

# HP OpenView Operations for UNIX White Paper

## Operational Service Views in Service Navigator

Software version: A.08.11



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## Abstract

In a distributed OVO environment with many operators in different locations, it is a priority to be aware of any critical problems that are not allocated to any operator. It is important to know on which problems operators need to work to avoid duplicated and redundant solutions. It is unacceptable if critical problems are waiting for a resolution and two or more operators are independently working on the same problem. Managers and operators need to be able to see at a glance which problems are already in the process of being handled and which problems still need to be assigned to an operator. Service Navigator's new Operational service views lets operators distinguish between services that have corresponding opened, assigned or closed messages. In this paper, we describe what Operational service views can do and how they can be used to make sure your operators are efficiently handling all of the important problems.

## Introduction

Service Navigator allows you to define dependencies among services. From the underlying messages in OVO, it establishes a service hierarchy and assigns responsibilities to operators. The operator is then able to see the current service status in the Java GUI and perform actions related to these services, or to drill down to the message details of the related services. In a service hierarchy, the status is calculated from the severity of the messages assigned to a service, and from the statuses of any subservices of that service. You can influence the following factors within a parent-child relationship:

- Status propagation refers to how a subservice represents its status to its parent service.
- Status calculation refers to the calculation that is performed to determine the status that is assigned to a service. This status is calculated from the severity of the messages assigned to the service itself, and from the statuses of any subservices of that service.
- Weighting of child objects – By setting a weighting, you can make a subservice more or less important than other subservices that contribute to the parent service

For better understanding of this document it is recommended that you are familiar with the concept of Status Calculation Rules, as described in the Service Navigator Concepts and Configuration Guide.

## Introducing an additional state in Service Navigator

Until OVO 8.11, each service in Service Navigator (SN) reflected only one status at a time. Messages in the active message browser were considered for the status calculation of services, regardless of whether messages were owned by any operator or not. There were some practical limitations of Service Navigator only being able to display one state per service, as some operators may only be interested in problems already allocated to them while other user wanted to see all open problems.

Now we can give the customers the possibility to visualize more than one state per service and provide the following advantages:



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- IT Manager may want to see service states which reflect the actual health of the managed environment including business services.
- Operators using Service Navigator Java GUIs may only want to see issues which are not already being addressed by other operators.

From OVO 8.11 there will be an additional status for services calculated from a set of messages, based on different rules. The calculation does not consider only active messages, but also the “own” state of the messages. This means that services can simultaneously have two statuses, based on a different set of messages, possibly reflecting two different severities.

You can monitor and work with services displayed in the following two status calculation views:

- Overall  
The service status view based on all messages present in the active message browser
- Operational  
The service status calculation view based on all non-owned messages present in the active message browser.

What is the difference between these two views? For example, a message with severity Critical targets a service and colors it red. Consequently, all upper services in the service hierarchy change their color depending on the propagation and calculation rule set for them. The Overall status calculation view displays these services in the same way, irrespective of the targeting message ownership status. In this example, these services are colored red. You can observe this in the object pane, service graph or map, and in the shortcut bar. When you take the ownership of the message, the severity of the service does not change until the message is acknowledged.

If your status calculation view is set to Operational and you take ownership of the message, the severities of the targeted service and all dependent services change back to the severity visible prior to the message arrival.

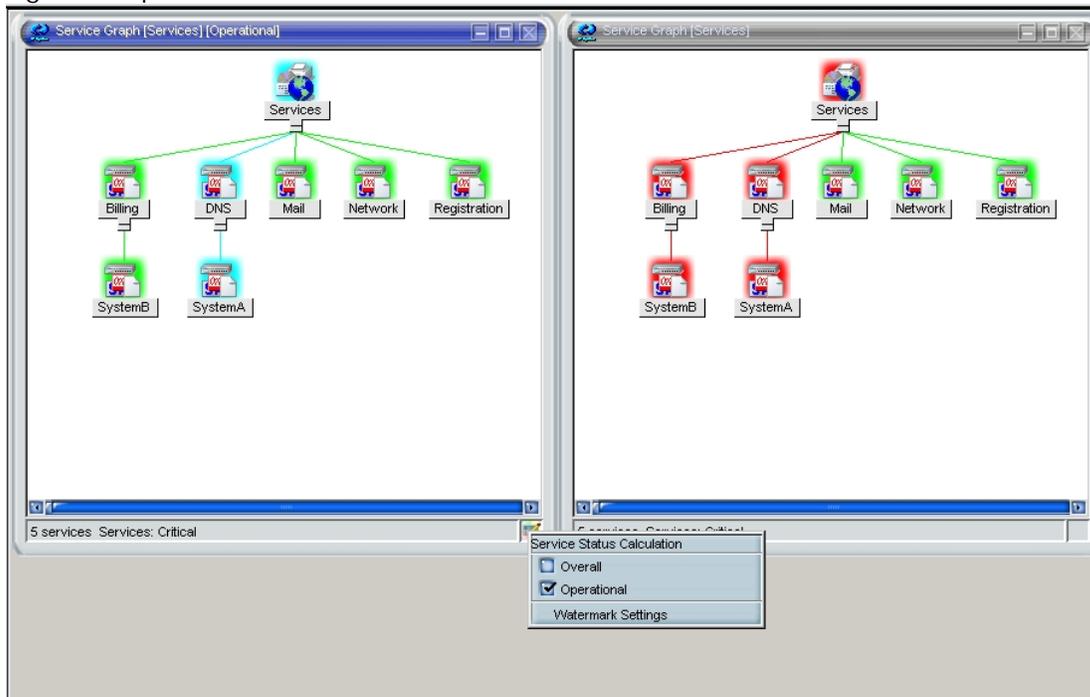
The benefit of the service operational view is that you can get an insight of how the service hierarchy would look if the message targeting a service is acknowledged, in other words, if the problem is solved. This is very useful, especially, if you monitor your services in both calculation views simultaneously as shown in Figure 1 below.

This functionality is available with the OVO A.08.11 management server patch in conjunction with the OVO A.08.11 Java GUI patch and subsequent patches. The latest patches at time of writing are detailed in Table 1:

Table 1: Latest OVO Patches Required for Operational Service Views

Patch Name	Platform	
	HP-UX	Solaris
OVO Management server A.08.11	PHSS_32404	ITOSOL_00386
OVO Java GUI A.08.11	PHSS_32405	ITOSOL_00387

Figure 1: Operational vs. Overall view



In Figure 1, both Overall and Operational status calculation views are shown. In the service graph presenting the Operational status calculation view, the currently displayed view is clearly indicated in the window title bar. In addition, an icon appears in the bottom right corner to indicate that the currently set view is Operational.

## Use Case

A Customer has a service called MyInternet consisting of five subservices: DNS, Mail, Network, Billing and Registration. SystemA is a single point of failure for the DNS sub service, and SystemB is a single point of failure for the billing sub service. The first level support team manage the services only based on the most critically service impacted service (only most critical calculation rule is used) within the service model. They do not monitor the event browser, other than drilling down to find the root cause of a problem.

SystemA has a critical application failure, which turns the service model to Critical. The first level support team does a root cause analysis and finds that an application failure has occurred. They open a trouble ticket automatically and pass the problem to the application support team. The trouble ticket system owns the OVO event, which still remains critical, as the problem is totally service impacting. The overall view shows the service MyInternet as critical while the Operational view shows MyInternet as normal.

Whilst the second level support team is working on the application problem on SystemA, a CPU bottleneck appears on system B and a critical message is generated. Again the MyInternet service becomes critical in the Operational view and it indicates that the first line support team needs to fix the problem on SystemB. This will prevent the service MyInternet being down for a longer time since two subsequent failures can be fixed simultaneously.

## Setting Service Status Calculation Views

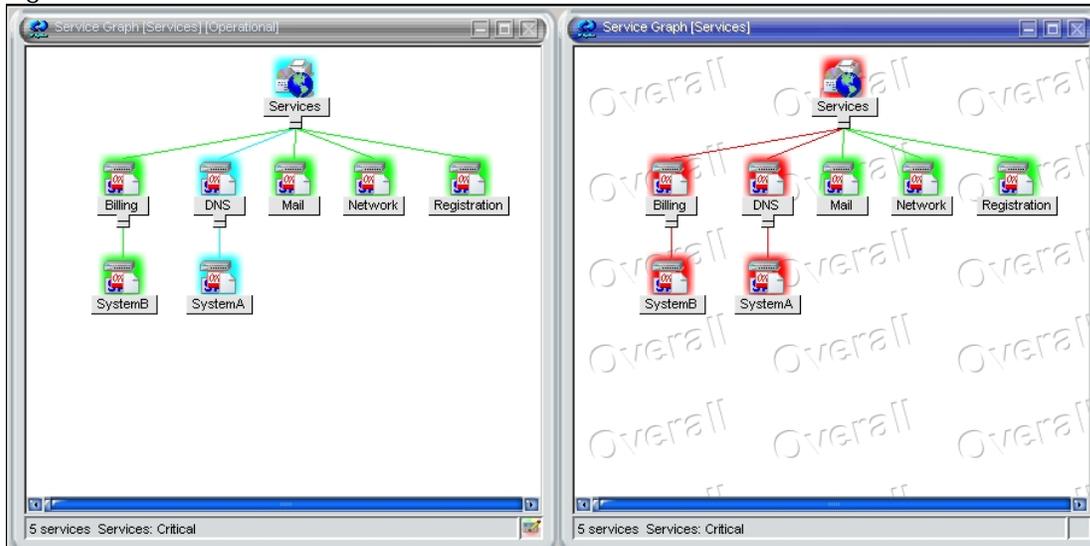
Service status calculation views are set in the following ways:

- By the OVO administrator (enabling and setting the default view)  
Service status calculation views are enabled and set by the OVO administrator with the `ovconfchg` configuration tool. The OVO administrator also specifies the global default calculation view, which is displayed every time you start the Service Navigator. It is also possible to rename the service status calculation views. For more information, see [“Enabling and Configuring Operational Service Views”](#).
- In the Preferences dialog (setting the default view)  
Even though the OVO administrator sets the status calculation views with the `ovconfchg` configuration tool, you do not have to accept all of these settings. You can select your custom status calculation view, if more than one is enabled, by selecting the status calculation view in the **Services** tab of the **Edit->Preferences** dialog.
- From the ‘calculation’ toolbar drop-down menu  
Service status calculation view set using the toolbar drop-down menu is displayed within the currently active service graph or map, but it does not change the default calculation view in the object pane or in the shortcut bar. If no service graph or map is currently active, the ‘calculation’ drop-down menu is disabled.  
**IMPORTANT** As soon as you restart the Java GUI, these changes on service graphs and maps are lost, and the default status calculation view is reset again.
- From the service graph’s or map’s pop-up menu (for the currently active service graph or map only)  
This is an alternative to the toolbar ‘calculation’ drop-down list, which can be used when the services toolbar is turned off. Service status calculation view that is set using service graph’s or map’s pop-up menu is displayed within the currently active service graph or map, but it does not change the default calculation view in the object pane. As with the ‘calculation’ drop-down list, the default calculation view is reset after the Java GUI is restarted.

## Setting Watermarks on Service Graphs and Maps

To easily differentiate between two service status calculation views, you can set watermarks on service graphs and maps for any of the status calculation views. A watermark represents the text displayed in the background of a service graph or map. Figure 2 shows an example of a custom watermark for the Overall status calculation view.

Figure 2 Watermarks for Overall Status Calculation View



You can enable and customize watermarks for any of the calculation views in the Watermark Advanced Setting dialog, which is accessible in one of the following ways:

- From the Preferences dialog  
To open the Watermark Advanced Setting dialog, click the [Advanced] button in the Services tab of the Edit->Preferences dialog.
- From the service graph's or map's pop-up menu  
To open the Watermark Advanced Setting dialog, select the **Watermark Settings** option from the **Service Status Calculation** pop-up menu. Right-click the area in the bottom right corner of the service graph or map to access the menu.
- Enabling and Disabling Customized Watermarks  
To enable or disable already customized watermark(s) on the service graphs and maps, use the **Show Watermark on Service Graphs and Maps** checkbox in the Services tab of the Edit->Preferences dialog.  
This checkbox is automatically selected if you enable the watermark for at least one of the status calculation views in the Watermark Advanced Settings dialog; likewise, if you disable watermarks for both status calculation views in the Watermark Advanced Settings dialog, the Show Watermark on Service Graphs and Maps checkbox is automatically de-selected.

## Enabling and Configuring Operational Service Views

You can specify service status calculation views that you want to be enabled on your OVO management server, as well as set the global default service status calculation view.

To enable and configure operational service views, perform the following:

1. Login as user root to the OVO management server.
2. Enable or disable service status calculation view(s) on your OVO management server.

**IMPORTANT:** You must enable at least one service status calculation view. Otherwise Service Navigator will fail to start.

- To enable or disable the Overall calculation view, enter the following command:

```
ovconfchg -ovrg server -ns opc -set OPC_SVC_CALC0 <calc_value>
```

Where *<calc\_value>* is one of the following:

- TRUE (to enable this status view)
- FALSE (to disable this status view)

- To enable or disable the Operational calculation view, enter the following command:

```
ovconfchg -ovrg server -ns opc -set OPC_SVC_CALC1 <calc_value>
```

Where *<calc\_value>* is one of the following:

- TRUE (to enable this status view)
- FALSE (to disable this status view)

For example, if you want to enable the Operational calculation view, and to disable the Overall calculation view, enter the following commands:

```
ovconfchg -ovrg server -ns opc -set OPC_SVC_CALC0 FALSE
ovconfchg -ovrg server -ns opc -set OPC_SVC_CALC1 TRUE
```

3. Specify the default service status calculation view. Enter the following command:

```
ovconfchg -ovrg server -ns opc \
-set OPC_SVC_DEFAULT_CALC <calc_value>
```

Where *<calc\_value>* is the ID of a service status calculation view. This value can be one of the following:

- 0 (Overall calculation view)
- 1 (Operational calculation view)

**NOTE:** Parameters must be defined in the [OPC] namespace. In this is achieved by using the `-ns opc` option.



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For example, to set your default service status calculation view to Operational, enter the following command:

```
ovconfchg -ovrg server -ns opc -set OPC_SVC_DEFAULT_CALC 1
```

4. Enable operational service view support for the Java GUI separately. Enter the command:

```
ovconfchg -ovrg server -ns opc -set JGUI_MULTISTATUS_ENABLED TRUE
```

The step above is necessarily in order to use the operational service view feature in the Java GUI.

**IMPORTANT:** You must restart the Management Server for changes to take effect.

## Renaming Operational Service Views

To rename the service status calculation views, set the following parameters using `ovconfchg(1m)` utility as follows:

```
OPC_SVC_CALC_NAME0 <calc_name1>  
OPC_SVC_CALC_NAME1 <calc_name2>
```

Where `<calc_name1>` and `<calc_name2>` are the names of service status calculation views.

For example, if you want to rename the Overall calculation view to Overall\_1, enter the following command:

```
ovconfchg -ovrg server -ns opc -set OPC_SVC_CALC_NAME0 Overall_1
```

## API for Operational Service View Changes

You can monitor the operational service view changes and check the current status view in one of the following ways:

By using `opcservice` command

To check the operational service view for the service `perfsvc`, perform the following:

1. Login as user `root` to the OVO management server.
2. Enter the following command:

```
opcservice -list perfsvc -xml
```

You should get output similar to the following:

```
<Results>
  <Services>
    <Service>
      <Name>perfsvc</Name>
      <Status>
        <Normal/>
      </Status>
      <MultiStatus>
        <CalculationId>1</CalculationId>
        <Normal/>
      </MultiStatus>
      <Label>Performance Service</Label>
    </Service>
    <Association>
      <Composition/>
      <SourceRef>perfapp</SourceRef>
      <TargetRef>perfsvc</TargetRef>
      <Status>
        <Normal/>
      </Status>
      <MultiStatus>
        <CalculationId>1</CalculationId>
        <Normal/>
      </MultiStatus>
    </Association>
  </Services>
</Results>
```

### By Creating Your Own Applications

You can create your own applications using C++ Service Engine APIs. Refer to the OVO Developer's Reference and to the man page `opcsvc_api(1m)` for more information on Service Engine APIs.

## Logging Status changes

If enabled, Service Navigator keeps a log of each status change in the OVO database. This allows you to design and generate reports about the availability of your services based on the data kept in the OVO database. For details about logging functionality, see the "Service Logging and Reporting" chapter in the Service Navigator Concepts and Configuration Guide.

Operational service view changes are currently not logged. Only Overall status changes are written to the database as with previous OVO/UNIX releases. Logging of Operational service view changes is planned for a future release.

## Summary

Service Navigator can show two different types of service views: overall and operational. The user can choose if service views shall consider all active messages or only those that are not "owned". In the Overall view, all messages drive the status of service objects while in the operational view only new messages are used for status calculation. This feature allows users to configure the Service Navigator status visualization to their needs and roles.

## For more information

For more information on HP OpenView Operations and HP Management Software, access the HP site at <http://www.managementsoftware.hp.com>

## Call to action

To help us better understand and meet your needs for HP OpenView information, please send comments about this paper to: [vesna.soraic@hp.com](mailto:vesna.soraic@hp.com).

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