availability**, **Performance**, and **System** KPIs is set at > **95%**.

➤ **Default.** This service offering is designed to provide standard thresholds for any service without a service offering.

When you add a business service to an agreement, the Default service offering is automatically available as one of the service offering options, together with any other service offerings you associated with the business service in the Services Manager. If there are no associated service offerings, the Default service offering is automatically used for that service.

The Default service offering cannot be associated with a business service from the Services Manager (as it is associated by default with every service), and cannot be deleted from Service Level Management.

Each preconfigured service offering covers the two default calendars, **24x7** and **Business Hours**, and has thresholds defined for each status level for the following KPIs:

➤ Application

➤ Availability

➤ MTBF (Mean Time Between Failures)

➤ MTBSI (Mean Time Between System Incidents)

➤ MTTR (Mean Time to Repair)

➤ Performance

➤ Response Time

➤ System

➤ System Availability

➤ User Availability

➤ User Performance

To view and edit a preconfigured global service offering, click the appropriate **Edit** button on the Global Service Offering page to open the Service Offering Definition dialog box (described in "Service Offering Definition Dialog Box" on page 142). You can edit thresholds for the KPIs, and you can add additional calendars, but you cannot add additional KPIs.

## User-Defined Global Service Offerings

You can define your own custom global service offerings, that are then available for associating with any CI. These service offerings can include any of the Service Level Management KPIs.

You can create a custom global service offering by cloning and editing an existing global service offering; or you can create a totally new one by clicking **New Global Offering**. See "Global Service Offerings Page" on page 141.

For details on defining service offerings, see "Creating and Editing Service Offerings" on page 124.

---

**Note:** Any custom global service offerings that you add can be edited and deleted by any user, even if the service offering is associated with a CI within an agreement.

---

# ♣ Creating and Editing Service Offerings

You can create and edit service offerings (global and private) for business services in the following locations:

➤ In the Global Service Offerings Page. For details, see "Global Service Offerings Page" on page 141.

➤ In the Add Service Offerings Page of the Business Service Wizard. For details, see "Add Service Offerings Page" on page 111.

➤ In the Services Manager Page, when a Business Service CI is selected. For details, see "Services Manager Page" on page 114.

You can create an entirely new service offering, or use an existing service offering as the base by cloning, or copying and pasting, an existing service offering.

For a task flow and examples for working with service offerings, see "Create and Apply Service Offerings for Service-Based Agreements" on page 130.

This section contains the following topics:

➤ "Defining Service Offering Values" on page 124

➤ "Modifying Details for Assigned Service Offerings" on page 126

## Defining Service Offering Values

You define and edit service offerings details in the Service Offering Definition dialog box. For details, see "Service Offering Definition Dialog Box" on page 142

In the Service Offering Definition dialog box, you select the calendars to be included in the service offering. The list includes all calendars that are defined on the **Admin** > **Service Level Management** > **Repositories** > **Calendars** page.

In the objective tables, you define a threshold for each KPI target during each timeslot. If required, you have the option to select the timeslots for a whole calendar or for the whole table, and so define the values for all in one operation. There is no validation of the entered values, so you must check that they are logically ordered for the selected operator.

It is not mandatory to define a value for every KPI target:

➤ If you do not define any target values for a KPI during a timeslot, then in the reports the KPI displays the numerical value for the timeslot, but the status is **No Data** (gray).

➤ If there is at least one target value defined for a timeslot, then in the reports only the defined targets are used for KPI status during that timeslot (regardless of which targets are included in the agreement).

For example, if for a particular timeslot and KPI there is a value defined for **Exceeded**, and all other targets are left undefined, then for that timeslot in the reports the KPI only has two possible statuses, **Exceeded** or **Failed**.

In the following example, there are no threshold values defined for the **Performance** KPI in the **24x7/Day** timeslot:



| | Unit | Operator | Exceeded | Met | Minor Breached | Breached | Failed |
|---|---|---|---|---|---|---|---|
| Availability | % | > | 95.0 | 90.0 | 85.0 | 80.0 | Otherwis |
| Performance | % | > | | | | | Otherwis |

This service offering is assigned to a Business Service CI in an agreement that includes all targets and all calendars. In the SLAs Summary report for the agreement, a daily status result is shown for the Performance KPI within the Business Hours calendar, but there is no status for the 24x7 calendar:



## Modifying Details for Assigned Service Offerings

You may need to make changes to both custom and preconfigured service offerings as a result of changes made elsewhere in Service Level Management, and you may need to make these changes after the service offering is used in an agreement. For example:

➤ If you add new calendars to Service Level Management, you must add definitions for the calendars to the relevant service offerings.

➤ If you add new KPIs in the repositories, and you want the KPIs to be assigned to service-related CIs, you must add the new KPIs to both the KPIs Valid Assignments XML (see "How KPI Assignment Works" on page 127) and to the relevant service offerings.

➤ If you want to remove a KPI from service-related CIs, you can remove the KPI from the relevant service offerings.

➤ You may want to change the threshold values used for a KPI by changing the values in the service offerings.

Changes you make to the service offerings are not automatically updated to the agreements where the service offerings are applied:

➤ If you added a calendar to the service offering, you can apply the change as follows: Open the relevant Edit Agreement Wizard, then save it. (This process also updates the agreement with any changes made in the service topology.)

➤ If you made any other sort of change to the service offering, you can apply the changes as follows: Open the relevant Edit Agreement Wizard, select a different service offering, and save. Then open the relevant Edit Agreement Wizard again, select the required service offering, and save. (This process overwrites any manual changes you made to the Agreement in the Advanced Agreement Options Wizard.)

## How KPI Assignment Works

Service offerings work together with the KPIs Valid Assignments XML definitions to define the KPIs and rules that are automatically attached to a Business Service CI, and all its child CIs, within a service-based agreement.

To view and edit the KPIs Valid Assignments XML definitions, select **Admin > Platform > Setup and Maintenance > Infrastructure Settings**, choose **Applications**, select **Service Level Management**, and locate the **KPIs valid assignments** entry. Click the **Edit** button to view the assignments. If you need to edit the file, it is recommended that you copy the file contents to an XML editor.

This section contains the following topics:

➤ "KPIs in Service-Based Agreements" on page 128

➤ "Editing KPIs in the Advanced Agreement Options Wizard" on page 129

## KPIs in Service-Based Agreements

When a service offering is selected for a Business Service CI when defining or editing an agreement in the Agreement Wizard (see "Agreement Wizard" on page 67), KPIs are attached to the Business Service CI and all its child CIs (included in the agreement) using the following assignment rules:

➤ A KPI is attached to a monitor CI under the Business Service CI if both the following are true:

 ➤ The KPI is defined as assigned to that monitor CI type in the KPIs Valid Assignments XML file.

 ➤ The KPI is included in the service offering selected for the Business Service CI.

 If both these conditions are met, then the KPI is attached to the monitor CI using the rule (and any rule parameters) that are defined in the KPIs Valid Assignments XML file, and using the KPI thresholds defined in the service offering.

➤ Each KPI attached to the monitor CIs is propagated up to the parent CIs, if the KPI is defined as assigned to each relevant CI type in the KPIs Valid Assignments XML file. The rule used for the KPI is taken from the same definition, and the thresholds are taken from the service offering.

➤ If there is more than one instance of a service-based CI in the agreement, attached to different Business Service CIs with different service offerings, then the KPI definitions are merged, so that all relevant KPIs are attached to all instances of the service-based CI. The most stringent threshold values from the attached service offerings are used for each KPI.

➤ Only the targets (for example, **Exceeded** and **Failed**) defined for the agreement on the Define Agreement Properties page are included for each attached KPI, regardless of which target thresholds are defined in the service offering.

### Editing KPIs in the Advanced Agreement Options Wizard

In the Define KPIs page of the Advanced Agreement Options Wizard, you can select a CI to see the KPIs added by the service offering. (See "Advanced Agreement Options Wizard" on page 65.)

The KPI assignment rules, applied within service-based agreements by the KPIs Valid Assignments XML and the service offerings, are not used for KPIs added manually in the Advanced Agreement Options Wizard (accessed by clicking the **Define Advanced Options** button on the Agreements Manager page).

For example, the thresholds defined for a KPI in a service offering are not applied when that KPI is manually attached to a CI in the Advanced Agreement Options Wizard.

In the Advanced Agreement Options Wizard you can perform the following actions to fine tune the KPIs included in the agreement:

➤ Attach additional KPIs to any CI included in the agreement. In the Advanced Agreement Options Wizard, you can attach KPIs and rules to a CI according to the assignment definitions in the Repositories—this can include KPIs that are not defined for the CI in the KPIs Valid Assignments XML file, and not included in the service offering.

➤ Edit the rule, parameter, or thresholds for any KPI.

➤ Delete any KPI added to a CI.

# 🔧 Create and Apply Service Offerings for Service-Based Agreements

This task describes how to create and associate service offerings with a Business Service CI, and to apply service offerings in agreements.

---

**Note:** If you need custom calendars for your organization, it is recommended that you define these before creating and editing service offerings (though you can also add them to the service offerings later).

---

This task includes the following steps:

➤ "Customize Global Service Offerings" on page 130
➤ "Create and Associate Service Offerings with a Business Service" on page 131
➤ "Add the Business Service CI to an Agreement" on page 134
➤ "Select a Service Offering for the CI" on page 135
➤ "Select Calendars for the Agreement" on page 136
➤ "Fine Tune KPI Assignment" on page 137
➤ "View Results in Reports" on page 140

## 1 Customize Global Service Offerings

Edit the preconfigured global service offerings according to the requirements of your organization, and define custom ones, in the Global Service Offerings Page. For details, see "Global Service Offerings Page" on page 141.

For general information on defining and editing service offerings, see "Creating and Editing Service Offerings" on page 124.

## 2 Create and Associate Service Offerings with a Business Service

Associate global service offerings with the Business Service CI, and/or define private service offerings for the Business Service CI. You do this in one of the following locations:

➤ In the Add Service Offerings Page of the Business Service Wizard. For details, see "Add Service Offerings Page" on page 111.

➤ In the Services Manager Page, when the Business Service CI is selected. For details, see "Services Manager Page" on page 114.

Use the following methods:

➤ **Attach Global.** Click this button to associate a global service offering with the CI.

➤ **Copy from Global.** Click this button to clone a global service offering and use it as a base for a private service offering for the business service.

➤ **New Offering.** Click this button to define a new private service offering for the business service.

➤ **Clone.** Click this button to clone one of the service offerings associated with the business service, and use it as a base for a private service offering for the business service.

➤ **Copy/Paste.** Use these buttons to copy to the clipboard a service offering defined for a business service, and then associate it with another business service. (This option is not available in the Business Service Wizard.)

You define and edit service offering definitions in the Service Offering Definition dialog box. For details, see "Service Offering Definition Dialog Box" on page 142.

For general information on defining and editing service offerings, see "Creating and Editing Service Offerings" on page 124.

### Example

A new custom service offering, Offering_level1, is defined for Business Service
CI My_service, with values for three calendars (24x7, Business Hours,
Custom_calendar) and for four KPIs (Availability, Performance, Response
Time, System Availability). In the following picture, the Custom_calendar link
is selected in order to define values for all Custom_calendar timeslots in one
operation:

In addition to the custom service offering, two global service offerings (Platinum, Custom_global) are selected to associate with the Business Service CI:



All associated service offerings are listed in the Service Offerings area for My_Service:

### 3 Add the Business Service CI to an Agreement

Include the Business Service CI in a service-based agreement.

You define an agreement in the Agreement Wizard. For task details, see "Define a Service Agreement - Workflow" on page 45.

#### Example

A new agreement, My_agreement, is created in the Create Agreement Wizard. The agreement has tracking periods Day and Week, and targets Exceeded, Met, Minor Breached, Failed.

On the Select Services page, the Business Service CIs My_service, IT_service, and Online_service are included in the agreement.
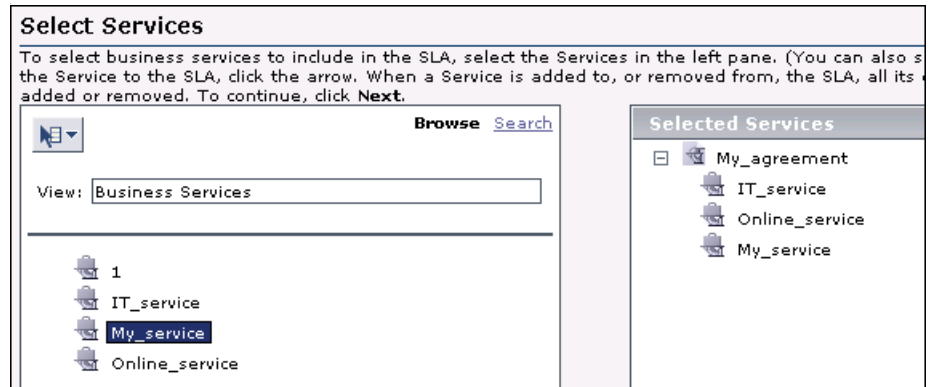


### 4 Select a Service Offering for the CI

In the Select Service Offerings page of the Agreement Wizard, select the Business Service CI in the left pane, then in the right pane select the service offering that you want to be applied to the CI and its children for the current agreement.

### Example

In the Select Service Offerings page of the new agreement, Offering_level1 is selected as the service offering to use with the My_service Business Service CI and all its children, within this agreement.



### 5 Select Calendars for the Agreement

The Select Calendars page of the Agreement Wizard lists the calendars that are included in all selected service offerings. Select the calendars you want to apply for the current agreement (up to three).

---

**Note:** Any calendar that is not selected is ignored for all KPIs, with the result that the KPIs have no results for that calendar.

---

### Example

The 24x7 calendar is not required for My_agreement, and is therefore not selected on the Calendars page.

| Calendars | | |
|---|---|---|
| Select Calendars | | |
| | **Calendar Name** | **Service Name** |
| ☑ | Business Hours | IT_service , My_service |
| ☐ | 24x7 | IT_service , My_service |
| ☑ | Custom_calendar | My_service |
| ☑ | Compound TI | Online_service |

## 6 Fine Tune KPI Assignment

If required, after defining a service-based agreement, you can check KPI assignment (as determined by the service offering and the KPIs Valid Assignments XML), and fine tune KPI details in the Advanced Agreement Options Wizard.

For details on the wizard, see "Advanced Agreement Options Wizard" on page 65.

For information on KPI assignment, see "How KPI Assignment Works" on page 127.

### Example

The Define KPIs page of the Advanced Agreement Options Wizard displays the KPIs assigned to the My_service CI and its CI children, using the assignment rules and the definitions in Offering_level1:

The KPI Definition dialog box for a KPI (opened by clicking the **Edit** button for the KPI) displays the threshold values defined in Offering_level1. However, only the calendars, tracking periods, and targets that are defined for the agreement (My_agreement) are included for the KPI:

### 7 View Results in Reports

The data for the agreement is viewed in the Service Level Management reports. For details, see "Service Level Management Reports - Overview" on page 210.

#### Example

The **Applications** > **Service Level Management** > **SLA Reports** > **CI Summary** report, generated for CI BillPay_MakePayment in SLA My_agreement, displays results for the KPIs assigned to the CI.

The calendar Compound_TI is included in the report because it is defined for the agreement; however, it shows status **No Objectives Defined** because the calendar is not included in Offering_level1, the service offering defined for this CI.

# Service Offerings User Interface

**This section describes:**

➤ Global Service Offerings Page on page 141

➤ Service Offering Definition Dialog Box on page 142

# Global Service Offerings Page

| Description | Enables you to manage the global service offerings, used to set service offerings for multiple business services.<br><br>**To access:** Select **Admin** > **Service Level Management** > **Repositories** > **Global Service Offerings** |
|---|---|
| Important Information | The Global Service Offerings page includes four preconfigured global service offerings: **Default**, **Gold**, **Platinum**, **Silver**. |
| Included in Tasks | "Create and Apply Service Offerings for Service-Based Agreements" on page 130 |
| Useful Links | "Global Service Offerings" on page 121 |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| ✏️ | Opens the Service Offering Definition dialog box, where you can edit the global service offering details. |
| ▯=▯ | Clones the global service offering. The copy of the global service offering is added to the table with the name "Copy of <name>". You can then edit the copy as required and rename it. |
| ✕ | Deletes the global service offering.<br><br>**Note:** You cannot delete the **Default** global service offering. This service offering is applied by default for all business services. |

| GUI Element (A–Z) | Description |
|---|---|
| **Description** | The description defined for the global service offering. Hold the cursor over the description to view the complete text in a tooltip. |
| **Name** | The global service offering name. |
| **New Global Offering** | Click to open the Service Offering Definition dialog box, where you define a new global service offering. |

# Service Offering Definition Dialog Box

| | |
|---|---|
| **Description** | Enables you to create a service offering to be used with business services. Each service offering defines the objective thresholds to be used during each calendar and tracking period, for KPIs associated with the Business Service CI. <br><br> **To access:** <br><br> ➤ Click the **New** or **Edit** button in the Service Offerings area/Global Service Offerings area displayed in the **Admin** > **Service Level Management** > **Services Manager** tab. <br> ➤ Click the **Create New** button in the Select Service Service Offerings page of the Agreement Wizard. |
| **Important Information** | The objective thresholds must be logical; Service Level Management does not validate the entered values. |
| **Included in Tasks** | "Create and Apply Service Offerings for Service-Based Agreements" on page 130 |
| **Useful Links** | "Service Offerings and KPI Assignment" on page 119 <br><br> "Creating and Editing Service Offerings" on page 124 |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **\<Calendar table\>** | Upper table in the **Objectives Definition** area. Displays a row for each selected calendar, and a column for each tracking period, so that each cell represents a timeslot. Click the appropriate cell to define objective threshold values for it. After entering the values in the KPIs table, click any other cell; the defined cell changes from empty to selected, and the cell's tooltip changes to **Defined**. |
| | To add the same objective values to all tracking periods of a calendar, click the calendar name, enter the objective target values in the target boxes, then click the calendar again (or click any cell). |
| **\<KPIs table\>** | Lower table in the **Objectives Definition** area. Displays a row for each KPI associated with this service offering, and a column for each of the KPI targets. When a calendar/tracking period cell is selected, you can define the threshold for each target of each KPI (together with the relevant operator). |
| | Availability and Performance KPIs are included in the table by default (but can be removed). |
| **Calendar(s)** | Displays the calendars for which this service offering can apply. Click the link to modify the selections. |
| | **Default values:** 24x7, Business Hours |
| **Description** | Enter a description of the service offering. |
| **Name** | Enter a name for the service offering. The name must not be longer than 100 characters. |
| **Objectives Definition area** | Area for defining the service offering objectives. You select time periods in the Calendar table, and define objective thresholds for KPIs during the selected time periods in the KPIs table. |

| GUI Element (A–Z) | Description |
|---|---|
| **Select all table** | Click to select all timeslots in the Calendar table. |
| **Select KPI to add** | Select a KPI from the dropdown list to add to the KPIs table, then click **Add KPI**. |

# 🔍 Troubleshooting and Limitations

➤ The objective thresholds entered in the Service Offering Definition dialog box must be logical for the operator, and ordered logically; Service Level Management does not validate the entered values.

➤ After making changes to a service offering that is in use with an agreement, you must run a recalculation task if you want the changes to be reflected in the previously aggregated data for the reports. For details, see "Recalculation Task Dialog Box" on page 92.

# 5

# Downtime Events

This chapter describes main concepts for downtime events.

**This chapter includes:**

**Concepts**

➤ Downtime Events - Overview on page 146

➤ Retroactive Events on page 147

**Tasks**

➤ Define Downtime Events - Scenarios on page 147

**Reference**

➤ Downtime Events User Interface on page 153

# 🎲 **Downtime Events** - Overview

The Downtime Events page enables you to schedule periods of downtime and other events that affect data in agreements, so that the relevant periods are shown with Downtime status in Service Level Management reports. You can create events only for existing agreements.

You define an event for a specific agreement or for all agreements. You can define BPM and SLA events. You use BPM events when adding an event affecting Business Process Monitor data in agreements, and SLA events when adding an event that affects specific agreements. You can define an event retroactively and you can define a recurring event.

For details on defining a downtime event, see "Downtime Event Schedule Dialog Box" on page 155.

For examples of event definitions, see "Define Downtime Events - Scenarios" on page 147.

---

**Note:**

➤ Service Level Management reports show downtime events defined for a specific agreement and for all agreements. If the Downtime Event Description is displayed for an event defined for all agreements, each of which has a different time zone, the event's date and time may not be relevant for all the agreements.

➤ From version 5.0 FP1, the maximum duration for an event (not including a one-time event) is 23 hours and 59 minutes. If you have created events in previous versions of HP Business Availability Center that are longer than this duration, Service Level Management shortens the event to 23 hours and 59 minutes.

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For details, about events for running agreements, see "Retroactive Events" on page 147.

# 🏵 Retroactive Events

If a downtime event is defined for an agreement after the agreement has started running, the event affects data received after the event is defined. To affect data retroactively, Service Level Management must recalculate the agreement.

For example, if you change the event frequency, data may now be included in reports that was previously excluded. Once the changes are saved, any generated reports include the updated event.

---

**Note:** For events to affect reports retroactively, you must recalculate the agreement. For details, see "Recalculation for Agreements" on page 42.

---

# 🔧 Define Downtime Events - Scenarios

The following scenarios give use-case examples for downtime events running on different schedules.

### 1 Once

Every morning the VP of eBusiness looks through the previous day's SLAs Summary reports. One morning, she realizes that due to maintenance in the Springfield office, the Web applications server had been down for three hours and all Business Process Monitor CIs from that location have failed. She needs to define a retroactive downtime event and adjust the reports to reflect the downtime.

➤ She accesses the Downtime Events tab and creates a new Business Process Monitor event by clicking the **New BPM Event** button.

➤ She enters a name and description for the downtime. She leaves the **Exclude data reported** check box selected.



➤ In the Scheduling section, she chooses the **Once** option and enters the start date, time, and duration of the server downtime.



➤ In the Event Schedule Action section, she selects one of the SLAs that cover the Springfield office contracts (she must create an event for each SLA).



➤ She clicks **CI Filter** to select the SLA.

➤ She selects the relevant SLA and then clicks **CI Filter** to select the Springfield location.

➤ She saves the event.

➤ She recalculates the SLA over the relevant period of time.

➤ She next accesses the SLAs Summary page, generates reports for relevant KPIs, and verifies that during this time, the data is ignored and the status of the SLA is **downtime**.

## 2 **Daily**

The operations support engineer is told that a server's graphics card is being upgraded for a new map application. A slowdown of the server may be expected for three days beginning today, while the R&D team tests the new application. To minimize problems, the team will be running tests for one hour each day. All SLAs that monitor this server will be affected, and he should define an event to appear in reports to explain the slowdown.

➤ He defines a new SLA event, and enters a name and detailed description for the downtime (each SLA needs its own event). He clears the **Exclude data reported** check box.



➤ In the Scheduling section, he chooses the **Daily** option and enters a frequency of 1 day (the default). In the Duration and Recurrence range, he chooses today's date and time from the calendar. He chooses a duration of 1 hour, and the end date and time for three days' hence.

➤ In the Event Schedule Action section, he selects the relevant SLA, clicks **CI Filter**, and selects the server.

➤ He saves the event.

➤ He accesses the CIs Over Time report (**Applications** > **Service Level Management** > **SLA Reports** > **CIs Over Time**) and clicks the Advanced Options link. He selects the **Downtime Event Description** check box.

➤ The next day he generates a CIs Over Time report and verifies that the event appears in the report.

---

**Note:** The operations support engineer has no need to recalculate the SLA, since the **Exclude data reported** check box was not selected.

---

### 3  **Weekly**

There are two possible scenarios for defining a Weekly frequency.

One possibility is you define an event to occur once every two weeks (**2**) with a start date of Tuesday, 7 Jun 05. For calculation purposes, the first week runs from Monday, 6 Jun 05 till Monday, 13 Jun 05.



➤ If the event is to occur every second Tuesday, the first occurrence of the event will be on Tuesday, 7 Jun 05.

➤ If the event is to occur every second Thursday, the first occurrence of the event will be on Thursday, 9 Jun 05.

➤ If the event is to occur every second Monday, the first occurrence of the event will be on Monday, 20 Jun 05.

Another possibility is you define a recurring event that occurs every second week on a Friday and a Sunday, to begin on a Saturday. In the first week, the event will run only on Sunday. In the second week, the event does not run. In the third week, the event runs on Friday and on Sunday, and so on.



## 4 Monthly

Every other month, on the fourth Sunday, the Web server for the Finance department in the Unionville office is scheduled for maintenance at 1:00 AM for two hours. Therefore, the IT Ops director must define a recurring event and exclude all CIs from reports during this period.

➤ The IT Ops director accesses the Events tab and creates a new Business Process Monitor event by clicking the **New BPM Event** button.

➤ He enters a name and description for the maintenance. He leaves the **Exclude data reported** check box selected.

➤ In the Scheduling section, he chooses the **Monthly** option. In the Frequency section, he selects **Fourth**, **Sunday**, and **2**. He enters the start date and time and enters **2** for the event duration. He leaves **No end date** selected.



➤ In the Event Schedule Action section, he selects one of the SLAs that cover the Unionville office contracts (each SLA needs its own event).



➤ He selects the SLA CI from the CI filter, so that all descendants are also affected.

➤ He saves the event.

**5 Yearly**

The VP of eBusiness likes to be prepared. Each July 5th, her boss sends her an email requesting network statistics for the previous day to compare to their targets. This year, on July 3rd, she prepares an SLA to measure network performance and creates an event that will run throughout the next 24 hours.

In the Scheduling section, she chooses the **Yearly** option. In the Frequency section, she selects **Every**, **July**, and **4**. She enters the start date and time of July 4th at 12:00 AM and sets an event duration of 23 hours and 59 minutes. She leaves **No end date** selected.

On July 5th she is able to reply immediately to her boss's email with the network performance results compared to the target objectives.

# 🔍 Downtime Events User Interface

**This section describes:**

# 🔍 CI Selection Dialog Box

| Description | Enables you to select the CIs that are affected by a downtime or scheduled event. |
|---|---|
| | **To access:** In the Downtime Event Schedule dialog box (accessed from the Downtime Events page), click **CI Filter**. |
| **Important Information** | The CI Selection dialog box is used for defining either: |
| | ➤ CIs in agreements, if you are defining an SLA event. |
| | ➤ Business Process Monitor-related CIs, if you are defining a BPM event. |
| | The descendants of the selected CIs are also affected by this event (including descendants added in the future to a CI). |
| **Useful Links** | "Downtime Events - Overview" on page 146 |
| | The dialog box uses View Explorer functionality. For details, see "View Explorer" in *Model Management.* |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **SLA** | Displayed if you are defining an SLA event. The **SLA** box displays the name of the SLA (agreement) you selected in the Downtime Event Schedule dialog box. Select the check boxes for the relevant CIs in the SLA tree. |
| **View** | Displayed if you are defining a BPM event. Select one of the End User views from the **View** list, then select the check boxes for the relevant CIs in the view tree. |
| | **Note:** You can select any of the displayed CIs, even if they are not currently included in the agreement (so they are affected by the event if they are added to the agreement in the future). |

# 🔑 **Downtime Event Schedule Dialog Box**

| Description | Enables you to define downtime and other scheduled events affecting agreements, so that the relevant periods are shown with Downtime status in Service Level Management reports.<br><br>**To access:** In the Downtime Events page, click **New BPM Event** or **New SLA Event**, or click the **Edit** button for an event. |
|---|---|
| **Important Information** | ➤ The Downtime Event Schedule dialog box is used for defining both BPM events and SLA events.<br>➤ When editing a defined event, you cannot change the defined agreement or CIs.<br>➤ If a new event is to affect agreement data retroactively, or if you make changes to an event that retroactively affects agreement data, you must recalculate the relevant agreements. For more information, see "Retroactive Events" on page 147. |
| **Included in Tasks** | "Define a Service Agreement - Workflow" on page 45 |
| **Useful Links** | "Downtime Events - Overview" on page 146<br><br>For examples of event definitions, see "Define Downtime Events - Scenarios" on page 147 |

### Event Schedule General Properties Area

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **Description** | Enter a description of the event. |
| | You can view the event description in reports for the event. For details, see "Advanced Options Dialog Box" on page 241. |
| **Exclude data reported during event** | Select the check box to exclude data such as scheduled maintenance periods. |
| **Name** | Enter the name of the event. |

### Scheduling Area

| Description | Enables you to schedule the time periods during which data is affected. You can define a one-time event (**Once**) or a recurring event (**Daily**, **Weekly**, **Monthly**, or **Yearly**) |
|---|---|
| **Important Information** | ➤ Dates are specified according to the user's time zone. |
| | ➤ The specific elements displayed in this area depend on the schedule type you select. |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| <**Schedule type**> | Select the schedule type for the event: Either a one-time event (**Once**) or a recurring event (**Daily**, **Weekly**, **Monthly**, or **Yearly**).<br><br>Your selection determines the parameters displayed in the rest of the Scheduling area. |
| **End time** | Select the **End time** radio button if you want to define an end date for the event, or to limit the event recurrences to end at a certain date.<br><br>Click the date link to set the required end date and time.<br><br>**Default value:** Current date and time. |
| **Event duration** | For a one-time event, select the **Event duration** radio button if you want to define a fixed duration for the event, and set the duration in days, hours, and minutes.<br><br>For a recurring event, set the duration of the event in hours and minutes. |
| **Frequency** | In the **Frequency** area, you define how often a recurring event is to occur. For example, you can set the event to occur:<br><br>➤ For a **Daily** event—every 5th day.<br>➤ For a **Weekly** event—every 3 weeks, on Tuesday and Friday.<br>➤ For a **Monthly** event—on the 10th day of every month, or the first Sunday of every fourth month, or the last day of every sixth month.<br>➤ For a **Yearly** event— every July 4th, or the last Friday in December every year. |

| GUI Element (A–Z) | Description |
|---|---|
| **No end date** | Select the **No end date** radio button if you want the recurring event to be open-ended (unbound). |
| **Start date** | Click the link to set the required start date and time.<br><br>**Default value:** Current date and time. |

### Event Schedule Action Area

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **CI Filter** | Displays the specific CIs that are impacted by the event.<br><br>Click the **CI Filter** link to open the CI Selection dialog box, where you select the CIs that are impacted by the event.<br><br>**Note:** When defining an SLA event for **All SLAs**, the **CI Filter** parameter is hidden; you do not select specific CIs, the event is recursively defined for all CIs in each SLA. |
| **SLA** | Select the SLA (agreement) from the list that the event affects. If the event affects all existing SLAs and any future SLAs, select **All SLAs** (you must have edit permissions for all SLAs).<br><br>**Default value:** All SLAs<br><br>**Note:**<br>➤ The SLA list includes only those SLAs that you have permissions to change.<br>➤ If you select **All SLAs**, and the SLAs have different time zones, then the downtime event date and time displayed in reports may not be relevant for all the SLAs. |

# 🔍 **Downtime Events Page**

| Description | Lists the defined events, and enables you to create, edit, or delete events. |
| --- | --- |
| | **To access:** Select **Admin** > **Service Level Management** > **Downtime Events** |
| **Included in Tasks** | "Define a Service Agreement - Workflow" on page 45 |
| **Useful Links** | "Downtime Events" on page 145 |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
| --- | --- |
| ✏️ | Click to open the Downtime Event Schedule dialog box for the event, in edit mode. |
| ✕ | Click to delete the selected event or events. |
| | Any reports generated from this time reflect the deletion. Service Level Management also updates the Audit Log. For details, see "The Audit Log" on page 17. |
| | **Note:** If you delete a retroactive event for which you previously ran a recalculation of agreement data, then you must recalculate again after deleting the event, if you want to remove the impact of the event on the agreement data. For details, see "Recalculation for Agreements" on page 42. |
| **End Date** | The date and time when the event terminates. If there is no end date, the event is considered **unbound**. |
| **Impact** | Displays the agreements and CIs that are affected by the event. |
| **Name** | The name defined for the event. |
| **New BPM Event** | Click to open the Downtime Event Schedule dialog box, where you can define a new event affecting Business Process Monitor data. |

| GUI Element (A–Z) | Description |
|---|---|
| **New SLA Event** | Click to open the Downtime Event Schedule dialog box, where you can define a new event affecting agreements. |
| **Scheduling** | The frequency of the event:<br>➤ **Single.** This is an event scheduled to occur one-time.<br>➤ **Recurring.** This is an event scheduled for repeated occurrence (daily, weekly, monthly, or yearly). |
| **Start Date** | The date and time when the event begins. |
| **Type** | The type of event, either **BPM** or **SLA**. |

# 6

# Calendars

This chapter explains how to define calendars for agreements.

**This chapter includes:**

**Concepts**

➤ Calendars - Overview on page 162

**Tasks**

➤ Customize the First Day of the Week or First Month on page 163

➤ Calendar Examples on page 164

**Reference**

➤ Calendars User Interface on page 167

# 🟦 **Calendars - Overview**

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**Note:** Calendars were referred to as Time Intervals in previous versions.

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Calendars define the periods for which Service Level Management performs data calculations.

In your organization, the same service levels are probably not required at all times of the day or night, or during all days of the week or year. For example, performance and availability are more crucial to a Web retailer during a busy shopping period before a holiday. Likewise, resource allocators in an ERP system must have 99% availability every working morning, whereas at other times 97% might be acceptable.

To monitor your business processes at these crucial times, you define calendars that span the period you want to monitor. This is the time range that Service Level Management checks for compliance to the agreement. Service Level Management includes two default calendars: **24x7** and **Business Hours**.

You define calendars for your organization in the Calendar Wizard. For details, see "Calendar Wizard" on page 168. The defined calendars are then available for using when defining service offerings and agreements. You can define as many calendars as required, but only can select up to three per agreement.

Service Level Management reports organize results according to calendars. You can add calendar descriptions to Service Level Management reports. For details, see "Advanced Options Dialog Box" on page 241.

---

**Note:**

➤ If you add new calendars to Service Level Management, you must add definitions for the calendars to the appropriate service offerings, including the preconfigured service offerings. For details, see "Creating and Editing Service Offerings" on page 124.

➤ If you add or remove calendars from service offerings, you must edit the agreements containing the service offerings. For details, see "Modifying Details for Assigned Service Offerings" on page 126.

➤ If you delete a calendar, it is automatically removed from all service offerings and agreements.

➤ If you update one of the calendars included in a compound calendar, the compound calendar itself is also updated.

---

# 🏮 Customize the First Day of the Week or First Month

By default, Business Availability Center takes Monday as the first day of the week, and January as the first month of the first quarter. This task describes how to change either of these defaults in the Infrastructure Settings page.

**To customize target names:**

1 Open the **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings** page.

2 Select the context **Foundations**, then select **Calendar** from the dropdown list.

3 In the **Calendar Options** table, modify the required value.

The change takes effect immediately, for example, in the reports that you generate.

**4** After changing the setting for the first day of the week or for the first month, you must afterwards recalculate all agreements (from the **Admin > Service Level Management > Service Level Agreements** tab), otherwise the reports, and the Status Snapshot report for previous periods, may show no data for some of the tracking periods.

# Calendar Examples

The following sections give examples for creating custom calendars:

➤ "Weekly Calendar Example" on page 165

➤ "Compound Calendar Example" on page 166

## Weekly Calendar Example

To quickly create a calendar that spans the whole week, apart from work days: In the Weekly Calendar Definition page of the Calendar Wizard ("Calendar Pattern: Weekly Calendar Definition Page" on page 170) select a start time of 12 AM and an end time of 12 AM. Select all the days of the week. Click **Add**. Select a start time of 9 AM and an end time of 5 PM. Select Monday to Friday. Click **Clear**.

### Compound Calendar Example

To define a calendar that monitors business hours but does not include the first day of the month. You define a yearly calendar (called **1st day of month**) that includes only the first day of each month:

Next, you define a **Compound** type calendar where you include the Business Hours calendar and exclude the **1st day of month** calendar.

**Compound Calendar Definition**

To include a calendar in the compound calendar, select its **In Use** check box. Then select **Include** for the calendar to be in the calculation, and **Exclude** for the calendar to be removed from the calculation. For example, to define a calendar that m business hours but does not include the first day of the month, define a yearly calendar that includes the first day of the m Select this calendar and the Business Hours calendar, then select the **Exclude** button for this calendar and the Include butt Business Hours calendar.

**Calendar**

| In Use | Name | Period Type | Include | Exclude |
|--------|------|-------------|---------|---------|
| ☑ | Business Hours | Weekly | ⦿ | ○ |
| ☑ | 1st day of month | Yearly | ○ | ⦿ |
| ☐ | 24x7 | Weekly | ⦿ | ⦿ |

In this example, **24x7** is irrelevant to the compound calendar being defined and is not selected.

# 🔍 Calendars User Interface

**This section describes:**

# 🔍 Calendar Wizard

| Description | You use the Calendar Wizard to define calendar schedules to use with your agreements. |
|---|---|
| | **To access:** On the **Admin** > **Service Level Management** > **Repositories** > **Calendars page,** click the **New Calendar** button, or the **Edit** button for an existing calendar. |
| Wizard Map | The Calendar Wizard contains: |
| | Calendar Properties Page > Calendar Pattern: Weekly Calendar Definition Page / Calendar Pattern: Yearly Calendar Definition Page / Calendar Pattern: Compound Calendar Definition Page > Calendar Summary Page |
| Useful Links | "Calendars" on page 161 |

## Calendar Properties Page

| Description | Enables you to define calendar properties and select the period type for the calendar. |
|---|---|
| | **To access:** On the **Admin** > **Service Level Management** > **Calendars page**, click the **New Calendar** button, or the **Edit** button for an existing calendar. |
| Important Information | When you open the Calendar Wizard in edit mode, the Properties page lists any agreements that are using the calendar. |
| Wizard Map | The Calendar Wizard contains: |
| | **Calendar Properties Page** > Calendar Pattern: Weekly Calendar Definition Page / Calendar Pattern: Yearly Calendar Definition Page / Calendar Pattern: Compound Calendar Definition Page > Calendar Summary Page |
| Useful Links | "Calendars" on page 161 |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **Choose period type** | Select the radio button for the period type on which you want to base the calendar:<br><br>➤ **Weekly.** The calendar is based on a weekly cycle, for example, every Sunday from 1:00 AM to 3:00 AM.<br>➤ **Yearly.** The calendar is based on a yearly cycle, for example, the month of December or annual vacations.<br>➤ **Compound.** The calendar combines existing calendars. For example, if you have a yearly calendar monitoring January to October, and a weekly calendar monitoring business hours, you can combine the two calendars into a compound calendar that monitors business hours from January to October. |
| **Description** | Enter a description. The description should not be longer than 500 characters and can consist of any characters and spaces. |
| **Name** | Enter a name for the calendar. The name should not be longer than 50 characters and can consist of alphanumeric characters and spaces. |

## Calendar Pattern: Weekly Calendar Definition Page

| | |
|---|---|
| **Description** | Enables you to define a weekly pattern of active times for the calendar. |
| **Important Information** | You see this page in the Calendar Wizard if you selected **Weekly** on the Calendar Properties Page. |
| **Wizard Map** | The Calendar Wizard contains: <br><br> Calendar Properties Page > **Calendar Pattern: Weekly Calendar Definition Page** / Calendar Pattern: Yearly Calendar Definition Page / Calendar Pattern: Compound Calendar Definition Page > Calendar Summary Page |
| **Useful Links** | "Calendar Examples" on page 164 |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **<Calendar grid>** | A time grid containing a cell for each day of the week/ 30 minute period. Click a cell to make that day/time "active" in the calendar. Click the cell again to remove it from the calendar. <br><br> Active times are shown in blue, free times (times not included in calendar) in gray. |
| **Add** | Click to add the selected time range to the calendar grid. |
| **Add Range** | Set a time range as "active" by selecting the start time and end time for the range, then selecting the day(s) of the week for which the time range is to apply. Click **Add** to add the period to the calendar grid. <br><br> Select a range and click **Clear** to remove that range from the calendar grid. <br><br> **Tip:** Use the CTRL and SHIFT keys to select multiple days. |

| GUI Element (A–Z) | Description |
|---|---|
| **Clear** | Click to remove the selected time range from the calendar grid. |
| **Clear All** | Click to remove all active times from the grid. |

## Calendar Pattern: Yearly Calendar Definition Page

| Description | Enables you to define a yearly pattern of active times for the calendar. |
|---|---|
| **Important Information** | You see this page in the Calendar Wizard if you selected **Yearly** on the Calendar Properties Page. |
| **Wizard Map** | The Calendar Wizard contains: Calendar Properties Page > Calendar Pattern: Weekly Calendar Definition Page / **Calendar Pattern: Yearly Calendar Definition Page** / Calendar Pattern: Compound Calendar Definition Page > Calendar Summary Page |
| **Useful Links** | "Calendar Examples" on page 164 |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **<Calendar grid>** | A time grid containing a cell for each month/day. Click a cell to make that date "active" in the calendar. Click the cell again to remove it from the calendar. Active times are shown in blue, free times (times not included in calendar) in gray. |
| **Add** | Click to add the selected time range to the calendar grid. |

| GUI Element (A–Z) | Description |
|---|---|
| **Add Range** | Set a time range as "active" by selecting the start day and end day for the range, then selecting the months of the year for which the date range is to apply. Click **Add** to add the period to the calendar grid. <br><br> Select a range and click **Clear** to remove that range from the calendar grid. <br><br> **Tip:** Use the CTRL and SHIFT keys to select multiple days. |
| **Clear** | Click to remove the selected time range from the calendar grid. |
| **Clear All** | Click to remove all active times from the grid. |

## Calendar Pattern: Compound Calendar Definition Page

| | |
|---|---|
| **Description** | Enables you to select the calendars to include in the new compound calendar. |
| **Important Information** | ➤ You see this page in the Calendar Wizard if you selected **Compound** on the Calendar Properties Page. <br><br> ➤ If you update one of the calendars included in a compound calendar, the compound calendar itself is also updated. |
| **Wizard Map** | The Calendar Wizard contains: <br><br> Calendar Properties Page > Calendar Pattern: Weekly Calendar Definition Page / Calendar Pattern: Yearly Calendar Definition Page / **Calendar Pattern: Compound Calendar Definition Page** > Calendar Summary Page |
| **Useful Links** | "Calendar Examples" on page 164 |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
| --- | --- |
| **<Calendar table>** | Lists all existing calendars. |
| **In Use** | Select the check box for each calendar that impacts on the new calendar. |
| **Include/Exclude** | Enabled after selecting the **In Use** check box for a calendar. Select either the **Include** or **Exclude** radio button for each calendar, as follows:<br><br>➤ **Include.** This option includes the active times for the selected calendar in the calculations for the new calendar.<br>➤ **Exclude.** This option excludes the active times for the selected calendar in the calculations for the new calendar. |

# Calendars Page

| | |
| --- | --- |
| **Description** | Lists the calendars defined for Service Level Management (including the preconfigured calendars) and enables you to create, edit and delete calendars.<br><br>**To access:** Select **Admin** > **Service Level Management** > **Repositories** > **Calendars** |
| **Important Information** | Calendars were called Time Intervals in previous versions. |
| **Useful Links** | "Calendars" on page 161 |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
|  | Opens the Calendar Wizard, where you can edit properties of the calendar. |
|  | Creates a clone of the calendar named Copy of <calendar name>. You can use the copy to define a new calendar with a similar schedule. |
|  | Deletes the calendar. You cannot delete a calendar if it is associated with an agreement. |
| **Description** | Displays a description of the calendar. |
| **Name** | The calendar name. |
| **New Calendar** | Click to open the Calendar Wizard, where you define a new calendar. |
| **Period Type** | Displays whether the calendars is based on weekly, yearly, or compound periods. |

# 7

# Integration with HP ServiceCenter

This chapter explains how system incidents from HP ServiceCenter are handled in Service Level Management.

**This chapter includes:**

**Concepts**

➤ Integration with HP ServiceCenter - Overview on page 175

➤ Service Level Management KPIs for System Incidents on page 176

➤ Use Case Example: System Incident KPIs During a Single Period on page 181

➤ Use Case Example: System Incident KPIs Across Periods on page 184

## Integration with HP ServiceCenter - Overview

HP Business Availability Center integrates with HP ServiceCenter to collect information on open incidents for business services, and present the information within Business Availability Center applications.

The data for incidents is retrieved from HP ServiceCenter using the EMS Integration tool, which sets up a SiteScope HP ServiceCenter monitor to import the topology for the services and their incidents. The result of this process is to create new Business Service CIs with child EMS Monitor CIs (or to create EMS Monitor CIs attached to existing Business Service CIs). The topology can be seen in the Service Measurements view. For details on working with the EMS Integration tool, see "Use the EMS Integration Tool for HP ServiceCenter Data" in *Solutions and Integrations*.

The data for each EMS Monitor CI is updated by the incoming event samples from HP ServiceCenter, providing an ongoing record of the lifecycle for each incident. This information is used by the system incident KPIs in Service Level Management.

# Service Level Management KPIs for System Incidents

You include system incidents in service agreements by adding the relevant Business Service CI, or the child EMS Monitor CI, to the agreement in the **Admin** > **Service Level Management** > **Agreements Manager** page.

When a system incident is added to an agreement, specific KPIs for handling HP ServiceCenter data are automatically attached to the EMS Monitor CI:

➤ **MTTR.** The Mean Time to Repair KPI provides information on the percentage of incidents during a time period whose repair time was within a specified threshold. The monitor rule for the KPI is the MTTR rule, described in "MTTR (Mean Time to Recover)" in *CI Attribute Customization*.

➤ **MTBF.** The Mean Time Between Failures KPI provides information on the average time span when there were no open incidents for a business service, during a time period. The monitor rule for the KPI is the MTBF rule, described in "MTBF (Mean Time Between Failures)" in *CI Attribute Customization*.

➤ **MTBSI.** The Mean Time Between System Incidents KPI provides information on the average time span between the opening of one incident to the opening of the next incident, during a time period. The monitor rule for the KPI is the MTBSI rule, described in "MTBSI (Mean Time Between System Incidents)" in *CI Attribute Customization*.
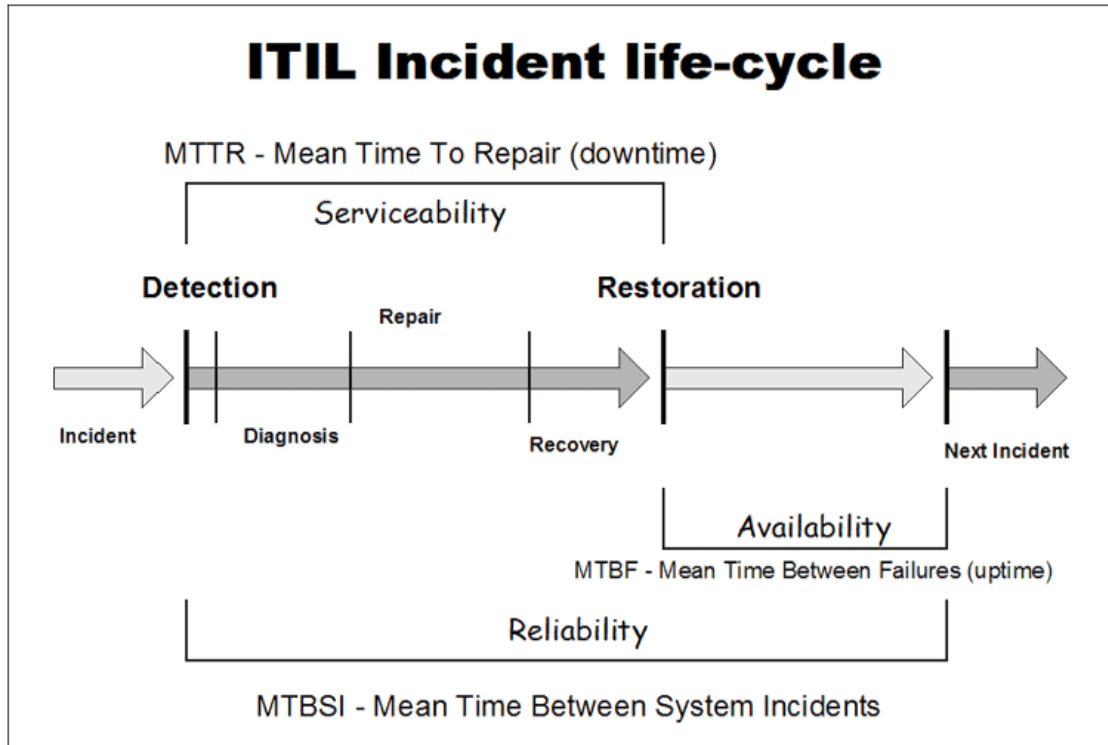
**Note:** The Business Service CI uses the Incidents Group Rule as the default group rule for the MTTR, MTBF, and MTBSI KPIs. The logic for this group rule assumes that there is a single child CI; however, if the Business Service CI has than one child using these KPIs (for example, in a hierarchy of Business Service CIs), you must manually change the group rule for these KPIs to the **Worst Child (Min)** rule.

Change the rule in the Define KPIs page of the appropriate agreement wizard: See "Agreement Wizard" on page 67 or the "Advanced Agreement Options Wizard" on page 65.

## Incident State and Severity Values

The calculations for the MTTR, MTBF, and MTBSI KPIs use the status (state) and severity values received for the incidents in the samples from HP ServiceCenter:

➤ The status of the incident received in a sample, for example, **Open** or **Pending**, indicates the current point in the lifecycle of the incident. A new sample is sent for every change in the incident status.

Service Level Management uses the incident status to define the **Initial State** parameter (marking the start of repair time) and **Final State** parameter (marking the end of repair time) for the system incident KPIs. By default, the incident statuses used for these parameters are **Open** and **Closed**.

➤ The severity for the incident received in the sample, for example, **High** or **Average**, enables filtering of the incidents to be included in calculations.

By default, Service Level Management sets the **Severity** parameter for the system incident KPIs to **3** (equivalent to **Average** severity in HP ServiceCenter). This means that incidents of severity 3 or higher (higher severities are 1 and 2) are included in the calculations for the KPI.

The default parameter values for the system incident KPIs are defined in the corresponding rules for the KPIs. You can change the default values from the **Admin > Service Level Management > Repositories > Business Rules** page. For details, see "Rule Details Dialog Box" in *CI Attribute Customization*.

You can also modify the default parameter values for the KPIs attached to individual CIs within a service agreement. You do this by editing the KPI within the Agreement Wizard from the **Admin** > **Service Level Management** > **Agreements Manager** page. For details, see "KPI Definition Dialog Box" on page 87.

If required, you can assign multiple instances of the system incident KPIs to a CI, and define different parameter values for each one, to compare different parts of the incident lifecycle. To do this you must clone the system incident KPIs in the KPIs Repository, and edit the parameters for the new KPIs as required (for example, you might create MTTR2, MTTR3, and so forth). You can then attach the new KPIs to CIs on the Define KPIs page of the Agreement Wizard.

For details on creating new KPIs, see "KPIs Repository" in *CI Attribute Customization*.

## KPI Calculation Principles

The following principles apply when calculating the KPI values:

➤ All calculations take into consideration the calendars for the agreement, and exclude downtime.

➤ An incident is considered in the calculations for a calendar if its **Initial State** timestamp is within the calendar. Only the repair time within that calendar is counted for calculation purposes.

➤ If an incident starts in one tracking period and ends in a different tracking period, it is not included within the calculation for each period, but is included for a longer period that includes the two shorter periods. For example, if an incident starts on Monday and ends on Wednesday, the data for the incident is not included for Monday or for Wednesday—but is shown in the data for the entire week that includes these days.

# 🍡 Use Case Example: System Incident KPIs During a Single Period

The following use case gives examples of calculations for incidents that were opened for a Business Service CI during a single day. Each new incident creates an EMS Monitor CI as a child of the Business Service CI, and the calculations are done for the system incident KPIs attached to the EMS Monitor CIs—MTTR, MTBF, and MTBSI KPIs.

### Use Case Details

The details for the use case are as follows:

➤ Calculations are made for a day tracking period.

➤ The monitored period during a day is 08:00 to 20:00.

➤ There are two calendars monitored by the SLA:

  ➤ Business hours from **08:00-13:00** and **17:00-20:00** (shown in blue in results)

  ➤ Off business hours from **13:00-17:00** (shown in gold in results)

➤ The SLA targets are **Exceeded** and **Failed**.

➤ The objective set for the MTTR KPI is: **70%** of the incidents must be resolved in:

  ➤ <= **01:30** in business hours

  ➤ <= **04:00** in off business hours

---

**Note:** In the MTTR results for each example, **m** means that the objective was met, **b** means that the objective was breached.

---

➤ The objective set for the MTBF KPI is: Average time between failures must be >= **01:30**

➤ The objective set for the MTBSI KPI is: Average time between incidents occurring must be >= **03:00**
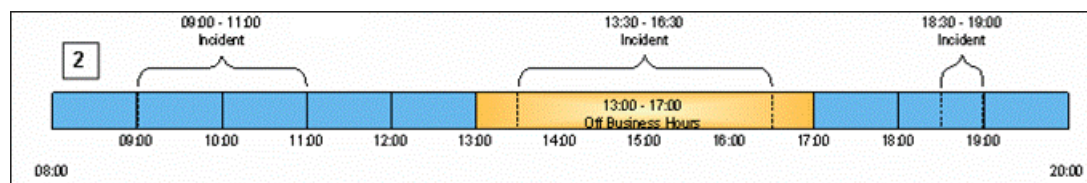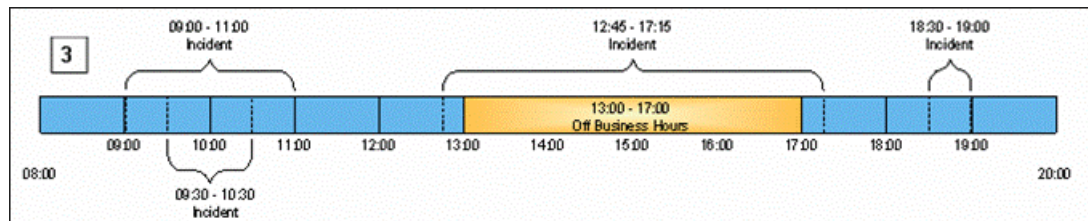
## Case 1 Results
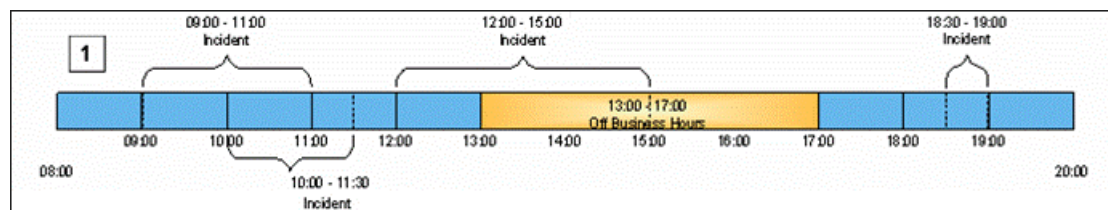


1. **Case 1 – Business Hours**:
   a. Incident 1: **start** 09:00; **end** 11:00 (duration 02:00).
   b. Incident 2: **start** 10:00; **end** 11:30(duration 01:30).
   c. Incident 3: **start** 12:00; **end** 13:00 (duration 01:00).
   d. Incident 4: **start** 18:30; **end** 19:00 (duration 00:30).

2. **Case 1 – Off Business Hours**
   a. **No incidents**

| Case 1 | MTTR | MTBF | MTBSI |
|---|---|---|---|
| Business Hours | b,m,m,m = **75%** | (1+0.5+1.5+1)/4=**01:00** | (1+2+2.5)/3=**02:45** |
| Off Business Hours | No data | **02:00** | No data |

## Case 2 Results



1. **Case 2 – Business Hours:**
   a. Incident 1: **start** 09:00; **end** 11:00 (duration 02:00).
   b. Incident 2: **start** 18:30; **end** 19:00 (duration 00:30).
2. **Case 2 – Off Business Hours:**
   a. Incident 1: **start** 13:30, **end** 16:30

| Case 2 | MTTR | MTBF | MTBSI |
|---|---|---|---|
| Business Hours | b,m = **50%** | (1+3.5+1)/3=**01:53** | (5.5)/1=**05:30** |
| Off Business Hours | m = **100%** | (0.5+0.5)/2=**00:30** | No data |

# Case 3 Results



1. **Case 3 – Business Hours:**
   a. Incident 1: **start** 09:00; **end** 11:00 (duration 02:00).
   b. Incident 2: **start** 09:30; **end** 10:30 (duration 01:00).
   c. Incident 3: **start** 12:45; **end** 17:15 (duration 00:30).
   d. Incident 4: **start** 18:30; **end** 19:00 (duration 00:30).
2. **Case 3 – Off Business Hours:**
   a. **No Incidents.**

| Case 3 | MTTR | MTBF | MTBSI |
|---|---|---|---|
| Business Hours | b+m+m+m = **75%** | (1+1.75+1.25+1)/4=**01:15** | (0.5+3.25+2)/3=**01:40** |
| Off Business Hours | No data | No data | No data |

# Case 4 Results
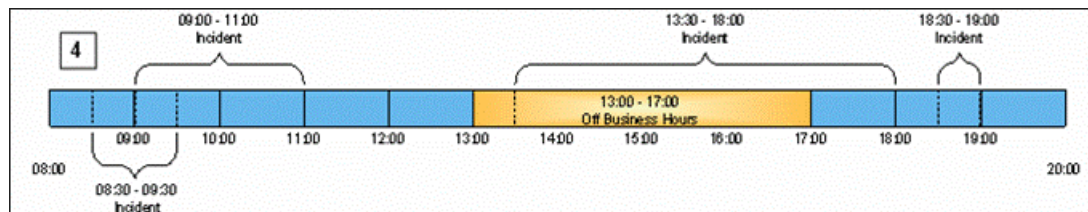


1. **Case 4 – Business Hours:**
   a. Incident 1: **start** 08:30; **end** 09:30 (duration 01:00).
   b. Incident 2: **start** 09:00; **end** 11:00 (duration 02:00).
   c. Incident 3: **start** 18:30; **end** 19:00 (duration 00:30).
2. **Case 4 – Off Business Hours:**
   a. Incident 1: **start** 13:30; **end** 17:00 (duration 03:30).

| Case 4 | MTTR | MTBF | MTBSI |
|---|---|---|---|
| Business Hours | m,b,m = **66%** | (0.5+3.5+1)/3=**01:40** | (0.5+5.5)/2=**03:00** |
| Off Business Hours | m= **100%** | (0.5)/1=**00:30** | No data |

# 🍥 Use Case Example: System Incident KPIs Across Periods

The following use case gives examples of calculations for incidents that were opened for a Business Service CI over the course of a week. Each new incident creates an EMS Monitor CI as a child of the Business Service CI, and the calculations are done for the system incident KPIs attached to the EMS Monitor CIs—MTTR, MTBF, and MTBSI KPIs.

## Use Case Details

The details for the use case are as follows:

➤ Calculations are made for day and week tracking periods.

➤ There are two calendars monitored by the SLA:

  ➤ Business hours: Sunday, Wednesday, Thursday, Friday, Saturday (shown in blue in results)

  ➤ Off business hours: Monday, Tuesday (shown in gold in results)

➤ The SLA targets are **Exceeded** and **Failed**.

➤ The objective set for the MTTR KPI is: **70%** of incidents must be resolved within 30 hours.

## Use Case Results
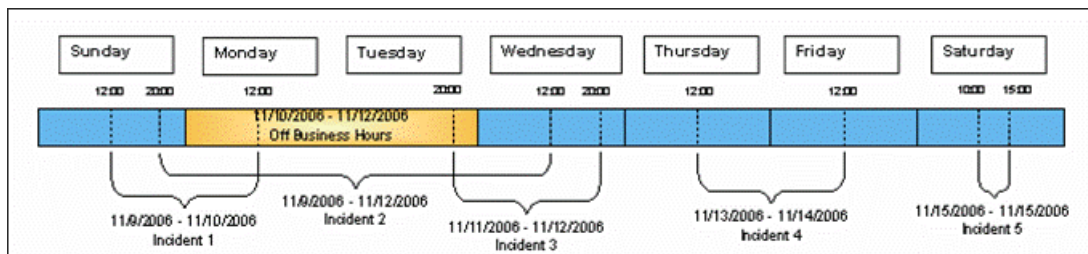


**Business Hours (blue):**

➤ **Sunday:** No closed incidents

➤ **Monday:** Not relevant - off-business hours

➤ **Tuesday:** Not relevant - off-business hours

➤ **Wednesday:** 1 incident (opened on Sunday) with duration of 16 hours (amount of open time during business hours)

➤ **Thursday:** No closed incidents

➤ **Friday:** 1 incident (opened on Thursday) with duration of 24 hours

➤ **Saturday:** 1 incident with duration of 5 hours

---

**Note:** Incidents that are opened on one day and are closed on a different day are ignored in the calculations for each day, but included in the week calculations.

---

| KPI | Daily Results | | | | | | |
|---|---|---|---|---|---|---|---|
| | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
| MTTR | **No data** | **No data** | **No data** | **No data** | no data | **No data** | **100%** |
| MTBF | **No data** | **No data** | **No data** | **No data** | no data | **No data** | 09:30 |
| MTBSI | **No data** | **No data** | **No data** | **No data** | **No data** | **No data** | **No data** |

| KPI | Week results |
|---|---|
| MTTR | **100%** |
| MTBF | **14:45** ((12+16+22+9)/4) |
| MTBSI | **31:20** ((8+40+46)/3) |

**Off Business Hours (gold):**

| KPI | Daily Results | | | | | | |
|---|---|---|---|---|---|---|---|
| | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
| MTTR | **No data** | no data | **No data** | **No data** | **No data** | **No data** | **No data** |
| MTBF | **No data** | **No data** | **No data** | **No data** | **No data** | **No data** | **No data** |
| MTBSI | **No data** | **No data** | **No data** | **No data** | **No data** | **No data** | **No data** |

| KPI | Week results |
|---|---|
| MTTR | **No data** |
| MTBF | **No data** |
| MTBSI | **No data** |

# 8

# Business Process and Business Transaction Data in Service Level Management

This chapter describes how to work with HP Business Process Insight and HP TransactionVision data in Service Level Management.

**This chapter includes:**

**Concepts**

**Tasks**

## 🔵 Agreements for Business Process and Business Transaction CIs - Overview

HP Business Process Insight sends data to Business Availability Center on the business process steps and flows that it monitors for your business processes. For general information on the integration with Business Process Insight, see "HP Business Process Insight Data in HP Business Availability Center" in *Using Dashboard*.

HP TransactionVision sends data to Business Availability Center on the path taken by your business transactions across your enterprise. For general information on the integration with TransactionVision, see "Business Transaction Management" in *Using Dashboard*.

You can use either or both of these data sources to measure application performance over time against your business goals, by creating service agreements containing Business Process Insight CIs or TransactionVision CIs. The preferred method for building agreements for data from these sources is to use the CI-based process. For details, see "Building Agreements—CI-Based Process" on page 26.

The values used for the CIs are taken from the samples arriving from each application. By default, samples are sent every 15 minutes from Business Process Insight, and every 5 minutes from TransactionVision. The samples contain data on the numerical count and the monetary value of business process instances or business transaction instances, as relevant, broken down by whether the instances are completed or backlogged, and by various state categories. (For details on the data in the samples, see "Data Samples" in *Reference Information*.)

Within agreements, the Business Process Insight and TransactionVision CIs each work with KPIs and rules preconfigured for these data sources. Some of the rules calculate the KPI value based on count values, and some based on monetary values (for details, see "KPIs Based On Monetary Value" on page 193).

For each CI, there are default KPIs and rules that are automatically assigned to the CI when you select the **Automatically define default KPIs for new CIs** option in the Agreement Wizard. Other KPIs and rules must be manually assigned. For almost all KPIs and rules, you must define objective thresholds—for details, see "Objective Thresholds for KPIs" on page 192.

For more information, see "KPIs and Rules for Business Process Insight" on page 189, and "KPIs and Rules for TransactionVision" on page 191.

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**Note:** Business Process Insight and TransactionVision monitor CIs do not work with Outage rules.

---

# KPIs and Rules for Business Process Insight

The topology for HP Business Process Insight CIs in Business Availability Center is described in "Topology for HP Business Process Insight" in *Using Dashboard*. The following table lists the KPIs and rules that are preconfigured to work with the five Business Process Insight monitor CIs, when added to agreements in Service Level Management.

All KPIs are attached to the relevant CI automatically when you select the **Automatically define default KPIs for new CIs** option in the Agreement Wizard, unless otherwise specified.

You can find descriptions of the KPIs and Rules in *CI Attribute Customization*.

| CI | KPI | Rules |
|---|---|---|
| All Business Process Insight monitor CIs | Backlog | Default rule: BPI Average Backlog (Count-based) |
| | | BPI Average Backlog (Value-based) |
| | Throughput | Default rule: BPI Hourly Throughput (Count-based) |
| | | BPI Hourly Throughput (Value-based) |
| BPI Business Process Monitor | Business Health | Default rule: BPI Health Average Status (Count-based) |
| | | BPI Health Average Status (Value-based) |
| BPI Duration Monitor | Duration | Default rule: BPI Average Duration |
| | | BPI Minimum Duration |
| | | BPI Maximum Duration |
| | | BPI Weighted Average Duration |
| | Duration Status Percentage<br><br>This KPI must be manually defined for the CI. | BPI Duration Status |

| CI | KPI | Rules |
|---|---|---|
| BPI Value Monitor/ BPI Custom Value Monitor | Value | Default rule: BPI Average Value |
| | | BPI Minimum Value |
| | | BPI Maximum Value |
| | | BPI Weighted Average Value  This rule is applicable for BPI Custom Value Monitor CI only. |
| | Value Status Percentage  This KPI must be manually defined for the CI. | BPI Value Status |

# KPIs and Rules for TransactionVision

There are seven KPIs that are used for TransactionVision data in Service Level Management:

➤ Backlog

➤ Delays

➤ Duration

➤ Exceptions

➤ Failures

➤ Throughput

➤ Value

Descriptions of the KPIs, and lists of which rules are relevant for each KPI, can be found in "List of Service Level Management KPIs and Details" in *CI Attribute Customization*.

When you add TransactionVision CIs to an agreement (in the Agreement Wizard) and select the **Automatically define default KPIs for new CIs** option, the Backlog, Duration, and Throughput KPIs are automatically attached to all TV Monitor CIs, and to all parent CIs for those CIs. The other TransactionVision data KPIs (Delays, Exceptions, Failures, and Value) must be manually attached to the CIs, as required, in the Define KPIs Page of the Agreement Wizard.

# Objective Thresholds for KPIs

Service Level Management uses the objective thresholds defined for a KPI to translate the calculated value for the KPI into one of the objective statuses used in an agreement (Exceeded, Failed, and so forth).

Each business process monitored by HP Business Process Insight, and each business transaction monitored by HP TransactionVision, represents an individual and intricate business event, with individual business objectives and risks. This means that, in order to display a meaningful objective status, objective thresholds generally need to be set individually for each business process and business transaction.

In view of this, most of the Business Process Insight and TransactionVision rules in Service Level Management do not include predefined objective thresholds. After adding Business Process Insight or TransactionVision CIs to an agreement, you define the thresholds for each KPI rule attached to each CI, in the KPI Definition Dialog Box (described on page 87).

---

**Note:** The exception to this is the BPI Health Average Status (Count-based) rule, the default rule for Business Health. This rule provides predefined percentage objective thresholds (unless you manually assign the KPI and rule to a CI, in which case you need to define the thresholds for it).

---

Until you define the objective thresholds for a rule (without defaults), the Service Level Management reports display only a value for the KPI, without a status color. In the tooltip for the KPI, the **Status** field displays **No objectives defined**.

# KPIs Based On Monetary Value

The samples sent to Business Availability Center by HP Business Process Insight and HP TransactionVision contain data on the count of instances in each measurement category. Where relevant, the samples also contain data on the monetary value of the instances (though monetary values are not always included).

Service Level Management provides KPIs and rules that calculate status and business metrics based on the financial information included in the samples. The following sections describe how to work with these KPIs and rules:

➤ "Count-Based and Value-Based KPIs" on page 193

➤ "Units Used for Value-Based KPIs" on page 195

### Count-Based and Value-Based KPIs

The Value KPI provides value-based metrics, calculated from the monetary values for the completed instances, as received in the samples.

In addition, some of the other KPIs for Business Process Insight and TransactionVision can provide either count-based or value-based metrics, according to the rule defined for the KPI. When the rule is count-based (the default for each KPI), the count values received in the samples are used for the calculations; when the rule is value-based, the monetary values received in the samples are used for the calculations.

The following KPIs can be either value-based or count-based:

**For Business Process Insight data:**

➤ Backlog

➤ Business Health

➤ Throughput

➤ Value (This KPI is value-based only)

**Note:** The Value Status Percentage KPI also provides metrics based on monetary values; however, this KPI calculates a percentage based on a count of instances with monetary values at each threshold level, as sent by HP Business Process Insight.

**For TransactionVision data:**

➤ Backlog

➤ Delays

➤ Exceptions

➤ Failures

➤ Value (This KPI is value-based only)

**Note:** Explanations of these KPIs can be found in "List of Service Level Management KPIs and Details" in *CI Attribute Customization*.

To change a KPI attached to a CI from count-based to value-based, in the KPI Definition Dialog Box select a suitable value-based rule and define the required objective thresholds.

If you want to see both count-based and value-based versions of the KPI attached to the CI, then you need to clone the KPI template in the repositories to create a second version of the KPI. You can then attach both of the KPI versions to the CI, and use different rules for each. See "Define New KPIs for Monetary Values - Scenario" on page 198.

If you want a KPI to use a value-based rule by default, you must change the defined default settings for the CI in the Default KPIs XML definition: Select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, choose **Applications**, select **Service Level Management**, and locate the **Default KPIs** entry in the table. To edit the file, it is recommended that you copy the file contents to an XML editor.

## Units Used for Value-Based KPIs

The Value KPI displays a monetary value result in the reports, and has a default currency unit of **$** (USD).

The Backlog KPI (for Business Process Insight and TransactionVision data) and the Throughput KPI (only for Business Process Insight data), when using a value-based rule, also display monetary value results in the reports. However there is no default currency unit defined for these KPIs.

Defining or changing the currency unit for these KPIs is done in the KPI Repository, by editing existing KPI templates or defining new ones, depending on your specific requirements (for details on editing and defining KPIs, see "Set Up a KPI" in *CI Attribute Customization*).

To work with monetary values with these KPIs, you must consider the requirements for your integrations with Business Process Insight and/or TransactionVision:

➤ If you require both count-based and value-based versions of the Backlog or Throughput KPIs, then you need to create two different versions of the KPI in the KPI Repository. You can then define a currency unit for the value-based version.
For example, you create a clone of Throughput and also override the original. One is renamed Throughput-Values and has a defined $ currency unit; the other is renamed Throughput-Count.

➤ If you have business processes or transactions using different currency units, then you need to define multiple versions of the KPIs, each with a different defined currency unit.
For example, you have business transactions in three different currencies. You create two clones of Value KPI and rename them Value-Euro and Value-Sterling, and define appropriate currency units for them. You then override the Value KPI and rename it Value-USD (leaving the $ currency unit defined).

➤ If you are working with both Business Process Insight and TransactionVision data in Service Level Management, you need to consider if changes to a KPI are relevant for both data types, or if you need to create separate KPI versions for each data type.
For example, you create a clone of the Backlog KPI and also override the original. One is renamed Backlog-BPI Values and has a defined currency unit; the other is renamed Backlog-TV Count, and has no unit defined.

For a scenario on defining additional KPI templates for value-based KPIs, see "Define New KPIs for Monetary Values - Scenario" on page 198.

---

**Note:** If you decide to use that a single KPI for multiple currencies, then you should use one of the status-based group rules for a parent CI with more than one currency amongst the child CIs. For details, see "Status-Based Group Rules" on page 196.

---

# Status-Based Group Rules

In some cases, performing logical arithmetical operations (such as average, minimum, maximum) on the KPI values in a group gives meaningless results. This is the case in the following examples:

➤ For a group containing business transaction monitor CIs, when the Value KPI for each child CI gives a monetary value in a different currency.

➤ For a group containing business process monitor CIs, when the Backlog KPI for each child CI gives a backlog count value. A count of 500 may represent a large number for one business process (causing Failed status), but a small number for a different business process (causing Exceeded status).

In these situations, you can use one of the status-based group rules for the parent CI. The status-based group rules calculate a status for the CI based on the statuses of the children, and do not display a value.

There are two status-based group rules available:

➤ Group Average Status**.** For details, see "Group Average Status" in *CI Attribute Customization.*

➤ Group Worst Status**.** For details, see "Group Worst Status" in *CI Attribute Customization.*

**Notes:**

➤ KPIs using status-based rules are excluded from status forecast calculations.

➤ When a status-based rule is in use, the SLA reports are affected as follows:

  ➤ No value is displayed in the cell for a KPI using the status-based rule. In the tooltip, there is no value displayed beside the KPI name, instead it says **N/A (Status Based)**.

  ➤ There are no objectives for status-based rules, so none are displayed in the relevant reports or tooltips for the KPI using the status-based rule.

  ➤ No trend is displayed in the Time Range Comparison report for KPIs using a status-based rule.

  ➤ The graphs for the CIs Over Time and the CI Over Time vs Target reports do not display KPIs using a status-based rule.

# 👆 Define New KPIs for Monetary Values - Scenario

This scenario describes the creation and assignment of new Service Level Management KPIs to work with both count-based and value-based rules.

---

**Note:** The scenario describes defining new KPIs for TransactionVision CIs, but the same principles apply when defining new KPIs for Business Process Insight CIs.

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This scenario includes the following steps:

➤ "Background" on page 198

➤ "Create KPI Templates" on page 199

➤ "Attach KPIs to CIs" on page 201

➤ "Recalculate the SLA" on page 204

➤ "Results in Reports" on page 204

## 1 Background

Acme company have an integration with HP TransactionVision, but do not integrate with HP Business Process Insight.

The SLA TV for Acme was previously created for the TransactionVision data, and shows count-based information in the Service Level Management reports. The IT Manager has requested to see also monetary information for the backlogged business transactions. The business transactions have monetary values in one of two currencies, either dollars or euro.

## 2  Create KPI Templates

Sam, the Service Level Management administrator, accesses the Service Level Management KPI Repository and creates two clones of the Backlog KPI, then overrides the Backlog KPI.

| | | | | | |
|---|---|---|---|---|---|
| **Agreements Manager** | **Services Manager** | **Downtime Events** | | **Repositories** | |

**Factory KPIs**

| | | | | | |
|---|---|---|---|---|---|
| ☐ | 101 | Availability | SLM General | 13 | 10 |
| ☐ | 104 | Availability Six Sigma | SLM General | 13 | 10 |
| ☐ | 212 | Average Outage Duration | SLM General | 13 | 10 |
| ☐ | 612 (Overridden) | Backlog | SLM General | 13 | 10 |
| ☐ | 604 | Business Health | SLM General | 13 | 10 |
| ☐ | 611 | Delays | SLM General | 13 | 10 |
| ☐ | 605 | Duration | SLM General | 13 | 10 |
| ☐ | 607 | Duration Status Percentage | SLM General | 13 | 10 |

[ Clone ]  [ Override ]

**Custom KPIs**

| | ID | Display Label ▲ | Applicable Sections | Display Order | Acknowledgement Level |
|---|---|---|---|---|---|
| ☐ | 2003 | Backlog | SLM General | 13 | 10 |
| ☐ | 612 | Backlog | SLM General | 13 | 10 |
| ☐ | 2002 | Backlog | SLM General | 13 | 10 |

He opens the overridden version for editing and renames it Backlog-Count (this will remain the default KPI attached to the CIs). He also opens each of the two new copies of the KPI for editing; the first he renames Backlog-Value Euro and defines the unit as **euro**, and the second he renames Backlog-Value Dollars and defines the unit as **$**.



The names are displayed in the Custom KPIs area:



| | ID | Display Label▲ | Applicable Sections | Display Order | Acknowledgement Level |
|---|---|---|---|---|---|
| ☐ | 612 | Backlog-Count | SLM General | 13 | 10 |
| ☐ | 2002 | Backlog-Value Dollars | SLM General | 13 | 10 |
| ☐ | 2003 | Backlog-Value Euro | SLM General | 13 | 10 |

## 3 Attach KPIs to CIs

Sam accesses the Agreements Manager tab and opens the TV for Acme SLA for editing. In the Define KPIs page, he sees that Service Level Management has automatically updated the default Backlog KPI to **Backlog-Count**.



Sam attaches the new value-based KPIs to the CIs. For each TV Monitor CI, he clicks **Add KPI** to open the KPI Definition dialog box, and selects either the **Backlog-Value Dollars** KPI or the **Backlog-Value Euro** KPI, according to the currency used by that business transaction.

He also defines the value-based rule for the Backlog KPI (**TransactionVision Average Backlog Value**) and assigns threshold values in dollars for the objectives.



The same KPI is attached to the parent Business Transaction CI for each TV Monitor CI.

For higher-level group CIs, with child CIs using both currencies, Sam attaches both the **Backlog-Value Dollars** KPI and the **Backlog-Value Euro** KPI.

### 4  Recalculate the SLA

The TV for Acme SLA must be recalculated for the changes to be implemented in the reports. In the Agreements Manager tab, Sam sees that the recalculation task has not been automatically scheduled, so he clicks **Schedule recalculation task** and defines the recalculation time.



### 5  Results in Reports

The **Backlog-Count** KPI continues to show count results for the CIs, while the **Backlog-Value Dollars** KPI and the **Backlog-Value Euro** KPI show monetary values.



| CI ▲ | Backlog-Count | Backlog-Value Dollars ($) | Backlog-Value Euro (Euro) | Duration (HH:MM:SS) | Throughput |
|---|---|---|---|---|---|
|  | 24x7 | 24x7 | 24x7 | 24x7 | 24x7 |
| TV for Acme | 3,170.645 | 89,533.813 | 43,808,799.702 | 00:00:08 | 16.000 |
| Bond | 5,246.291 | - | 43,808,799.702 | 00:00:02 | 8.000 |
| Bond monitor | 5,246.291 | - | 43,808,799.702 | 00:00:02 | 8.000 |
| Fund Transfer | 1,095.000 | 89,533.813 | - | 00:00:14 | 8.000 |
| Fund Transfer monitor | 1,095.000 | 89,533.813 | - | 00:00:14 | 8.000 |

■ Exceeded ■ Failed ■ No Data ■ Downtime

# 9

# KPIs and Business Rules Repositories

The **Admin** > **Service Level Management** > **Repositories** tab includes the KPIs and Business Rules repository pages for Service Level Management.

## KPIs

KPIs help you to monitor your business objectives, and to track critical performance variables over time. For details on the Service Level Management KPIs, see "List of Service Level Management KPIs and Details" in *CI Attribute Customization*.

For details on defining and editing Service Level Management KPI, see "KPIs Repository" in *CI Attribute Customization*.

## Rules

Service Level Management business rules define the logic to be used when calculating measurements for a KPI. For details on the Service Level Management rules, see "List of Service Level Management Business Rules" in *CI Attribute Customization*.

For details on defining and editing Service Level Management KPI, see "Service Level Management Rules" in *CI Attribute Customization*.

# Part II

## Service Level Management Reports

# 10

# Working with the Service Level Management Application

This chapter describes main concepts and elements specific to the application component of Service Level Management.

**This chapter includes:**

**Concepts**

**Tasks**

**Reference**

➤ Service Level Management Application User Interface on page 240

**Troubleshooting and Limitations** on page 295

# ♣ Service Level Management Reports - Overview

Service Level Management reports show you how well actual service levels compare with your goals. The reports provide you and your users with a bird's eye view of the whole system, and enable you to get an early warning of potential problems, before agreement violations occur.

You can view reports from a Six Sigma perspective, and you can store report data and share reports. You can also use the SLA Status Alerts report to view a log of alerts sent during a specified time period—for details, see "SLA Alerts" in *Alerts*.

---

**Tip:** You can also use the Service Report framework to create a custom report with elements from Service Level Management and Dashboard. The Service Report employs a multidimensional data model. For details, see "Service Report" in *Using My BAC*.

---

## Report Summaries

The following table summarizes the Service Level Management reports:

| Report Name | Description | Use This Report To... |
|---|---|---|
| Status Snapshot | Displays up-to-date information about the worst-performing agreements in the current tracking periods, and in previous, closed periods.<br><br>For details, see "Status Snapshot Report" on page 285. | track worst-performing agreements, and get a quick snapshot of agreement status |
| SLA Status | Displays current and forecast status for agreements over a selected tracking period.<br><br>For details, see "SLA Status Report" on page 276. | determine if current service levels may lead to a future breach of the agreement |
| SLAs Summary | Displays a list of agreements and their status, organized by KPI/calendar/time period.<br><br>For details, see "SLAs Summary Report" on page 282. | view a summary of data for all (or specific) agreements |
| CI Summary | Drill-down from the SLA Summary report. The report displays status for CIs in the branch for a selected CI (up to four levels), organized by KPI/calendar/time period.<br><br>For details, see "CI Summary Report" on page 253. | find CIs that did not reach their objectives |
| CI Impact | Displays a CI's impact across several agreements. The report displays status organized by KPI/calendar/time period.<br><br>For details, see "CI Impact Report" on page 244. | compare the availability and performance of a CI across several agreements |

| Report Name | Description | Use This Report To... |
|---|---|---|
| CI Status | Displays status for CIs in the branch for a selected CI (up to four levels), for a selected time range, calendar, and KPI.<br><br>For details, see "CI Status Report" on page 250. | view configuration information, such as objectives, for each CI |
| Time Range Comparison | Enables you to compare status for up to eight time ranges for CIs in an agreement.<br><br>Displays status for CIs in the branch of a selected CI (up to four levels), for a selected calendar and KPI.<br><br>The added value in this report is that it displays a trend between two time ranges.<br><br>For details, see "Time Range Comparison Report" on page 291. | compare time ranges to determine whether availability and performance have improved |
| CIs Over Time | Displays a graphic display of status over time for selected CIs, for a specific KPI and calendar.<br><br>For details, see "CIs Over Time Report" on page 259. | follow the results of a particular CI over a time period and compare with other CIs |
| CI Over Time vs. Target | Displays a graphic display of status over time for a selected CI, for a specific KPI and calendar, and compares results to the target objectives for the CI.<br><br>For details, see "CI Over Time vs. Target Report" on page 247. | see how well a CI has performed compared to its objectives |
| Outage Summary | Displays a list of outages for selected CIs.<br><br>For details, see "Outage Summary Report" on page 270. | view outage information for a specific agreement |

| Report Name | Description | Use This Report To... |
|---|---|---|
| Outage Breakdown | Displays a graphic display for breakdown of outage categories by CI outages, or a breakdown of CI outages by outage categories. You view data according to outage duration or number of outages, for a specific calendar.<br><br>For details, see "Outage Breakdown Report" on page 262. | view a breakdown of all outages for certain CIs, to see to which category a CI belongs (Database, Network, Webserver, Undefined, or user-defined) |
| Outage Distribution | Displays a graphic display of outage distribution by CI or by outage category. You view data according to outage duration or number of outages, for a specific calendar.<br><br>For details, see "Outage Distribution Report" on page 265. | view the outage distribution for selected CIs, to see which CI or category has the most outages, or has outages with the longest duration |

## Producing Reports

For a general explanation of how to work with all HP Business Availability Center reports, see "Working in Reports" in *Reports*.

If you have defined downtime or other events, Service Level Management reports exclude the data according to the downtime definitions. For details, see "Downtime Events" on page 145.

Service Level Management:

➤ displays a report with the last agreement selected.

➤ displays a report with the same filters (for example, KPI, configuration item, time period) as those chosen in a previous report, for the duration of the Web session.

➤ displays reports with a minimum time granularity of one hour.

➤ generates a report at the same level (for example, agreement, CI, CI's children) as that chosen in a previous report.

➤ generates a report according to the aggregated data stored in the database.

➤ updates the "to date" views once daily.

➤ enables users to add any report to a custom report.

➤ enables users to sort a report by any column.

➤ can display up to 60 data points in each table. For example, for a month time period, you can choose to view the data organized by weeks (four or five data points) or days (30 or 31 data points). However, you cannot choose to view by hours (~744 data points).

# ♣ Status in Reports

Each KPI assigned to a CI generally displays a value for the KPI (calculated by the KPI business rule) and an objective status (determined by comparing the calculated value against the objective thresholds defined in the rule).

For monitor (leaf) CIs, the KPI rule calculates the value based on data received in the samples for the CI. For group (parent) CIs, the KPI rule calculates the value based on the results for the child CIs in the group.

Statuses are color coded as follows:

| Status | Color name | Color |
|---|---|---|
| Exceeded | Green | 🟩 |
| Met | Olive green | 🟨 |
| Minor Breached | Yellow | 🟨 |
| Breached | Orange | 🟧 |
| Failed | Red | 🟥 |

## Agreement Status

The Status Snapshot report and SLA Status report both display the current status for entire agreements, during specific tracking periods.

Status for each agreement is calculated using the SLM Status KPI. Every hour, the Service Level Management engine calculates the status-to-date for each KPI attached to the Service Level Agreement CI (the CI at the highest level of the agreement), for every tracking period defined for the agreement. The status-to-date calculations are based on results up to the end of the previous hour, using a running average of the KPI values.

You can view the KPIs defined for the Service Level Agreement CI in the Define KPIs page of the Agreement Wizard or the Advanced Agreements Options Wizard:



The SLM Status KPI takes the hourly status-to-date calculations, and determines what is the worst status held by any of the KPIs attached to the Service Level Agreement CI, in each tracking period. The resulting worst status for each tracking period is saved in the database. When you access the Status Snapshot report or the SLA Status report, the report displays status according to the last saved results (up to the previous hour).

**Note:** KPIs for the Service Level Agreement CI that do not have a status (because no objectives are defined for the KPI) are ignored in the SLM Status KPI calculations.

For example:

In the Banking SLA, the Service Level Agreement CI has two attached KPIs, **Availability** and **Performance**. The SLA works with **Week** and **Month** tracking periods.

On Tuesday August 12th at 9:00 AM, Service Level Management calculates the status-to-date for the Banking SLA, using the results available for up to 8:00 AM. For the current week (calculated from midnight on Sunday), the Availability KPI has the worst status-to-date (Failed); for the current month (since midnight July 31st), both KPIs have the same status (Minor Breached).

When a user accesses the Status Snapshot report at 9:25 AM, the Banking SLA displays Failed status for the Week tracking period and Minor Breached for the Month tracking period.

Also see: "Aggregated Data" on page 221 and "Tracking Range and Granularity in Service Level Management" on page 227.

# 🔹 About SLA Management

SLA Management enables you to view services provided by your department. You use the three default views shown in the View Explorer in the left pane to view services or business units, and their CIs. You can view data and agreement information about configuration items (CIs) that represent the business process, hardware, or software services, and about business units associated with agreements.

For information about defining business units, see "Business Units for Services and Agreements" on page 28.

To view data in reports, choose between the following views:

➤ **Business Services.** Enables you to view the related agreements for each business service, and link to the CI Impact report for the selected service.

➤ **Business Units.** Enables you to view the related agreements for each business unit (provider or customer), and link to the SLAs Summary report for the selected unit.

➤ **Service Providers.** Enables you to view the related agreements for business units (providers) and their services, and open the SLAs Summary report or CI Impact report for the selected unit or service.

# 🔹 Outage Reports

Outage reports enable you and your users to manage and control outages (periods of time during which measurements fail), thus improving service levels. There are three outage reports available in Service Level Management:

➤ Outage Breakdown Report, described on page 262

➤ Outage Distribution Report, described on page 265

➤ Outage Summary Report, described on page 270

When you generate a report, Service Level Management calculates (on the fly) whether there have been any outages in the time period you chose, by running the outage business rule associated with the CI. The Minimum duration set in the outage rule determines the length of time considered an outage.

You define outages during agreement creation. For details, see "Outages in Agreements" on page 34.

# Primary Grouping/Secondary Grouping

In the SLAs Summary, CI Summary, and CI Impact reports, you can organize the results under two levels of headings, a primary grouping and a secondary grouping. The data is then organized according to the secondary grouping.

The grouping options are time period, KPI, and calendar. Once you select an option as the primary grouping, it is not available as an option for the secondary grouping.

If you only want one heading level, select **None** for the secondary grouping—the data is then organized only by the primary grouping.

In the following example, the time periods are shown as the primary heading, and the calendars are shown as secondary headings under each time period.

# 🎲 Tooltip for KPIs in Reports

Hold the pointer over a result to view information about the KPI:



The tooltip displays information about the KPI, based on what is defined in the agreement (for details, see "Agreement Wizard" on page 67). The tooltip content varies, depending on the report and the selections made in the Advanced Options dialog box.

The following parameters may be included:

➤ **CI.** The name of the CI.

➤ **Date.** The date that the result is for.

➤ **<KPI>.** The actual calculated result for the KPI.

➤ **Status.** The status given to the KPI by comparing the result against the target objectives.

➤ **Business Rule.** The rule used for the KPI calculations.

➤ **Exceeded**, **Met**, **Minor Breached**, **Breached.** The value defined for each target objective for the KPI.

# 🔹 Aggregated Data

All reports are calculated according to aggregated data stored in the database.

When calculating results for previously-aggregated data, Service Level Management rounds out the tracking period. The **From** time is rounded down to the nearest hour, and the **To** time is rounded up to the nearest hour.

Data aggregation for the status-to-date information (for example, week-to-date) displayed in the Status Snapshot report differs from the calculations done in other reports. The Status Snapshot report displays data that is correct up to one or two hours ago, while other Service Level Management reports display data calculated to the last closed day. This means that you may see different data displayed in the Status Snapshot report as compared with other reports, or that the Status Snapshot report already contains data while other reports do not yet have data.

For more information on data aggregation in HP Business Availability Center, see "Data Aggregation" in *Reference Information*.

# 🔹 Status Forecast for Agreements

Service Level Management provides a forecast of agreement status at the end of a period, based on behavior in the past. The status forecast shows you whether continuing to maintain your services at the current levels will lead to a breach of the agreement in the future.

Status forecast is described in the following sections:

➤ "Status Forecast Calculations" on page 222

➤ "Status Forecast in Applications" on page 223

### Status Forecast Calculations

The forecast is calculated by looking at the behavior of each KPI in the agreement during a previous period, and assuming the same behavior pattern will continue during the forecast period. The extrapolated KPI data is used to calculate a forecast result for each KPI, and the status forecast for the agreement is based on the worst of all KPI statuses.

Two values are defined for the status forecast:

➤ **Base Forecasting On.** This is the period that the forecast calculations are based on, and the options are determined by the tracking periods defined for the agreement. Depending on the context, the analysis can be based on the "Last <aaa>," or "<aaa> to date," where <aaa> is a tracking period used for the agreement, for example, **Last Month** or **Month to date**. If it is currently halfway through May, selecting **Last Month** gives a forecast based on April's results, and selecting **Month to date** gives a forecast based on the results for May so far.

**Note:** Forecasting cannot be based on a single hour or on the current day.

➤ **Give Forecasting For.** This is the period that the forecast is given for, and the options are also based on the tracking periods defined for the agreement, excluding hour and day. The forecast is given for the end of a period that includes the current date, for example **End of week** or **End of Quarter**. If it is currently halfway through May, selecting **End of Quarter** gives a forecast for the current quarter from April 1st to June 30th.

**Note:**

➤ The forecast calculations are based on averages, so if an agreement contains a KPI that is based on an accumulative result (as is the case for the Outage Duration, Number of Outages, MTBF, MTBSI, and MTTR KPIs), the calculations yield inaccurate forecast results. Do not rely on forecast results for agreements that contain any of these KPIs.

➤ KPIs that are using a status-based rule are excluded from forecast calculations. For more information, see "Status-Based Group Rules" on page 196.

➤ An agreement must have a tracking period of at least a week or more to generate a forecast for it.

➤ If the agreement was inactive at any point during the analysis period, then that period cannot be used for forecasting.

➤ The forecast does not take account of any downtime defined for the future period.

## Status Forecast in Applications

Status forecast is calculated in the following Service Level Management contexts:

➤ **Status Snapshot report.** A status forecast is calculated for the agreements displayed in the **Worst-Performing SLAs - Current Periods** pane of the **Applications** > **Service Level Management** > **Status Snapshot** report.
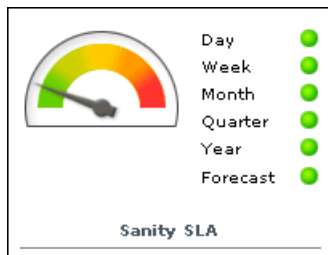
The forecast is calculated based on all calendars for the agreement, and using default tracking periods. To set different default periods, select **Admin > Platform > Setup and Maintenance > Infrastructure Settings**, choose **Applications**, select **Service Level Management**, and locate the required parameter. Modify the value as required.

The default tracking periods for the Status Snapshot report are as follows:

➤ **Week (base calculation period).** This is the default tracking period that the status forecast calculation is based on, meaning that calculations are based on the agreement results for the last (prior) week. To set a different default tracking period, modify the value for the **Status forecast: Base calculation period** parameter.

➤ **Month (calculated period).** This is the default tracking period that the status forecast is calculated for, meaning that the status forecast is given for the end of the current month. To set a different default tracking period, modify the value for the **Status forecast: Calculated period** parameter.

---

**Note:** Status forecast is only displayed for an agreement if the agreement is set to use both the default tracking periods (defaults defined in the Infrastructure Settings page), and if data is found that can be used to calculate the forecast result.

---

➤ **SLA Status report.** You can generate a status forecast for selected agreements in the **Applications** > **Service Level Management** > **SLA Reports** > **SLA Status** report. The forecast is calculated for the tracking periods and calendar that you select. The report also shows the status trend for the base forecasting period, and calculates the expected breach date for the agreement, where appropriate.



➤ **SLA alert schemes.** You can define SLA alert schemes in the **Admin** > **Alerts** > **SLA Alerts** page, to monitor the status forecast for an agreement and trigger an alert if the status forecast changes. You define the forecast tracking periods as part of the alert scheme, and the status forecast is recalculated every hour, for all calendars.

The triggered alerts are viewed in the **Applications** > **Alerts** > **SLA Alerts Report**.



## Time Zones

Service Level Management calculates reports according to an agreement's time zone, so that data is linked to the appropriate calendar. However, Service Level Management displays dates and times according to the time zone settings of the machine on which it is installed (the user's time zone).

Reports can contain data from different time zones: when reports include data for more than one agreement, and the agreements are defined for different time zones, each agreement's data is reported according to the agreement's time zone.
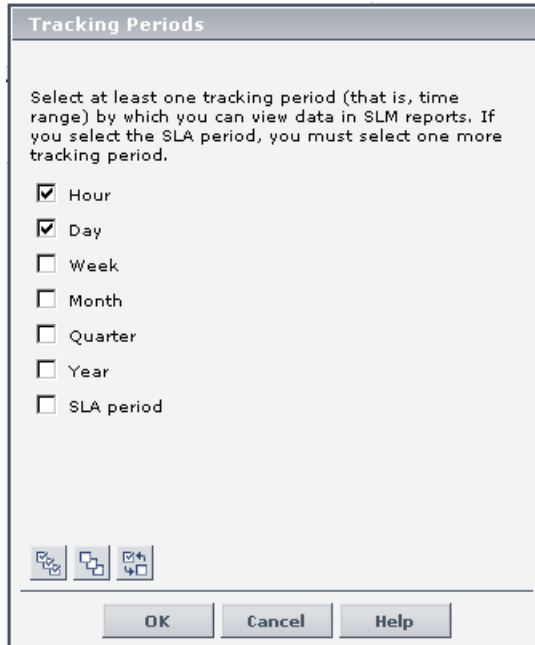
For reports calculated for the **last** time period, data is displayed according to the user's time zone.

# 🔩 Tracking Range and Granularity in Service Level Management

Tracking periods in Service Level Management define the time periods for aggregating data, and are used for tracking the agreement. You select tracking periods in Service Level Management reports to define the granularity for calculations.

The tracking periods for an agreement are defined in the Agreement Wizard. (See "Define Agreement Properties Page" on page 68.) You select at least one tracking period from **Hour**, **Day**, **Week**, **Month**, **Quarter**, **Year**. In addition, you can select **SLA period**, which tracks status for the agreement from the start of the agreement till the present.

The tracking periods that you select in the agreement determine which granularities are available in reports. For example, say you select the **Hour** and **Day** tracking periods for an agreement:
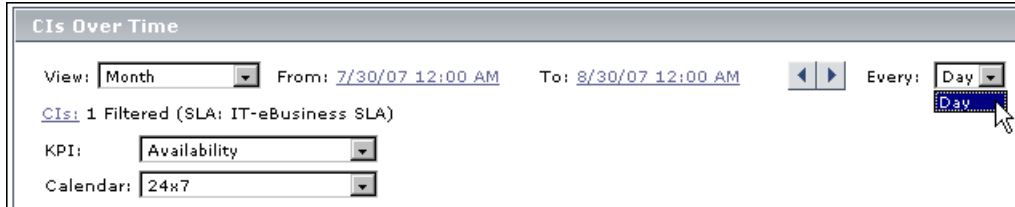
In the CIs Over Time report, a user chooses to view a month's report. Because the **Week** tracking period was not defined for the agreement, the **Week** granularity is not available for the report (it does not appear in the **Every** list):



General information on working with the tracking range and granularity in reports can be found in "Time Range and Granularity Bar" in *Reports*.

The following additional information applies when using the tracking range and granularity settings in Service Level Management reports:

➤ For certain reports, the tracking periods that appear in the **View** list depend on the tracking periods defined for the agreement. That is, if the agreement includes only Day and Week, you cannot generate a report to show results by quarter.

➤ The **SLA to date** option may be included in the **View** list for reports that display data about a single agreement. When selected, the report time range begins at the start date of the agreement and continues till the current time.

➤ The **Last** option in the **View** list enables you to display data for the last part of a tracking period. For example, you could generate a report for the last week. When you use this option, the data is displayed according to the user time zone (whereas in all other views, the data is displayed according to the agreement time zone).

➤ Service Level Management can display up to 60 data points in one report. This means, for example, that if you select a month time period, you cannot view the report with an hourly granularity, because there are more than 60 hours in a month.

➤ For reports that are based on a weekly tracking period, calculations depend on which day is selected as the first day of the week. You define the first day of the week in the Infrastructure Settings Manager. For details, see "Customize the First Day of the Week or First Month" on page 163.

➤ Data for Service Level Management reports is calculated at midnight. When the tracking range for a report is set "to date," then the data is shown for up to the previous midnight. For example, if you select the tracking range **Month to date** on Wednesday May 14th, the report shows data for the month up to midnight (end of day) on Tuesday May 13th.

This means that for a report generated for **Month to date** on the first day of a new month, for example, May 1st, there is no available calculated data for that month, and the report instead shows the data up to the previous midnight, meaning the data for April. The same principle applies for reports for **Week to date**, **Quarter to date**, and **Year to date**. The actual time range of the data presented in the report is shown in the report header.

This logic is not applied for status forecast calculations—when a forecast is calculated on the first day of a new week/month/year based on status-to-date, it uses the to-date data for the new period, resulting in a no-data status.

➤ If a report is generated for a tracking period that has no defined objective targets, the value for the period is displayed without a status. For example, an outages KPI is defined with objectives for a month tracking period, but no objectives are defined for a week tracking period. If a report is then generated on a weekly basis, it gives only the number of outages for each week without a status.

# Additional Values in Reports

Service Level Management is able to perform statistical calculations on certain KPIs, so that additional information is provided along with the main value. For example, for an Availability KPI, you can view the total number of samples, the number of failed samples, deviation from target, and so forth.

The following sections describe the additional values and how to view them in the Service Level Management reports:

➤ "Additional Values List" on page 230
➤ "Displaying Additional Values" on page 231

## Additional Values List

The additional values available in Service Level Management reports are as follows (listed alphabetically):

| Additional Value | Description |
|---|---|
| **Deviation from Target (numerical value or %)** | The deviation of the KPI value from the **Exceeded** target for the KPI. There are two versions of this additional value, numeric or percentage. <br><br> For example: If the average response time over a day is 5.5 seconds, and the Exceeded target for that day is 4 seconds, the **Deviation from target** value is (numerical) 1.5 seconds or (percentage) 37.5%. |
| **DPMO** | Defects per million opportunities. Used with the Six Sigma Availability and Performance KPIs. |
| **Failures** | The number of unsuccessful samples during the sampling period. |
| **Met Threshold** | The number of samples that met the **Exceeded** target threshold for the KPI during the sampling period. |
| **Number of Periods** | Used with MTBF and MTBSI KPIs. The number of periods between incidents that the KPI calculation is based on. |
| **Number of Incidents** | Used with the MTTR KPI. The number of incidents that the KPI calculation is based on. |
| **Samples** | The number of samples included in the KPI value calculation. <br><br> **Note:** For HP Business Process Insight and HP TransactionVision KPIs, in some cases the **Samples** value shows the number of business process instances or business transaction instances that are included in the calculation, rather than the number of samples. |
| **Standard Deviation** | The standard deviation from the **Exceeded** target for the KPI. |

| Additional Value | Description |
|---|---|
| Successes | The number of successful samples during the sampling period. Each KPI has its own "success" condition. For example, for the Availability KPI, a successful sample contains an "available" result, and for the Performance KPI, success is based on the sample meeting the threshold defined for the KPI parameter **Percentile Condition**. |
| Trimmed Samples | The number of samples that were excluded from the KPI value calculation, because of a filtering threshold set for the KPI (for example: Ignore any response time sample that exceeds 60 seconds). |

## Displaying Additional Values

In order for an additional value to be displayed in a Service Level Management report, the additional value must be configured for use with the KPI, and the **Show Additional Values** setting must be selected in the report.

When the KPI uses a time-based calculation method, only the Samples additional value is displayed; the calculation method must be changed to sample-based in order to view other additional values.

The following sections describe how to configure these settings:

➤ "Configuring Additional Values to Use with KPIs" on page 232

➤ "Configuring Sample-Based Calculation for KPIs" on page 234

➤ "Configuring Reports to Display Additional Values" on page 234

### Configuring Additional Values to Use with KPIs

The KPI/additional value settings are defined in the **Additional Values XML**. This XML file lists the additional values that are valid for each KPI, and shows whether the additional value is configured for use in the reports (**calculate="true"**).

The **Samples**, **Number of Periods**, and **Number of Incidents** options are by default configured for use in the reports with all relevant KPIs. All other options are set to not be used (**calculate="false"**). For example, the following shows the default settings for the **User Performance** KPI:

```
</KPI>
<KPI id="111" name="User Performance">
        <Additional-Value calculate="true" id="1" name="numOfSamples"/>
        <Additional-Value calculate="false" id="5" name="Deviation From Targets"/>
        <Additional-Value calculate="false" id="6" name="Deviation From Targets
        (%)"/>
</KPI>
```

To modify which additional values are configured for use with each KPI, select **Admin** > **Platform** > **Setup and Maintenance** > **Infrastructure Settings**, choose **Applications**, select **Service Level Management**, and locate the **Additional Values** entry on the page. Click the **Edit** button to view the file contents. It is recommended that you copy the file contents to an XML editor to make changes.

**Note:** Configuring more additional values for calculation may cause slower report generation.

If an additional value is not listed for a specific KPI, it is not valid for that KPI. The following table shows the additional values that are valid for each KPI:

| KPI/Additional Value | Samples | Trimmed Samples | Successes | Failures | Deviation from Target | STD | DPMO | Met Threshold |
|---|---|---|---|---|---|---|---|---|
| **Availability System Availability User Availability** | Yes | No | Yes | Yes | Yes | No | No | No |
| **Performance** | Yes | Yes | No | Yes | Yes | No | No | Yes |
| **System Performance** | Yes | Yes | No | No | Yes | Yes | No | No |
| **User Performance** | Yes | No | No | No | Yes | No | No | No |
| **Response Time** | Yes | Yes | No | No | Yes | Yes | No | No |
| **Six Sigma Availability** | Yes | No | Yes | Yes | Yes | No | Yes | No |
| **Six Sigma Performance** | Yes | Yes | No | Yes | Yes | No | Yes | Yes |
| **System Network Security Application** | Yes | No | No | No | No | No | No | No |

**Note:** There is also a **Number of Periods** option for the MTBF and MTBSI KPIs, and a **Number of Incidents** option for the MTTR KPI.

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### Configuring Sample-Based Calculation for KPIs

When the calculation method used for a KPI is time-based, the only additional value that is displayed in the reports is **Samples**. In order to see other additional values, you must change the calculation method to sample-based.

The calculation method is defined in the monitor rule for the KPI (at leaf CI level) in the **Calculation Method** parameter. This parameter is only applicable for certain monitor rules, and by default is set to time-based. (For information on which rules use the Calculation Method parameter, see "List of Service Level Management Business Rules" in *CI Attribute Customization*.)

You change the calculation method to sample-based in the KPI Definition dialog box, described in "KPI Definition Dialog Box" on page 87. You must make the change individually for each KPI of a leaf CI, if you want to see all additional values for that KPI.



If you make the change after the agreement has been calculated, you need to run recalculation (see "Recalculation for Agreements" on page 42).

### Configuring Reports to Display Additional Values

Additional values can be viewed in all reports in the **Applications** > **Service Level Management** > **SLA Reports** and **Outage Reports** tabs, with the exception of the SLA Status report.

In order to view additional values in a report, the **Additional Values** option must be selected in the Advanced Options dialog box. This option is selected by default for all applicable reports. For details, see "Advanced Options Dialog Box" on page 241.

The additional values are displayed in the tooltip for a cell in the report (and also in additional columns in the CI Status report).

# 🪶 View SLA and Outage Reports

The following steps explain how to work with Service Level Management to view reports in the SLA Reports and Outage Reports tabs.

### 1 Define Agreements

Define agreements using the Agreement Wizard.

For task details, see "Define a Service Agreement - Workflow" on page 45.

### 2 Select Required Report

Select the report you want to view from the **Applications** > **Service Level Management** > **SLA Reports** or **Outage Reports** tab. For a brief description of each report and when you would use it, see "Service Level Management Reports - Overview" on page 210.

### 3 Set Report Filters

Select the required values for filters such as the View granularity bar, CI, KPIs, Calendars, and so forth. For details, see the documentation for that report.

### 4 Add Descriptions and Additional Values to Reports

Use the Advanced Options link to add descriptions to the report. For details, see "Advanced Options Dialog Box" on page 241.

### 5 Add a Header and Footer to a Report

A header or footer defined for a report in the Custom Manager takes precedence over a header or footer defined in the Infrastructure Settings Manager Reporting section. That is, the former overwrites the latter. For details on defining headers and footers, see "Configuring a Report Header and Footer" in *Platform Administration*.

### 6 Generate Report and Use to Evaluate Agreement Goals

Click the **Generate** button to generate a report for the data you have chosen, and drill down in the report as required.

**7 View the Report According to a Six Sigma Calculation**

You can view results from a Six Sigma perspective. This is on condition that the agreement has been defined with a Six Sigma KPI. For details, see "Six Sigma for Agreements" on page 39.

**8 Share the Report or Save Report Data**

You can print, format, and export reports. For details, see "Common Report Elements" in *Reports*.

# ⚓ Work with Service Level Management Reports - Scenarios

The following scenarios suggest ways that you can use Service Level Management summary reports.

➤ "Preventing Breaches of Contract with the CI Summary Report" on page 237

➤ "Comparing Services in the CI Impact Report" on page 239

## Preventing Breaches of Contract with the CI Summary Report

Every morning the Director of Applications generates reports for the previous day. In the case of any problems, he analyzes them, and acts accordingly.

➤ This morning he accesses Service Level Management and generates an SLAs Summary report from the previous day (**Applications** > **Service Level Management** > **SLA Reports** > **SLAs Summary**). He sees that yesterday afternoon the sales SLA was about to be breached (the Performance KPI has a yellow status).

➤ He clicks a configuration item (CI) to navigate to the CI Summary report. He notices that performance of the Sales home page was poor during business hours for a specific transaction:



➤ He continues to navigate through the CI hierarchy following the trail of the minor breached measurement. He reaches the leaf node CI, which is a Business Process Monitor transaction script that monitors a database server.

➤ He sends the report by email to the DBAs with a request for them to investigate and let him know what action they have taken. Shortly after, he receives a phone call to say the database server had slowed down while new software was being installed on it.

➤ He fills out a Business Process Monitor events form (**Admin** > **Service Level Management** > **Downtime Events**), and adds a description about the server slow down.

➤ He returns to the Summary Reports tab and selects the CI Summary report.

➤ He clicks the **Advanced Options** link and selects the **Downtime Event Description** check box. He generates the report again and verifies that the report includes the reason for the downtime.

## Comparing Services in the CI Impact Report

A lawyer for a well-known ISP writes the service level agreements. During negotiations over a new network contract with an important Gold customer, she requests a report from IT to show whether the ISP is meeting its obligations for network speeds for all Gold customers. This report will help her calculate prices and conditions for the new contract.

IT gives the task to the HP Business Availability Center admin who rolls up his sleeves and gets to work.

➤ He verifies the names of the CIs that measure network performance for each Gold customer (he had previously created a view, to which he had added a network CI, for each customer).

➤ He creates an SLA and adds the network CIs for all Gold customers to it.

➤ He generates the CI Impact report (with a Year to Date and Quarter view), and chooses the SLA.

➤ He drills down to the CI Summary report to view performance data for the network CIs for the past year.

➤ He creates a custom report, and sends it by e-mail to the lawyer, explaining to her how she can get more information by accessing the CI Impact and CI Summary reports.

# 🔍 Service Level Management Application User Interface

**This section describes:**

# 🔩 Advanced Options Dialog Box

| | |
|---|---|
| **Description** | Enables you to add descriptions and additional values to the report, or customize display aspects of the report.<br><br>**To access:** Click **Advanced Options** in a Service Level Management report. |
| **Important Information** | ➤ Not all options are available for all reports.<br>➤ Each option of type **<xxx> Description** displays the relevant information in a separate area below the report data.<br>➤ After selecting an option in the Advanced Options dialog box and generating a report, that option remains selected for all Service Level Management reports where it applies, until you clear the selection in a report and regenerate. |
| **Included in Tasks** | "View SLA and Outage Reports" on page 236 |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **Calendar Description** | Displays a description and details for the calendars selected for the report, as defined during calendar creation. |
| **CI Description** | Includes the name and description of all CIs that are included in the report. |

| GUI Element (A–Z) | Description |
|---|---|
| **Downtime Event Description** | Displays details of all events that meet the following criteria:<br><br>➤ the event falls within the report's time period<br>➤ the event action affects a CI that is included in the report<br><br>The **Impact** column displays the name of the CI that is affected by the downtime event.<br><br>The **Excluded from Reports** column takes its information from the **Exclude data reported during event** check box in the Downtime/Event Schedule window. For details, see "Downtime Event Schedule Dialog Box" on page 155. |
| **Hierarchy Depth** | Select a value between 0 and 3 to define the number of CI levels that are displayed in the report under the selected CI.<br><br>**Default value:** 3 |
| **Number of digits after decimal point** | Select a value between 0 and 3 to define the number of digits after the decimal point that is displayed for numerical values in the report.<br><br>**Default value:** 3<br><br>**Note:** If you change the default displayed in the report, Service Level Management continues to calculate objectives using the default value. |
| **Show Additional Values** | Includes additional values in the report, as relevant for the KPIs. For details, see "Additional Values in Reports" on page 229.<br><br>The additional values are displayed in the tooltip for a cell. In addition, in the CI Status report, the data is displayed in columns in the report. You can select the column format:<br><br>**Expanded columns.** (Default value) Displays each additional value in a separate column.<br><br>**Grouped column.** Displays the additional values grouped in a single column. |

| GUI Element (A–Z) | Description |
|---|---|
| **Show objective details as columns** | (Only for Time Range Comparison report) Adds a column displaying objectives for the selected KPI per CI to a Time Range Comparison report. |
| **Show SLA details as columns** | (Only for SLAs Summary report) Adds columns displaying agreement type, customer, and provider for each agreement to the SLAs Summary report (instead of displaying this information in a tooltip for the agreement name). |
| **SLA Description** | Displays various information on the agreement, according to the properties defined on the Define Agreement Properties Page during agreement creation. The SLA Description is displayed for all agreements included in the report. |

# 🔍 CI Impact Report
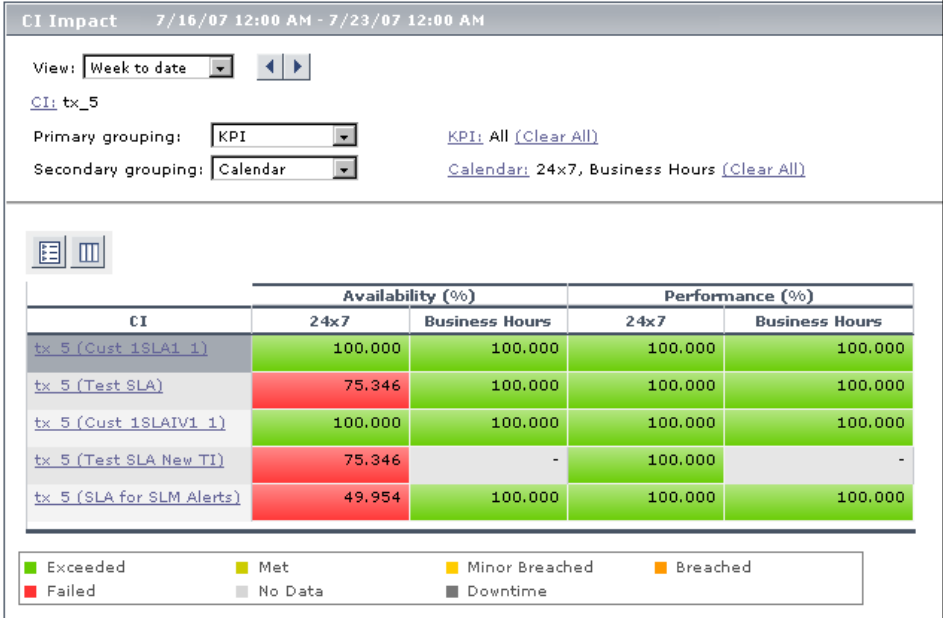


| Description | Displays KPI results for a selected CI across all the agreements in which it is included. |
|---|---|
| | **To access:** Applications > Service Level Management > SLA Reports > CI Impact |
| **Important Information** | Youcan use this report to compare the KPI results for a CI across several agreements. |
| **Included in Tasks** | "View SLA and Outage Reports" on page 236 |
| **Useful Links** | For an example of working with a CI Impact report, see "Comparing Services in the CI Impact Report" on page 239. |

## Report Settings

| GUI Element (A–Z) | Description |
| --- | --- |
| **<Common report settings>** | For details, see "Common Report Elements" in *Reports*.<br><br>Also see "Tracking Range and Granularity in Service Level Management" on page 227. |
| **Advanced Options** | Enables you to include descriptions and additional values in the report, and customize some display aspects. For details, see "Advanced Options Dialog Box" on page 241. |
| **Calendar** | Displays the names of the calendars selected for inclusion in the report. To change the selection, click the **Calendar** link to open the Calendar dialog box. The dialog box lists all calendars attached to the selected CI (in all agreements).<br><br>**Note:** You can include all relevant calendars by clicking the **Clear All** link. This clears the displayed selection and replaces it with **All**. |
| **CI** | Displays the name of the CI selected for inclusion in the report.<br><br>To change the selection, click the **CI** link. For details, see "CIs Dialog Box" on page 256. |
| **KPI** | Displays the names of the KPIs selected for inclusion in the report. To change the selection, click the **KPI** link to open the KPI dialog box. The dialog box lists all KPIs that are attached to the selected CI in all agreements.<br><br>**Note:** You can include all relevant KPIs by clicking the **Clear All** link. This clears the displayed selection and replaces it with **All**. |
| **Primary Grouping/ Secondary Grouping** | Select the first and second level column headers to be used for presenting data in the report. For details, see "Primary Grouping/Secondary Grouping" on page 218. |

### Report Content

The following elements are included (unlabeled GUI elements are shown in angle brackets):
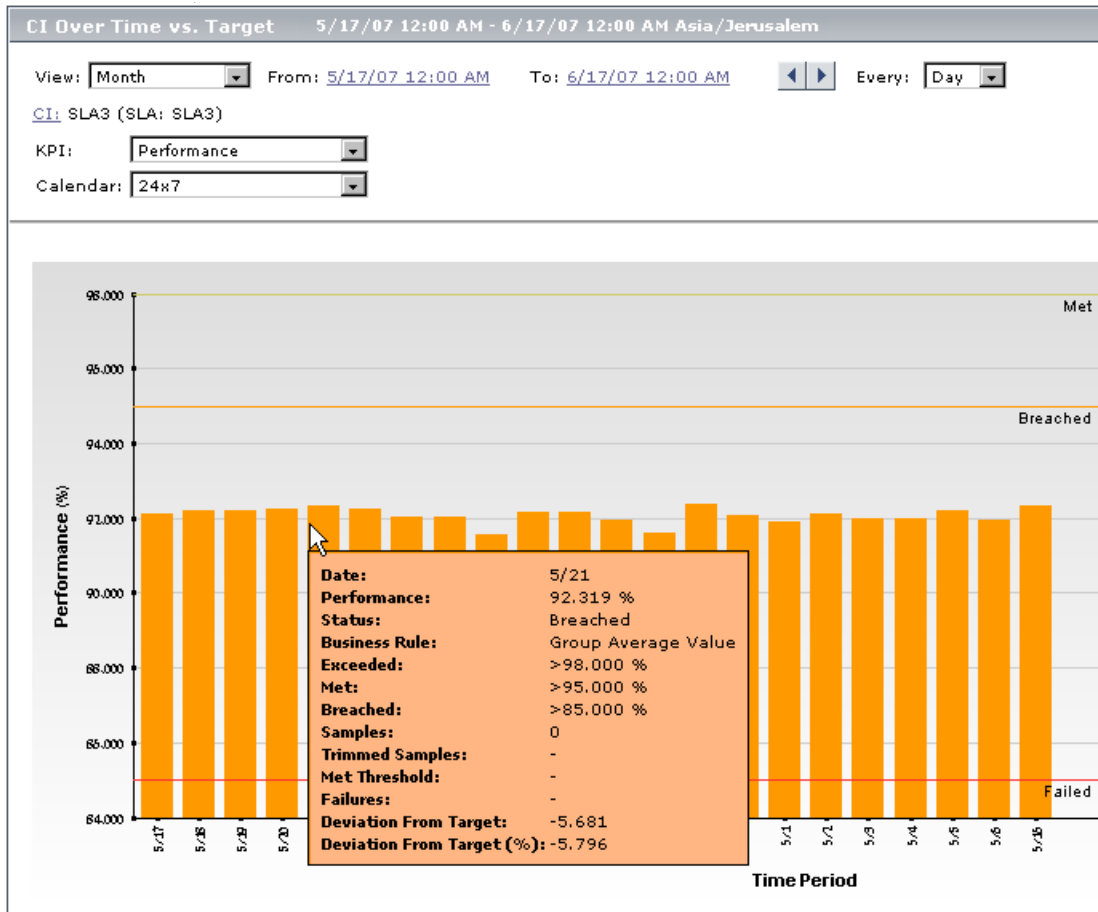
| GUI Element (A–Z) | Description |
|---|---|
| **<Table cell>** | Displays the numerical result for the KPI. The background color shows the status for the KPI (based on the target objectives). |
| | **Tooltip:** Hold the pointer over a cell to view information about the KPI. For details, see "Tooltip for KPIs in Reports" on page 220. |
| **CI** | Lists each instance of the CI in all agreements. The name of the agreement appears in brackets after the name of the CI. |
| | Click a CI name to drill down to the CI Summary report, which displays the branch for the CI. Use the breadcrumbs at the top of the page to return to the CI Impact report. |
| | **Tooltip:** Hold the pointer over the name of a CI to view the full name in a tooltip. |

# 📌 CI Over Time vs. Target Report



| Description | Displays KPI results over a time period for a selected CI, against the target objective for each time period. |
|---|---|
| | **To access:** Applications > Service Level Management > SLA Reports > CI Over Time vs Target |

| Important Information | ➤ You can use this report to see how well a CI has performed compared to its objectives. <br> ➤ Results can be displayed in graph or table format. |
|---|---|
| **Included in Tasks** | "View SLA and Outage Reports" on page 236 |

## Report Settings

| GUI Element (A–Z) | Description |
|---|---|
| **<Common report settings>** | For details, see "Common Report Elements" in *Reports*. <br> Also see "Tracking Range and Granularity in Service Level Management" on page 227. |
| **Advanced Options** | Enables you to include descriptions and additional values in the report, and customize some display aspects. For details, see "Advanced Options Dialog Box" on page 241. |
| **Calendar** | Select a calendar. The lists includes the calendars relevant for the selected CI. |
| **CI** | Displays the name of the CI selected for inclusion in the report. <br> To change the selection, click the **CI** link. For details, see "CIs Dialog Box" on page 256. |
| **KPI** | Select a KPI. The lists includes the KPIs relevant for the selected CI. |

## Report Content

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
| --- | --- |
| **\<Table cell/graph bar>** | Displays the numerical result and status for the KPI during that time period (based on the target objectives). |
| | **Tooltip:** Hold the pointer over a cell or bar to view information about the KPI. For details, see "Tooltip for KPIs in Reports" on page 220. |
| **Objectives** | The objective targets for the KPI in each time period are displayed in a column in the table, and superimposed on the graph. |
| **Time Period** | Lists the time periods included in the report, according to the selected granularity. |
| | **Tooltip:** In table format, hold the pointer over a time period to view the exact time and date that the time period started. |

# 🔍 CI Status Report



| CI Status | 7/1/07 12:00 AM - 8/1/07 12:00 AM Asia/Jerusalem |
| --- | --- |

View: Month ▾   From: 7/1/07 12:00 AM    To: 8/1/07 12:00 AM   ◀ ▶

CI: SLA3 (SLA: SLA3)

KPI:  Availability ▾

Calendar: 24x7 ▾

| CI | Availability (%) | Objectives | Samples | Successes | Failures | Deviation From Target |
| --- | --- | --- | --- | --- | --- | --- |
| SLA3 | 73.831 | Exceeded: > 98.0 %<br>Met: > 95.0 %<br>Breached: > 85.0 % | 17,718 | - | - | -24.169 |
| ⊢ Exchange | 96.493 | Exceeded: > 98.0 %<br>Met: > 95.0 %<br>Breached: > 85.0 % | 2,726 | - | - | -1.507 |
| ⊢ dogbert | - | Exceeded: > 98.0 %<br>Met: > 95.0 %<br>Breached: > 85.0 % | 0 | - | - | - |
| ⊢ dogbert | - | Exceeded: > 98.0 %<br>Met: > 95.0 %<br>Breached: > 85.0 % | 0 | - | - | - |
| ⊢ GreenYellow_Stri | 89.480 | Exceeded: > 98.0 %<br>Met: > 95.0 %<br>Breached: > 85.0 % | 0 | - | - | -8.52 |
| ⊢ GreenYellow_S | 89.480 | Exceeded: > 98.0 %<br>Met: > 95.0 %<br>Breached: > 85.0 % | 0 | - | - | -8.52 |
| ⊢ MellowYellow | 100.000 | Exceeded: > 98.0 %<br>Met: > 95.0 %<br>Breached: > 85.0 % | 1,363 | - | - | 2 |

■ Exceeded     ■ Met     ■ Breached     ■ Failed     ▨ No Data

| | |
| --- | --- |
| **Description** | Displays KPI results, objectives, and sample information, for a CI and its descendants.<br><br>**To access:** Applications > Service Level Management > SLA Reports > CI Status |

| Important Information | You can use this report to view configuration information, such as objectives, for each CI. |
|---|---|
| Included in Tasks | "View SLA and Outage Reports" on page 236 |

### Report Settings

| GUI Element (A–Z) | Description |
|---|---|
| **<Common report settings>** | For details, see "Common Report Elements" in *Reports*.<br><br>Also see "Tracking Range and Granularity in Service Level Management" on page 227. |
| **Advanced Options** | Enables you to include descriptions and additional values in the report, and customize some display aspects. You can include additional values in columns in the report. For details, see "Advanced Options Dialog Box" on page 241. |
| **Calendar** | Select a calendar. The lists includes the calendars relevant for the selected CI. |
| **CI** | Displays the name of the CI selected for the report, and the name of the agreement that contains the CI. The report includes all CIs in the branch under the selected CI.<br><br>You can also select the CI representing the whole agreement, to include all CIs in the agreement in the report.<br><br>To change the selection, click the **CI** link. For details, see "CIs Dialog Box" on page 256. |
| **KPI** | Select a KPI. The lists includes the KPIs relevant for the selected CI. |

### Report Content

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **<Additional values columns>** | If the report is set to show additional values (set in the Advanced Options dialog box), the values are displayed either in a single grouped column or in multiple columns, according to your selection.<br><br>For details, see "Additional Values in Reports" on page 229. |
| **<KPI cell>** | Displays the numerical result for the KPI. The background color shows the status for the KPI (based on the target objectives).<br><br>**Tooltip:** Hold the pointer over a cell to view information about the KPI. For details, see "Tooltip for KPIs in Reports" on page 220. |
| **CI** | Displays the CIs included in the selected branch of the agreement (up to four levels). Click a CI name to drill down to the branch under that CI. (You can return to the previous level using the breadcrumbs at the top of the page.)<br><br>**Tooltip:** Hold the pointer over a CI name to view the full name in a tooltip. |
| **Objectives** | Displays the objectives defined for the KPI, for the selected calendar. |

# ✎ CI Summary Report



| | Availability (%) | | | Performance (%) | |
|---|---|---|---|---|---|
| CI | 24x7 | Acme business week | Business Hours | 24x7 | Acme business week |
| IT-eBusiness SLA 2 | 60.000 | 66.667 | 66.667 | 33.333 | 33.333 |
| FTP Server | 60.000 | 66.667 | 66.667 | 33.333 | 33.333 |
| Cust 1 BPM 1 | 60.000 | 66.667 | 66.667 | 33.333 | 33.333 |
| tx 10 | 100.000 | - | - | 0.000 | 0.000 |
| tx 15 | 100.000 | 100.000 | 100.000 | 0.000 | 0.000 |
| tx 1 failed | 0.000 | - | - | - | - |
| tx 2 failed | 0.000 | 0.000 | 0.000 | - | - |
| tx 5 | 100.000 | 100.000 | 100.000 | 100.000 | 100.000 |

| | |
|---|---|
| **Description** | Displays KPI results for configuration items (CIs) in a specific agreement. **To access:** Applications > Service Level Management > SLA Reports > CI Summary |
| **Important Information** | You can use this report to find the CIs that failed to reach their objectives. |
| **Included in Tasks** | "View SLA and Outage Reports" on page 236 |
| **Useful Links** | For a use-case example of the CI Summary report, see "Preventing Breaches of Contract with the CI Summary Report" on page 237. |

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## Report Settings

| GUI Element (A–Z) | Description |
| --- | --- |
| **<Common report settings>** | For details, see "Common Report Elements" in *Reports*.<br><br>Also see "Tracking Range and Granularity in Service Level Management" on page 227. |
| **Advanced Options** | Enables you to include descriptions and additional values in the report, and customize some display aspects. For details, see "Advanced Options Dialog Box" on page 241. |
| **Calendar** | Displays the names of the calendars selected for inclusion in the report. To change the selection, click the **Calendar** link to open the Calendar dialog box. The dialog box lists the calendars attached to the selected agreement.<br><br>**Note:** You can include all relevant calendars by clicking the **Clear All** link. This clears the displayed selection and replaces it with **All**. |
| **CI** | Displays the name of the CI selected for the report, and the name of the agreement that contains the CI. The report includes all CIs in the branch under the selected CI.<br><br>You can also select the CI representing the whole agreement, to include all CIs in the agreement in the report.<br><br>To change the selection, click the **CI** link. For details, see "CIs Dialog Box" on page 256. |

| GUI Element (A–Z) | Description |
|---|---|
| **KPI** | Displays the names of the KPIs selected for inclusion in the report. To change the selection, click the **KPI** link to open the KPI dialog box. The dialog box lists the KPIs that are relevant for the CIs in the selected branch.<br><br>**Note:** You can include all relevant KPIs by clicking the **Clear All** link. This clears the displayed selection and replaces it with **All**. |
| **Primary Grouping/ Secondary Grouping** | Select the first and second level column headers to be used for presenting data in the report. For details, see "Primary Grouping/Secondary Grouping" on page 218. |

### Report Content

The following elements are included (unlabeled GUI elements are shown in angle brackets):

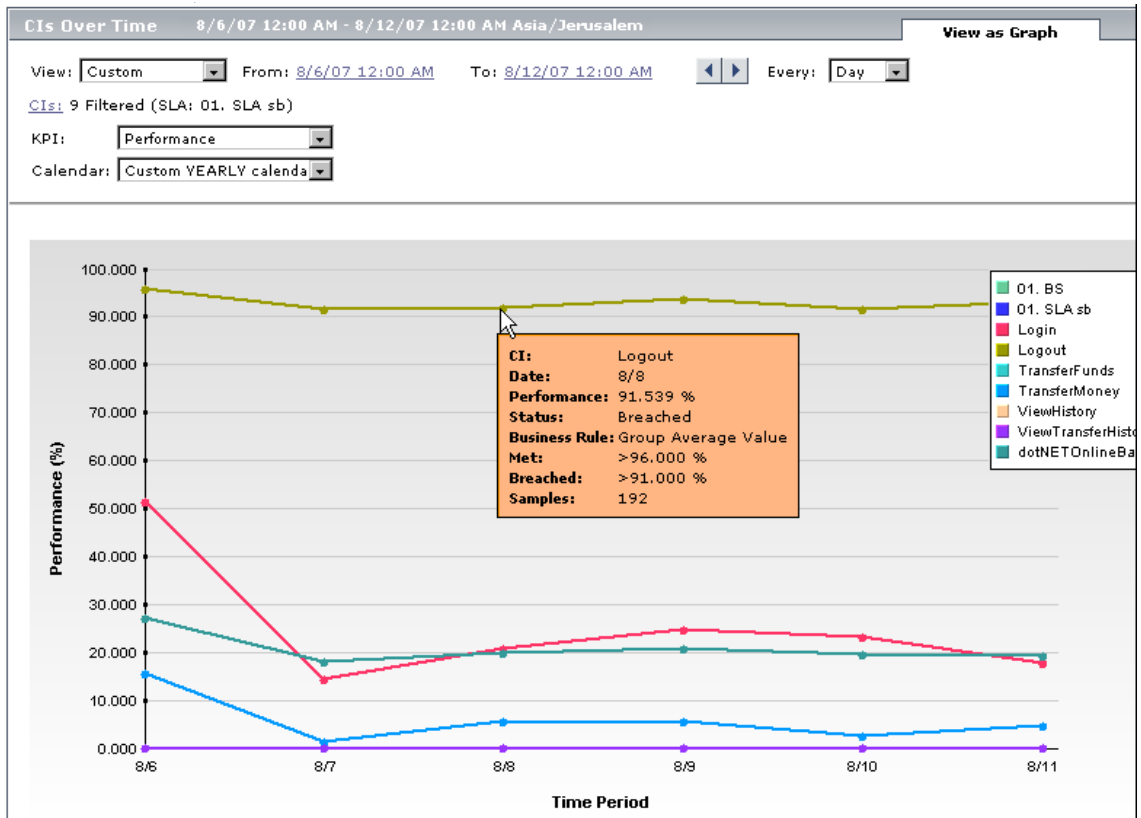| GUI Element (A–Z) | Description |
|---|---|
| **<Table cell>** | Displays the numerical result for the KPI. The background color shows the status for the KPI (based on the target objectives).<br><br>**Tooltip:** Hold the pointer over a cell to view information about the KPI. For details, see "Tooltip for KPIs in Reports" on page 220. |
| **CI** | Displays the CIs included in the selected branch of the agreement (up to four levels). Click a CI name to drill down to the branch under that CI. (You can return to the previous level using the breadcrumbs at the top of the page.)<br><br>**Tooltip:** Hold the pointer over a CI name to view the full name in a tooltip. |

# 🔍 CIs Dialog Box

| Description | Enables you to select the CI or CIs to be included in a Service Level Management report, for the duration of a Web session. The report provides information based on the selected CIs.

**To access:** In a Service Level Management report, click **CI** or **CIs** in the reports settings area. |
|---|---|
| Important Information | ➤ The elements included in the dialog box vary, depending on the current report.<br>➤ For some reports (for example, CI Impact), you can select from the Business Services CIs in the Business Services view. |
| Useful Links | "View Explorer" in *Model Management* |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
|  | Click to display context menu options for the currently selected CI. |
| **<CI topology tree>** | Displays the CIs in the selected agreement (or the Business Service CIs in the Business Services view, if you selected **SLA Management** for the **Select From** option, as described below). |
| | Select the required CI, or, for reports that have multiple CI selection, select the check boxes for the required CIs. |
| | **Context menu:** One or more of the following menu options may be displayed for a CI: |
| | ➤ **Properties.** Opens a dialog box displaying properties for the selected CI. |
| | ➤ **Show Related CIs.** Moves to Search mode and displays a list of the CIs that have a relationship to the selected CI. |
| | **Note:** For some reports, when you select a CI, the entire branch under the CI is displayed in the report. |
| **Browse** | The default mode for the CIs dialog box, enabling you to select an agreement and CIs. |
| **Search** | Click **Search** to move to Search mode, where you can search for CIs in all agreements. (Search in **Current SLA** is enabled only after you have changed the agreement selection.) For details on using the Search functionality, see "Search for CIs in Search Mode" in *Model Management*. |

| GUI Element (A–Z) | Description |
|---|---|
| **Select From** | (Displayed for CI Impact report) Enables you to choose how you locate the required CI: <br><br> ➤ **SLAs.** Select this option to select a CI from an agreement. <br><br> ➤ **SLA Management.** Select this option to select a Business Service CI from the Business Services view (only relevant for Business Service CIs that are included in an agreement). |
| **SLA** | Select the agreement containing the required CIs from the dropdown list (start typing in the agreement name to filter the list), or click the ellipsis button to open the Select SLA dialog box, where you can select an agreement from the full list of agreements. <br><br> **Note:** If you select another agreement before clicking **OK**, all previous CI selections are discarded. Only the CIs selected in the currently displayed agreement are saved for the report filter when you click **OK**. |

# 🔍 CIs Over Time Report



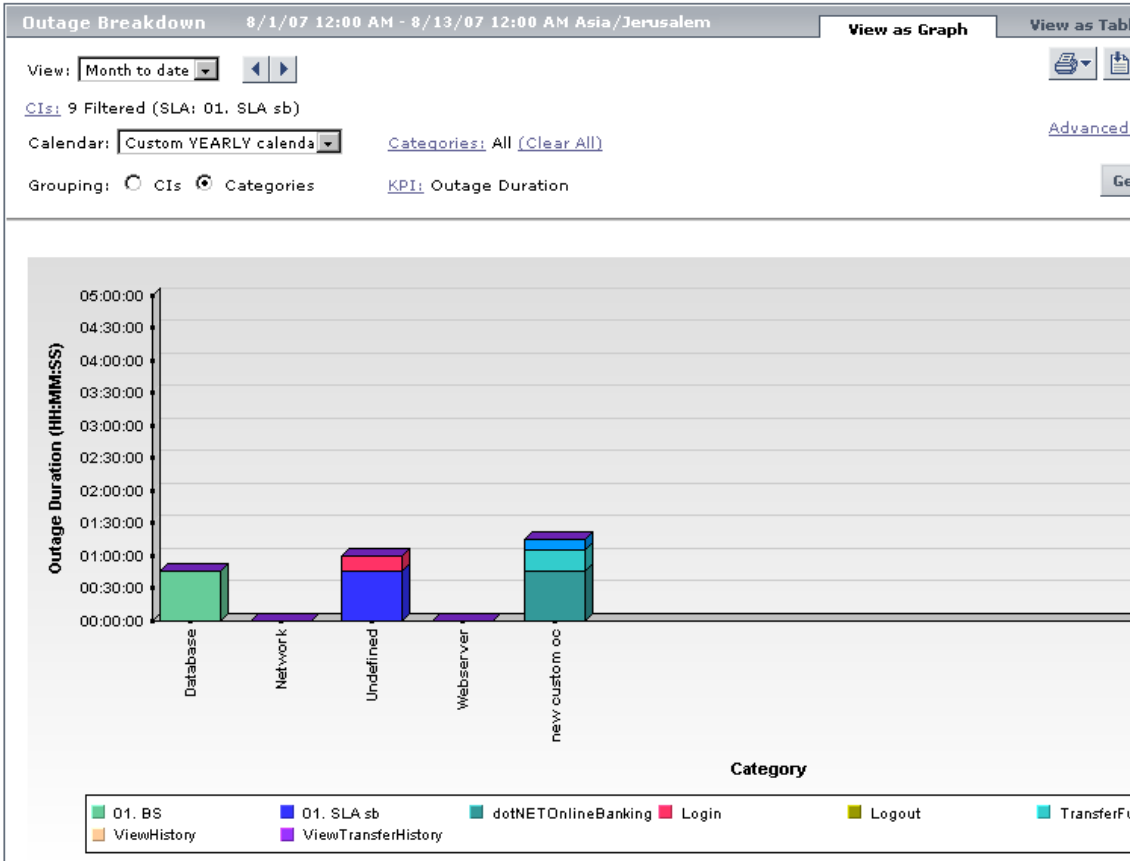| Description | Displays KPI results over a time period for selected CIs. |
|---|---|
| | **To access:** Applications > Service Level Management > SLA Reports > CIs Over Time |
| **Important Information** | ➤ You can use this report to compare the behavior of CIs over time |
| | ➤ Results can be displayed in graph or table format. |
| **Included in Tasks** | "View SLA and Outage Reports" on page 236 |

## Report Settings

| GUI Element (A–Z) | Description |
| --- | --- |
| **<Common report settings>** | For details, see "Common Report Elements" in *Reports*.<br>Also see "Tracking Range and Granularity in Service Level Management" on page 227. |
| **Advanced Options** | Enables you to include descriptions and additional values in the report, and customize some display aspects. For details, see "Advanced Options Dialog Box" on page 241. |
| **Calendar** | Select a calendar. The lists includes the calendars relevant for the selected CIs. |
| **CIs** | Displays the number of CIs selected for the report, and the name of the agreement that contains the CIs.<br>**Tooltip:** Hold the cursor over the CIs link to view the names of the selected CIs.<br>To change the selection, click the **CIs** link. For details, see "CIs Dialog Box" on page 256. |
| **KPI** | Select a KPI. The lists includes the KPIs relevant for the selected CIs. |

## Report Content

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **<Table cell/graph node>** | Displays the numerical result and status for the KPI during that time period (based on the target objectives).<br><br>**Tooltip:** Hold the pointer over a cell or node to view information about the KPI. For details, see "Tooltip for KPIs in Reports" on page 220. |
| **Time Period** | Lists the time periods included in the report, according to the selected granularity.<br><br>**Tooltip:** In table format, hold the pointer over a time period to view the exact time and date that the time period started. |

# 🔍 Outage Breakdown Report



| Description | Displays a breakdown of outage categories by selected CIs, or a breakdown of CI outages by outage categories. You view data according to outage duration or number of outages, during a specific calendar. |
|---|---|
| | **To access:** Applications > Service Level Management > Outage Reports > Outage Breakdown |
| **Important Information** | Results can be displayed in graph or table format. |

| Included in Tasks | "View SLA and Outage Reports" on page 236 |
|---|---|
| Useful Links | "Outages in Agreements" on page 34 |

## Report Settings

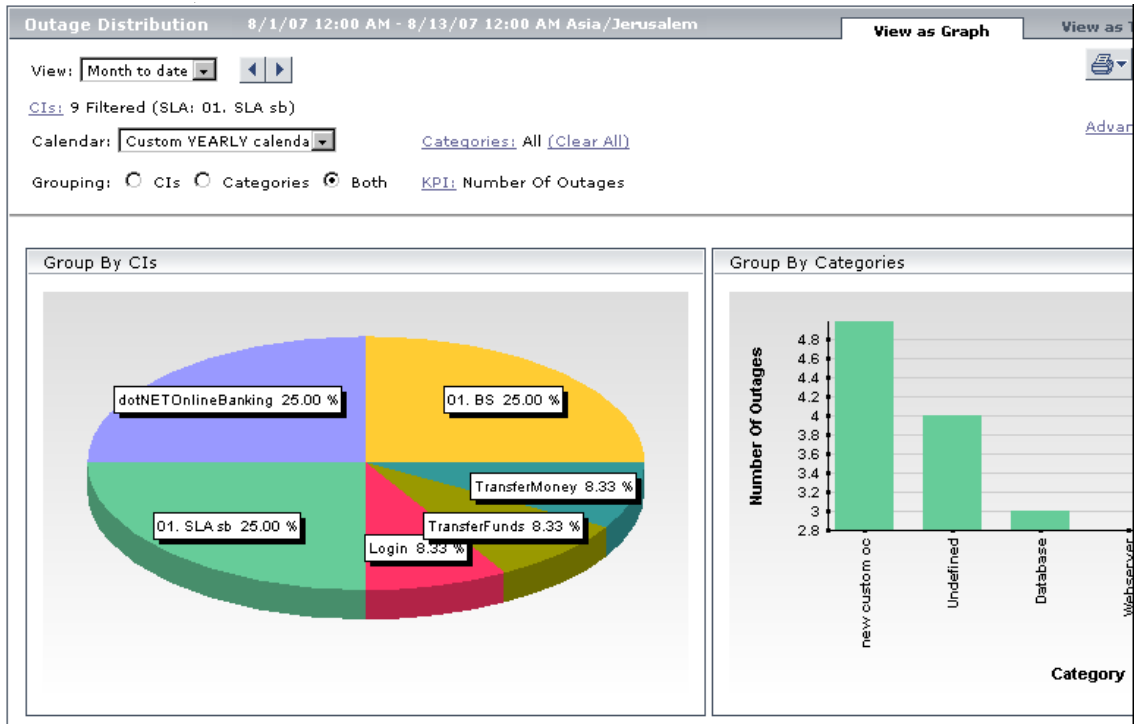| GUI Element (A–Z) | Description |
|---|---|
| **<Common report settings>** | For details, see "Common Report Elements" in *Reports*.<br>Also see "Tracking Range and Granularity in Service Level Management" on page 227. |
| **Advanced Options** | Enables you to include descriptions and additional values in the report, and customize some display aspects. For details, see "Advanced Options Dialog Box" on page 241. |
| **Calendar** | Select a calendar. The list includes only those calendars that have been assigned to the agreement. |
| **Categories** | Displays the names of the outage categories selected for inclusion in the report. To change the selection, click the **Categories** link to open the Categories dialog box. The dialog box lists the available predefined outage categories—**Database**, **Network**, **Webserver**, and **Undefined**—and any user-defined categories.<br>**Default value:** All<br>**Note:** You can include all relevant outage categories by clicking the **Clear All** link. This clears the displayed selection and replaces it with **All**. |
| **CIs** | Displays the number of CIs selected for the report, and the name of the agreement that contains the CIs.<br>**Tooltip:** Hold the cursor over the CIs link to view the names of the selected CIs.<br>To change the selection, click the **CIs** link. For details, see "CIs Dialog Box" on page 256. |

| GUI Element (A–Z) | Description |
| --- | --- |
| **Grouping** | Select a radio button according to how you want the data organized in the report:<br><br>➤ **CIs.** Displays outage data and outage categories per included CI.<br>➤ **Categories.** Displays outage data for CIs per included outage category. |
| **KPI** | Displays the name of the outage KPI used for outage calculations in the report, either **Number of Outages** or **Outage Duration**. To change the selection, click the **KPI** link to open the KPI dialog box. |

### Report Content

The following element is included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
| --- | --- |
| **<Table cell/Graph bar>** | Displays the number of outages or duration of outages for each CI or outage category during the selected time period.<br><br>The bars on the graph tab are color-coded by either CI or category, according to your **Grouping** selection.<br><br>Click a bar section or table cell to drill down to the Outage Summary Report, which displays information on the outage for the relevant CI and category, during the same time period. Use the breadcrumbs at the top of the page to return to the Outage Breakdown report.<br><br>**Tooltip:** Hold the pointer over a cell or bar to view the CI and category name, and KPI results. |

# 🔍 Outage Distribution Report



| Description | Displays outage distribution by CIs or outage categories. |
|---|---|
| | **To access:** Applications > Service Level Management > Outage Reports > Outage Distribution |
| **Important Information** | ➤ Use the Outage Distribution report to see which CI or category has the most outages, or has outages with the longest duration. |
| | ➤ Results can be displayed in graph or table format. |
| **Included in Tasks** | "View SLA and Outage Reports" on page 236 |
| **Useful Links** | "Outages in Agreements" on page 34 |

### Report Settings

| GUI Element (A–Z) | Description |
| --- | --- |
| **<Common report settings>** | For details, see "Common Report Elements" in *Reports*. <br><br> Also see "Tracking Range and Granularity in Service Level Management" on page 227. |
| **Advanced Options** | Enables you to include descriptions and additional values in the report, and customize some display aspects. For details, see "Advanced Options Dialog Box" on page 241. |
| **Calendar** | Select a calendar. The list includes only those calendars that have been assigned to the agreement. |
| **Categories** | Displays the names of the outage categories selected for inclusion in the report. To change the selection, click the **Categories** link to open the Categories dialog box. The dialog box lists the available predefined outage categories—**Database**, **Network**, **Webserver**, and **Undefined**—and any user-defined categories. <br><br> **Default value:** All <br><br> **Note:** You can include all relevant outage categories by clicking the **Clear All** link. This clears the displayed selection and replaces it with **All**. |
| **CIs** | Displays the number of CIs selected for the report, and the name of the agreement that contains the CIs. <br><br> **Tooltip:** Hold the cursor over the CIs link to view the names of the selected CIs. <br><br> To change the selection, click the **CIs** link. For details, see "CIs Dialog Box" on page 256. |

| GUI Element (A–Z) | Description |
|---|---|
| **Grouping** | Select a radio button according to how you want the data organized in the report: <br><br> ➤ **CIs.** Displays outage distribution across the included CIs. In the graph tab, this information is shown in pie chart format. <br><br> ➤ **Categories.** Displays outage distribution per included outage category. In the graph tab, this information is shown in pie chart format. <br><br> ➤ **Both.** Displays both the CIs and the categories groupings on the page. In the graph tab, Group by CIs is in pie chart format, and Group by Categories is in bar chart format. |
| **KPI** | Displays the name of the outage KPI used for outage calculations in the report, either **Number of Outages** or **Outage Duration**. To change the selection, click the **KPI** link to open the KPI dialog box. |

### Report Content

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **<Bar chart>** | (Displayed on the **View as Graph** tab, when **Both** is selected as the **Grouping** option.) |
| | For each outage category, displays the total number of outages or total outage duration during the selected time period. |
| | Click a bar to drill down to the Outage Summary Report, which displays outage information for all outages in the relevant outage category, during the same time period. Use the breadcrumbs at the top of the page to return to the Outage Breakdown report. |
| | **Tooltip:** Hold the pointer over a bar to view the KPI results. |
| **<Pie chart>** | (Displayed on the **View as Graph** tab) |
| | Displays outage distribution (in percentage) for the included CIs (if you selected **CIs** or **Both** as the **Grouping** option) or for the included outage categories (if you selected **Categories** as the **Grouping** option). |
| | The percentages are based on the results for the selected KPI, so that each pie slice shows either the percentage of the total outages, or the percentage of the overall outage time (within the filters selected for the report). |
| | Click a pie slice to drill down to the Outage Summary Report, which displays outage information from all outages for the relevant CI, or for all outages in the relevant outage category, during the same time period. Use the breadcrumbs at the top of the page to return to the Outage Breakdown report. |
| | **Tooltip:** Hold the pointer over a pie slice to view the actual KPI results. |

| GUI Element (A–Z) | Description |
|---|---|
| **Group by CIs/Group by Categories table** | (Displayed on the **View as Table** tab.) |
| | Displays either the total number of outages or total outage duration, by CI or by outage category, for the selected time period. |
| | Click in a cell to drill down to the Outage Summary Report, which displays outage information from all outages for the relevant CI, or for all outages in the relevant outage category, during the same time period. Use the breadcrumbs at the top of the page to return to the Outage Breakdown report. |
| | **Tooltip:** Hold the pointer over a cell to view the KPI results. |

# 📌 Outage Summary Report



| Description | Lists the outages for selected CIs. |
|---|---|
| | **To access:** Applications > Service Level Management > Outage Reports > Outage Summary |
| **Important Information** | Use this report to view outage information for a specific agreement, to see the reason for the breach of contract. |
| | After generating a report, you can add a comment to each outage explaining the reason for the outage, and you can categorize the outages, so that you or your users can sort the report by category. |
| **Included in Tasks** | "View SLA and Outage Reports" on page 236 |
| **Useful Links** | "Outages in Agreements" on page 34 |

## Report Settings

| GUI Element (A–Z) | Description |
|---|---|
| **<Common report settings>** | For details, see "Common Report Elements" in *Reports*.<br><br>Also see "Tracking Range and Granularity in Service Level Management" on page 227. |
| **Advanced Options** | Enables you to include descriptions and additional values in the report, and customize some display aspects. For details, see "Advanced Options Dialog Box" on page 241. |
| **Calendar** | Select a calendar. The lists includes the calendars relevant for the selected CIs. |
| **Categories** | Displays the names of the outage categories selected for inclusion in the report. To change the selection, click the **Categories** link to open the Categories dialog box listing all available outage categories.<br><br>**Note:** You can include all categories by clicking the **Clear All** link. This clears the displayed selection and replaces it with **All**. |
| **CIs** | Displays the number of CIs selected for the report, and the name of the agreement that contains the CIs.<br><br>**Tooltip:** Hold the cursor over the CIs link to view the names of the selected CIs.<br><br>To change the selection, click the **CIs** link. For details, see "CIs Dialog Box" on page 256. |

### Report Content

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
|  | (Displayed in the toolbar above the report, after a report is generated.) |
| | Select a row in the report, then click this button to open the Outage Details dialog box, where you can assign a category to the outage or enter a description for it. If you need additional outage categories, define them in the Outage Categories Page. For more information, see "Outage Categories" on page 35. |
| | It is recommended to categorize each outage to make outage reports more meaningful. |
| | **Note:** The change takes effect the next time the report is generated. |
| **Category** | The category allocated to the outage. You can categorize the outage in this report. |
| **CI** | The name of the CI. |
| **Description** | The description of the outage. You can add a description to an outage in this report. |
| | **Tooltip:** To view the description in full, if it is concatenated, hold the pointer over the Description field. |
| **Duration** | The duration in hours, minutes, and seconds. |
| **End Date** | The end date and time of the outage. |
| **Start Date** | The start date and time of the outage. |

# 🔍 SLA Management Page

| | |
|---|---|
| **Description** | Enables you to select service-related views to view information about the connections between your business services, business units, and agreements. You can link to related reports that will assist you in understanding the connection. |
| | **To access:** Applications > Service Level Management > SLA Management |
| **Useful Links** | "Business Units for Services and Agreements" on page 28 |
| | "View Explorer" in *Model Management* |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **Left Pane: View Explorer** | In View Explorer for SLA Management, you can display one of the following views:<br><br>➤ **Business Services.** Contains all Business Service CIs defined in the CMDB. For details, see "Business Services - Overview" on page 98.<br>➤ **Business Units.** Contains all Business Unit CIs, representing service providers and customers, defined in the CMDB. For details, see "Business Units for Services and Agreements" on page 28.<br>➤ **Service Providers.** Contains all Business Unit CIs that represent internal and external service providers, and the Business Service CIs associated with the provider. For details, see "Define Business Services for Agreements" on page 100.<br><br>**Context Menu:** Right-click a CI to view a menu containing one or more of the following options:<br><br>➤ **CI Impact Report.** Opens the CI Impact report for the selected Business Service CI in a new window, using default filter settings or the report filter settings last used during the current Web session.<br>➤ **Related CIs.** Displays related CIs in the View Explorer search pane.<br>➤ **Properties.** Displays the General Properties window for the CI.<br>➤ **SLAs Summary Report.** Select either **Customer** or **Provider** from the sub-menu to open the SLAs Summary report for the selected customer (or for all customers) or selected provider (or for all providers) in a new window. All agreements that are associated with the customer/provider are included in the report. The report uses using default filter settings or the report filter settings last used during the current Web session. |

| GUI Element (A–Z) | Description |
|---|---|
| **Right Pane: SLA Management** | The right pane content changes according to the current selection in the view tree displayed in View Explorer:<br><br>➤ **Introductory information** about SLA Management is displayed when you first enter the page or select the view name.<br><br>➤ When the **Business Services view** name is selected, the right pane displays a table listing the business services, their associated providers, and their descriptions.<br><br>➤ When a **Business Service CI** is selected (in the Business Services view or the Service Providers view), the right pane displays details about the service (description, provision, and provider).<br><br>If there are associated agreements for the service, the pane also displays details about the agreements in a table. Click the **CI Impact Report** button to open the CI Impact report for the selected Business Service CI in a new window, using default filter settings or the report filter settings last used during the current Web session.<br><br>➤ When a **Business Unit CI** representing a provider or customer is selected (in the Business Services view or the Service Providers view), the right pane displays details about the CI (description, contact details).<br><br>If there are associated agreements for the provider or customer, the pane also displays details about the agreements in a table. Click the **SLAs Summary Report** button to open the report for all customers or for all providers (as relevant) in a new window. All agreements that are associated with the customers/providers are included in the report. The report uses default filter settings or the report filter settings last used during the current Web session. |

# 🔍 SLA Status Report



| Description | Displays agreement status for the current period, and provides a forecast of agreement status at the end of a calculation period.<br><br>**To access:** Applications > Service Level Management > SLA Reports > SLA Status |
|---|---|

| Important Information | ➤ You can use this report to see if continuing to maintain your services at the current levels will lead to a breach of the agreement on a future date. |
|---|---|
| | ➤ Agreements that do not correspond to the filtering criteria (for example, they do not use the defined calendar) are not included in the report. The excluded agreements are listed under the report. |
| | ➤ The usual logic used in Service Level Management reports when generating a report for week/month/year to date on the first day of a new period, is to use the results for the last week/month/year; however, in the SLA Status report, the **Current Status** for <x> to date on the first day of a period is calculated from the beginning of that period (the first hours). As a result, you may see different current status when you compare results for <x> to date in the SLA Status report and in the SLAs Summary report. |
| Included in Tasks | "View SLA and Outage Reports" on page 236 |
| Useful Links | ➤ "Status Forecast for Agreements" on page 221 |
| | ➤ "Agreement Status" on page 215 |

## Report Settings

| GUI Element (A–Z) | Description |
|---|---|
| <**Common report settings**> | For details, see "Common Report Elements" in *Reports*. |
| | Also see "Tracking Range and Granularity in Service Level Management" on page 227. |
| **Advanced Options** | Enables you to include descriptions and additional values in the report, and customize some display aspects. For details, see "Advanced Options Dialog Box" on page 241. |
| **Base Forecasting On** | Select the time period to be used as the base calculation period for the forecast calculation. |
| | The available options are determined by the tracking periods defined for the included agreements (excluding hour or the current day). |

| GUI Element (A–Z) | Description |
|---|---|
| **Calendar** | Select the calendar for which the status calculation should be made. The available options are the calendars defined for the selected agreements, or **All**. |
| | When you select **All**, the forecast is calculated for all calendars, and the worst results for each agreement are shown in the report. |
| **Give Forecasting For** | Select the time period that you want the forecast to cover. The current status is calculated for the same tracking period to-date. For example, selecting **End of Quarter** gives a forecast for the end of the current quarter, and current status for the current quarter-to-date. |
| | The available options are determined by the tracking periods defined for the included agreements (excluding hour and day). |
| **SLAs/Customers/ Providers** | The **SLAs** field (may be called **Providers** or **Customers**, if you previously filtered by one of these options) displays the names of the agreements, providers, or customers selected for the report. To change the selection, click the **SLAs/Providers/Customers** link. For details, see "SLAs Dialog Box" on page 280. |
| | **Note:** You can select all **SLAs/Customers/Providers** by clicking the **Clear All** link. This clears the displayed selection and replaces it with **All**. |

## Report Content

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **<Base Forecasting On period> Trend** | Displays an arrow indicating the trend direction for the agreement. The arrow is green for improving agreement status, grey if the status is constant (or if there is no data), and red if status is deteriorating.<br><br>The trend calculation is based on the difference between the current status (shown in the **Current Status** column) and the status for the base calculation period.<br><br>**Tooltip:** Hold the pointer over the trend arrow to see the dates for the trend periods. |
| **Current Status** | Displays the status-to-date for the agreement based on the **Give Forecasting For** tracking period and the selected calendar. For example, the current status could be calculated from the agreement results from the start of the month to the current date, during business hours. For more information, see "Agreement Status" on page 215.<br><br>**Tooltip:** Hold the pointer over the status bar to see the status and tracking period. |
| **Expected Breach Date** | Displays the date and time that agreement status is expected to fall below status **Exceeded**. A value is displayed in this column only if:<br><br>➤ The agreement current status is exceeded (green)<br>➤ The forecast status is less than exceeded |

| GUI Element (A–Z) | Description |
|---|---|
| **Forecasting Status** | Displays the status forecast for the selected tracking period and calendar. For example, the forecast could be calculated for the end of the current month for business hours, based on the agreement results for the last day. **Tooltip:** Hold the pointer over the status bar to see the status and forecast tracking period. |
| **SLAs** | Lists the agreements included in the report. **Tooltip:** Hold the pointer over a long agreement name to view it in full. |

# 🔍 SLAs Dialog Box

| | |
|---|---|
| **Description** | Enables you to filter the agreements to be included in a Service Level Management report. **To access:** In a Service Level Management report, click **SLAs** or **Providers** or **Customers** or **Services** in the reports settings area. (The link name depends on the category you previously selected for the filter.) |
| **Important Information** | ➤ **SLAs** generally implies all agreement types (SLAs, OLAs, UCs). <br> ➤ Only the agreements for which you have viewing permission are displayed in the SLAs dialog box and in the report. For more information, see "Permissions for Working with Agreements" on page 42. |
| **Useful Links** | "Business Units for Services and Agreements" on page 28 <br> "SLAs, OLAs, and UCs" on page 28 <br> "Business Services - Overview" on page 98 |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **<List of SLAs/ Providers/ Customers/Services>** | Select the check box for each option that you want to include in the report filter. Only those agreements that are associated with a selected filter option are included in the report. |
| **Select From** | Select the category of filter options you require: <br> ➤ **SLAs.** Enables you to select from the available agreements—SLAs, OLAs, and UCs. <br> ➤ **Providers.** Enables you to select from all providers that are associated with at least one agreement. <br> ➤ **Customers.** Enables you to select from all customers that are associated with at least one agreement. <br> ➤ **Services.** Enables you to select from all business services that are included in at least one agreement. |

# 🔍 SLAs Summary Report



| SLAs Summary | 7/30/07 12:00 AM - 8/3/07 12:00 AM |

View: Week to date ◄ ►

SLAs: All (Clear All)

Primary grouping: KPI     KPI: All (Clear All)
Secondary grouping: Calendar     Calendar: All (Clear All)

| SLAs | Availability (%) | | | Performance (%) | | |
|---|---|---|---|---|---|---|
| | 24x7 | Acme business week | Business Hours | 24x7 | Acme business week | Business Hours |
| Cust 1SLA1 1 | 60.000 | - | 60.000 | 33.333 | - | 33.333 |
| Cust 1SLAIV1 1 | 60.000 | - | 60.000 | 33.333 | - | 33.333 |
| IT-eBusiness SLA | - | - | - | - | - | - |
| IT-eBusiness SLA 2 | 60.000 | 66.667 | 66.667 | 33.333 | 33.333 | 50.000 |

■ Exceeded    ■ Met    ■ Minor Breached    ■ Breached    ■ Failed
■ Downtime

| Description | Displays a list of agreements and their status for selected KPIs and calendars. |
|---|---|
| | You can use this report to view a summary of data for all (or specific) agreements. |
| | **To access:** Applications > Service Level Management > SLA Reports > SLAs Summary |
| **Important Information** | You can drill down from this report to the CI Summary report. This enables you to identify the measurement causing a problem in an agreement. |
| **Included in Tasks** | "View SLA and Outage Reports" on page 236 |

## Report Settings

| GUI Element (A–Z) | Description |
|---|---|
| **<Common report settings>** | For details, see "Common Report Elements" in *Reports*.<br><br>Also see "Tracking Range and Granularity in Service Level Management" on page 227. |
| **Advanced Options** | Enables you to include descriptions and additional values in the report, and customize some display aspects. For details, see "Advanced Options Dialog Box" on page 241. |
| **Calendar** | Displays the names of the calendars selected for inclusion in the report.<br><br>To change the selection, click the **Calendar** link to open the Calendar dialog box. The dialog box lists all calendars attached to the selected agreements.<br><br>**Note:** You can include all relevant calendars by clicking the **Clear All** link. This clears the displayed selection and replaces it with **All**. |
| **KPI** | Displays the names of the KPIs selected for inclusion in the report. To change the selection, click the **KPI** link to open the KPI dialog box. The dialog box lists all KPIs attached to the selected agreements.<br><br>**Note:** You can include all relevant KPIs by clicking the **Clear All** link. This clears the displayed selection and replaces it with **All**. |

| GUI Element (A–Z) | Description |
|---|---|
| **Primary Grouping/ Secondary Grouping** | Select the first and second level column headers to be used for presenting data in the report. For details, see "Primary Grouping/Secondary Grouping" on page 218. |
| **SLAs** | The **SLAs** field (may be called **Providers** or **Customers**, if you previously filtered by one of these options) displays the names of the agreements, providers, or customers selected for the report. To change the selection, click the **SLAs/Providers/Customers** link. For details, see "SLAs Dialog Box" on page 280. <br><br> **Note:** You can select all SLAs/Customers/Providers by clicking the **Clear All** link. This clears the displayed selection and replaces it with **All**. |

### Report Content

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **<Table cell>** | Displays the numerical result for the KPI. The background color shows the status for the KPI (based on the target objectives). <br><br> **Tooltip:** Hold the pointer over a cell to view information about the KPI. For details, see "Tooltip for KPIs in Reports" on page 220. |
| **SLAs** | Displays the agreements included in the report. Click an agreement name to drill down to the CI Summary report for that agreement. (You can return to the SLAs Summary report using the breadcrumbs at the top of the page.) <br><br> **Tooltip:** Hold the pointer over the name of an agreement to view information in a tooltip. To display the information in the table, instead of in the tooltip, click **Advanced Options**, and select **Show SLA details as columns**. |

# 🔖 Status Snapshot Report



| Description | Displays up-to-date information for the worst-performing or best-performing agreements in the current tracking periods and in previous tracking periods. |
| --- | --- |
| | **To access:** Applications > Service Level Management > Status Snapshot |

| Important Information | ➤ An agreement is included in the Status Snapshot page only if it has relevant data. |
|---|---|
| | ➤ Different agreements may be displayed in the Current Periods pane and the Previous Periods pane. |
| | ➤ Hold the pointer over a long agreement name to view it in full. |
| | ➤ The Status Snapshot page is refreshed every five minutes. You can change this value in **Admin > Platform > Setup and Maintenance > Infrastructure Settings**, choose **Applications**, select **Service Level Management**, and locate the **SLA Status Snapshot refresh timing** entry. |
| Useful Links | "Status in Reports" on page 214 |

## Report Settings

| GUI Element (A–Z) | Description |
|---|---|
| **Apply** | Click to update the report with your changes. |
| **Maximum number of displayed SLAs** | Enter a value to limit the number of displayed agreements (the same value is applied for the Current Periods pane and Previous Periods pane). |
| | **Default value:** 10 |
| | **Note:** Entering large values causes slower display time. |

| GUI Element (A–Z) | Description |
|---|---|
| **SLAs/Providers/ Customers/Services** | The **SLAs** field (may be called **Providers**, **Customers**, or **Services** if you previously filtered by one of these categories) displays the name of the filter option selected for the report, or displays the number of selected options within that category. For example, **SLAs: Filtered 2/5** means that filtering is based on SLAs (agreements), and 2 out of 5 agreements are included in the filter for the report. To change the selection, click the field name link. For details, see "SLAs Dialog Box" on page 280.

When you filter by providers, customers, or services, the Status Snapshot report displays the worst-performing or best-performing agreements that are associated with the selected options.

**Note:** You can include all options in the current filter category by clicking the **Clear All** link. This clears the displayed selection and replaces it with **All**. |
| **Sort by** | Select **Best performing** or **Worst performing** to filter the agreements included in the Status Snapshot report by best or worst performance.

**Default value:** Worst performing |

## Current Periods Pane

| Description | Displays agreement status information for the current tracking period, and the predicted agreement status at the end of the forecast period. The included agreements are those that meet the filter criteria, and that work with the tracking period defined in the **Comparison tracking period** field. |
|---|---|
| **Important Information** | The status-to-date information displayed in the Status Snapshot report (for example, **Week**, which gives week-to-date information) shows real-time data that is correct up to one or two hours ago (for details on the status-to-date calculations, see "Agreement Status" on page 215). |
| | In other Service Level Management reports, status-to-date information is calculated to the last closed day. This means that you may see different data displayed in the Status Snapshot report as compared with other reports, or that the Status Snapshot report already contains data while other reports do not yet have data. |

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
|---|---|
| **Comparison tracking period** | Select the tracking period that is used for the status displayed in each agreement gauge. All tracking periods are available apart from **Hour** and **SLA period**. |
| | If an agreement meets all other filter requirements, but the selected tracking period is not part of the agreement definition, it is not displayed in the Current Periods pane (it is displayed in the Previous Periods pane). |
| | **Default value:** Month |

| GUI Element (A–Z) | Description |
|---|---|
| **<Gauge>** | The gauge for each agreement provides a pictorial representation of the status for the selected **Comparison tracking period** (for example, Day or Week). |
| | Click in a gauge to open the SLA Status report for that agreement. |
| | **Tooltip:** States the status and tracking period for the status. |
| **<Tracking period>** | Displays the status-to-date for each tracking period defined for the agreement (not including **Hour**). For example, **Week** gives the week-to-date status, **Month** gives the month-to-date status. |
| | **Tooltip:** Hold the pointer over a status icon to see details about its status. |
| **Forecast** | Displays the status forecast for the end of the forecast period. |
| | The status forecast is not displayed if the agreement does not have the default forecast calculation tracking periods (as defined in infrastructure settings), or if no data is found that can be used to calculate the forecast. |
| | **Tooltip:** Hold the pointer over **Forecast** to see the period the forecast is based on, and the period that the forecast is for. |
| | **Default values:** The default base period is **Week**, and the default forecasted period is **Month**. The default values can be changed in the Infrastructure Settings page. |
| | For information on how the status forecast is calculated, and on changing the default values, see "Status Forecast for Agreements" on page 221. |

## Previous Periods Pane

| Description | Displays agreement status information from previous, closed tracking periods (periods that have passed their end date), over the past six months. The included agreements are the worst performing/best performing agreements over the past six months, according to all the filter criteria. |
| --- | --- |

The following element is included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
| --- | --- |
| **<Bar chart>** | The bar chart for each agreement shows the status of week, month, and quarter periods. |
| | If a period is grey, either the period has not yet finished, or no data exists for that period. |
| | **Tooltip:** Hold the pointer over a bar to view information on the bar period and status. |

# ⚒ Time Range Comparison Report



| Description | Displays KPI results for a CI branch across different time ranges. |
|---|---|
|  | **To access:** Applications > Service Level Management > SLA Reports > Time Range Comparison. |
| **Important Information** | You can use this report to compare KPI results over different time periods. |
| **Included in Tasks** | "View SLA and Outage Reports" on page 236 |

## Report Settings

| GUI Element (A–Z) | Description |
| --- | --- |
| **<Common report settings>** | For details, see "Common Report Elements" in *Reports*.<br><br>Also see "Tracking Range and Granularity in Service Level Management" on page 227. |
| **Advanced Options** | Enables you to include descriptions and additional values in the report, and customize some display aspects. You can add a column to the report displaying objectives for the selected KPI.<br><br>For details, see "Advanced Options Dialog Box" on page 241. |
| **Calendar** | Select a calendar. The lists includes the calendars relevant for the selected CI. |
| **CI** | Displays the name of the CI selected for the report. The report displays all CIs in the branch for the selected CI (you can also select the agreement CI).<br><br>To change the selection, click the **CI** link. For details, see "CIs Dialog Box" on page 256. |

| GUI Element (A–Z) | Description |
| --- | --- |
| **KPI** | Select a KPI. The lists includes the KPIs relevant for the selected CI. |
| **Time Ranges** | Displays the time ranges selected for the report. Two time ranges are selected by default. |
| | To select time ranges, click the **Time Ranges** link to open the Time Ranges dialog box. |
| | ➤ Select the check box for a row to include that time range in the report. |
| | ➤ By default, the time range label is the name in the **Time Range** box. If you want a different label displayed in the report, enter it in the relevant **Label** box. |
| | ➤ Select the time range for each row. The available time ranges depend on the tracking periods defined for the agreement containing the selected CI. |
| | ➤ Set dates as required. |
| | **Note:** The trend column is displayed in the report only when exactly two time ranges are selected. |

### Report Content

The following elements are included (unlabeled GUI elements are shown in angle brackets):

| GUI Element (A–Z) | Description |
| --- | --- |
| **<KPI cell>** | Displays the numerical result for the KPI during that time range. The background color shows the status for the KPI (based on the target objectives). |
| | **Tooltip:** Hold the pointer over a cell to view information about the KPI. For details, see "Tooltip for KPIs in Reports" on page 220. |
| **CI** | Displays the CIs included in the selected branch of the agreement (up to four levels). Click a CI name to drill down to the branch under that CI. (You can return to the previous level using the breadcrumbs at the top of the page.) |
| | **Tooltip:** Hold the pointer over a CI name to view the full name in a tooltip. |
| **Objectives** | Displays, for each CI, the objectives defined for the attached KPI. This column is displayed if you selected **Show Objectives in Column** in the Advanced Options dialog box. |
| | **Note:** If a KPI has different objectives defined in each time range, then no objectives are displayed for that CI. |
| **Trend** | Displays the status trend between the first time range column and the second time range column. This column is displayed only if exactly two time ranges are selected. |

# 🔍 Troubleshooting and Limitations

This section provides information to help you troubleshoot Service Level Management reports.

## The Reports Log

HP Business Availability Center records errors that occur when generating Service Level Management reports in a reports log. The reports log can also include the following activities: report creation, report generation, report filters modification, report drill down, and so on. For details, see "Reports Log" in *Platform Administration*.

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