



# Using Call Classification Feature with Cisco Unified Service Monitor 2.3 and Cisco Unified Service Statistics Manager 1.3

## Guide

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## Introduction

This document highlights suggested best practices for field personnel and customers. It will enable you to effectively leverage Service Monitor and Service Statistics Manager to enhance the call classification based on the call detail records collected from the Communications Manager.

Other documents that address the management of the other Cisco Unified Communications components are available. This document does not replace the Cisco Unified Service Monitor Manager user guide, which is available on Cisco.com at: [http://www.cisco.com/en/US/products/ps6535/tsd\\_products\\_support\\_maintain\\_and\\_operate.html](http://www.cisco.com/en/US/products/ps6535/tsd_products_support_maintain_and_operate.html)

In addition, you will find the best practice document for deployment topics such as initial device setup, installation guidelines, server sizing, and so on, at: [http://www.cisco.com/en/US/products/ps6536/prod\\_white\\_papers\\_list.html](http://www.cisco.com/en/US/products/ps6536/prod_white_papers_list.html)

## Solution Overview

Service Monitor and Service Statistics Manager are monitoring applications that are part of the Unified Communications Management Suite.

Service Monitor is designed to alert/report on end user experience from various data sources in the network such as the Cisco 1040, Communications Manager and Network Analysis Module. Enhanced thresholds and reporting enables Service Monitor users to identify network points that contribute to voice degradation thus enabling quicker troubleshooting for problem resolution.

Service Statistics Manager is designed for long term reporting and trend analysis for performance management of Unified Communications network managed by Operations Manager and Service Monitor. Users can also generate detailed reports on call classification based on the call detail record

Service monitor is tightly integrated with Cisco Unified Service Statistics Manager. CUSM provides call information to CUSSM for long term trending and reporting purposes. This information is provided in the form of CDR and CMR records.

## Call Classification - What is New in Service Monitor 2.3 and Service Statistic Manager 1.3

Service Statistics Manager provides detailed reports on call classification based on the call detail record to enable administrators identify various call patterns based on the UC dial plan. Call classification allows system administrators to understand the types of calls made by the users to provide them guidance on the usage pattern of the UC infrastructure. Call types including Local, International, Conference, etc. are useful to understand the usage patterns related to the network bandwidth used as well as to monitor the overall call activity. The system administrator uses such reports to communicate to the management on the usage as well as to request expansion based on usage.

There are known limitations in the way Service Statistics Manager classifies calls in its 1.2 and earlier versions. Since CUSM provides call information (CDR) to CUSSM for long term trending and reporting purposes, it makes sense to move the call classification configuration and call classification logic into Service Monitor to enable Service Statistics Manager a pure reporting product. Hence the below changes are made in Service Monitor 2.3 and Service Statistics Manager 1.3:

- Dial plan configuration user interface is no longer available in Service Statistics Manager 1.3
- User shall setup call classifications in Service Monitor 2.3
- Service Monitor 2.3 provides call classification data for Service Statistics Manager 1.3 reporting
- Service Monitor 2.3 also includes on demand short term CDR reports. These reports will enable users to view individual calls that fall under certain type(s) of calls.

- Service Monitor CDR reports are used for troubleshooting purposes and Service Statistics Manager reports are used for long term and capacity planning.

**Note:**

There is no mechanism for Service Monitor 2.3 to inherit the dial plan setup defined in Service Statistics Manager 1.0, 1.1, 1.2. User need to manually recreate the call classification in Service Monitor 2.3. Before you upgrade Service Statistics Manager to 1.3, consider making a record of the dial plans, gateway codes, toll-free numbers, and service numbers that you would like to configure in Service Monitor 2.3. Before you recreate the call classification in Service Monitor 2.3, please review the below sections and keep the below differences in mind:

- Call category types and names used in Service Monitor are different from those used previously in Service Statistics Manager.
- Dial plans are assigned on a per cluster basis in Service Monitor.
- Toll-free numbers and service numbers are configured in each dial plan in Service Monitor. (You can configure a service number in Service Monitor as a dial pattern that you assign to the Service category.)

### Understanding Call Classification in Service Monitor 2.3

For the users who defined dial plan in Service Statistics Manager prior to 1.3 and need to recreate dial plan in Service Monitor 2.3, please be aware the below deferences:

Service Monitor categorizes calls using System-defined Categories and User-defined Categories. A call might belong to multiple call categories. For example, an outgoing call through a voice gateway is categorized into the VG/Trunk-Outgoing system-defined category. The same call could also be categorized as a Long Distance call. If so, Service Monitor includes the call in both categories. When you view data for such a call in the CDR Call report, all applicable call categories are listed in the report.

### Understanding How Service Monitor 2.3 Places a call into System-defined Categories

Service Monitor determines whether a call fits in system-defined categories by analyzing CDRs and other Unified Communications Manager data, such as the following:

- The device types of the source and target endpoints.
- The direction of the call: incoming or outgoing.
- The protocol: H.323, MGCP, or SIP.

Table 1 below lists system-defined call category types and names, and describes the calls included in the category type.

**Table 1.** System-Defined Call Categories in Service Monitor 2.3

Category Type	Description	Category Name
<b>Voicemail</b>	Calls to or from voicemail.	Unity Voicemail - Calls fall in this category if any of the source or destination device type is a Unity or Unity Connection.
<b>Conference</b>	Calls to or from a conferencing system	Conference Bridge - Calls fall in this category if any of the source or destination device type is a conference bridge.
<b>ICT</b>	Calls to or from an intercluster trunk (ICT).	<ul style="list-style-type: none"> <li>• ICT GK Controlled - ICT calls that are gatekeeper controlled</li> <li>• ICT Non-GK Controlled - ICT calls that are not gatekeeper controlled</li> </ul> Calls fall under this category if any of the source or destination device type is InterCluster Trunk

Category Type	Description	Category Name
<b>VG/Trunk-Outgoing</b>	Calls to a voice gateway or a trunk; only OffNet calls are included.	<ul style="list-style-type: none"> <li>• MGCP Gateway Outgoing - Calls to an MGCP voice gateway</li> <li>• H.323 Gateway Outgoing - Calls to an H.323 voice gateway</li> <li>• H.323 Trunk Outgoing - Calls to an H.323 trunk</li> <li>• SIP Trunk Outgoing - Calls to a SIP trunk</li> </ul> Calls fall under this category if destination device type indicates a Voice Gateway or a trunk and the configuration of that gateway or trunk in CM is 'Offnet'
<b>VG/Trunk-Incoming</b>	Calls from a voice gateway or a trunk; only OffNet calls are included.	<ul style="list-style-type: none"> <li>• MGCP Gateway Incoming - Calls from an MGCP voice gateway</li> <li>• H.323 Gateway Incoming - Calls from an H.323 voice gateway</li> <li>• H.323 Trunk Incoming - Calls from an H.323 trunk</li> <li>• SIP Trunk Incoming - Calls from a SIP trunk</li> </ul> Calls fall under this category if source device type indicates a Voice Gateway or a trunk and the configuration of that gateway or trunk in CM is 'Offnet'.
<b>Tandem</b>	A tandem call occurs when both endpoints are voice gateways or trunks.	Tandem
<b>OnNet Trunk</b>	Calls where one endpoint is a trunk and the call is not an OffNet call. For example, the trunk could be used to connect to WebEx or to a PBX.	<ul style="list-style-type: none"> <li>• OnNet H.323 Trunk</li> <li>• OnNet SIP Trunk</li> </ul>
<b>Internal</b>	Calls that do not fall into any of the above categories. For example, calls where one endpoint is an IP phone and the other endpoint is a voice gateway and the call is not an OffNet call.	Internal
<b>Unknown</b>	For system-related reasons, Service Monitor could not determine the device type of the endpoints.	Unknown

### Understanding How Service Monitor Places a Call under User-defined Categories

Service Monitor evaluates whether a call belongs in a user-defined call category, provided that:

- The call has already been categorized as an Internal or VG/Trunk-Outgoing call
- A user-defined dial plan is assigned to the cluster in which the call occurred

The following category types are available for creating custom categories

- Emergency
- Service
- Toll Free
- Local
- Long distance
- International
- Voicemail
- Conference

For each of the pre-defined user categories (Emergency, Service, Toll Free, Local, Long distance, International), the category type is the same as the default category name. Apart from the pre-defined user categories, two more category types are available for creating new custom categories. Those are

- Voicemail: to account for calls to legacy Voice mail system
- Conference: to account for conferences which are scheduled like meet-me conference, Web-Ex or Meeting place conference

No default call category names are defined for Voicemail and Conference. To use these call category types for user-defined categories, you must add call category names to them. For example, users can create a custom category 'Octel Voice mail' and assign it a category type of 'Voicemail', or create a category 'Calls to WebEx' with a category type of Conference.

These category types are not only useful for creating custom categories but they also help the system determine which dial pattern matches should be applied to source directory numbers and which to the destination directory numbers.

The dial pattern match will be applied to the calls classified under system category 'VG outgoing', 'Internal' and 'OnNet Trunk'

All dial pattern (with any category tag) match will be applied to the destination directory number for VG or Trunk Outgoing calls. Only the dial pattern with category tags 'Voicemail' and 'Conference' will be applied to the source directory numbers for VG or Trunk Outgoing calls.

For Internal calls and OnNet Trunks calls, only the dial pattern with category tags 'Voicemail' and 'Conference' will be applied, and to both the source and destination directory numbers.

### Understanding OffNet and OnNet Calls

A call is considered to be OffNet when at least one endpoint is a gateway or a trunk and when any of the following is also true of the endpoint:

- The Call Classification parameter is set to Offnet in the gateway configuration - or the trunk configuration - in Unified Communications Manager (Administration).
- In Unified Communications Manager, both of the following are true:
  - Call Classification parameter is set to System Default in the gateway or trunk configuration.
  - System Default service parameter is set to Offnet.
- The endpoint is an analog gateway.

Any call that does not meet the criteria for an OffNet call is considered to be an OnNet call.

#### Note:

- The correctness of call classification depends on CM administrator correctly configuring the call class (Offnet/Onnet) for VGs and trunk on the CM configuration page. There is a chance that the CM administrator does not pay attention to this configuration parameter, and just chooses the default values which may not be the correct value. In such scenarios, the calls may get classified incorrectly till the misconfiguration is corrected.
- All ICT calls will be classified as OnNet call

### Configuring Call Classification in Service Monitor 2.3

To configure call classification, perform the following tasks:

- Configure at least one dial plan.
- Assign a dial plan to each cluster.
- Configure gateway codes.

## Configuring User-Defined Dial Plans

A dial plan includes a set of dial patterns. A dial pattern identifies a call category name and type and specifies the rule or pattern that a directory number must match for the call to be included in the category. A dial pattern is assigned with a priority so only one call category is applied from a user-defined dial plan.

Service Monitor 2.3 provides a default dial plan as a starting point from which you can define your own dial plans. The default dial plan includes default dial patterns: call category names, types, and rules. For more information on default dial plan, see Understanding the default Dial Plan section on User Guide for Cisco Unified Service monitor 2.3.

To configure a user-defined dial plan, click **Add** under **Configuration** → **Call Classification** → **Dial Plan Configuration**, which opens the default dial plan, after supplying **Dial Plan Name**, **Toll Free Number(s)**, and **Dial Patterns**, you can update the dial patterns by updating the call categories and add, modify, and delete the rules that are specified in the default dial plan. To update a dial pattern, click **Add** or **Edit** from the Add Dial Plan page and define the fields such as **Conditions**, **Number of Digits**, **Pattern**, and **Call Category Name**.

**Note:** You can also manage call category names by selecting **Configuration** > **Call Classification** > **Call Category**

Figure 1 below shows how to configure a user-defined dial plan with Service Monitor

**Figure 1.** Configure User-Defined Dial Plan with Service Monitor 2.3

The screenshot shows the 'Add Dial Plan' configuration page in the Cisco Unified Service Monitor web interface. The page has a navigation menu on the left with options like 'Dial Plan Configuration', 'Call Category', 'Dial Plan Assignment', and 'Gateway Code'. The main configuration area includes fields for 'Dial Plan Name' (set to 'New Dial Plan Name'), 'Number of Chars', 'Pattern', and 'Call Category Name'. Below these fields are 'OK', 'Cancel', and 'Help' buttons. On the right side, there is a table titled 'Add Dial Plan' showing existing dial patterns. The table has columns for 'Condition', 'No. of Chars', 'Pattern', 'Call Category', and 'Priority'. A red box highlights the 'Add' button at the bottom of the table.

	Condition	No. of Chars	Pattern	Call Category	Priority
1.	>	3	0111	International	1
2.	=	7	I	Local	2
3.	=	10	TI	Toll Free	3
4.	=	10	GI	Local	4
5.	=	10	I	Long Distance	5
6.	=	11	TI	Toll Free	6
7.	=	11	XGI	Local	7
8.	=	11	I	Long Distance	8

Toll-Free Number(s): (Use commas if multiple numbers)

Buttons: Add, Edit, Delete, OK, Apply, Cancel

Note: Click Apply to submit the change on the server.

## Assigning a User-Defined Dial Plan to a Cluster

Service Monitor 2.3 supports the Dial Plan configuration per cluster. You can assign the same dial plan to all clusters or assign a different dial plan to each cluster that has been added to Service Monitor. To

Assign a dial plan to a cluster, click **Dial Plan Assignment** under **Configuration** → **Call Classification**, select Dial Plan for each cluster and click **Update Dial Plan Assignment**.

## Configuring Gateway Codes

Service Monitor uses the gateway codes that you configure to determine the call classification for an external call: whether it is local or long distance. Gateway code is usually tied with area code. For example, if your gateway connects to local PSTN with area code 408, you can configure 408 as a gateway code for this gateway, then define a dial pattern such as “If the number of digits dialed is equal to 10 and the pattern is G!”. SM will look at the called device name (if it is this gateway), then look at the dialed number, if it matches with area code, it will classify this call as local. So in Service Monitor 2.3, gateway endpoint name is part of “G” pattern match

To configure Gateway code, select **Configuration > Call Classification > Gateway Code**. The Gateway Code Summary page opens, select a cluster and click **Manage Gateway Code**. If the gateways that you are interested in do not appear on the Manage Gateway Code page, click **Search** to search gateways by providing route group name, gateway name or area code as below:

- To find a specific gateway, enter the gateway name only.
- To find gateways that belong to a specific route group, enter the route group name only.
- To find all gateways on a cluster (this list can be long) leave all entry fields blank.
- To find all gateways for which a particular gateway code is already configured, enter a gateway code only.

After the gateways that match the search criteria are added to the table, select one or more gateways, enter codes, separated by commas, in the Gateway Code field, click **Apply** and then click **Close**. To review the gateways for which gateway codes are configured in Service Monitor, select clusters and click **View** on the Gateway Summary page to open a Gateway Code Configuration Report which displays the gateway names along with their gateway codes configured.

Figure 2 below shows how to configure gateway codes with Service Monitor

**Figure 2.** Configure Gateway Codes with Service Monitor 2.3

The screenshot shows the Cisco Unified Service Monitor interface. The top navigation bar includes 'Reports', 'Configuration', 'Thresholds', and 'Administration'. The 'Configuration' tab is selected, and the breadcrumb trail is 'You Are Here > Configuration > Call Classification > Gateway Code'. On the left, a 'TOC' (Table of Contents) lists 'Dial Plan Configuration', 'Call Category', 'Dial Plan Assignment', and 'Gateway Code'. The main area is divided into 'Search Criteria' and 'Manage Gateway Code'. The 'Search Criteria' section has fields for 'Cluster Name' (COM-RTP-4XX), 'Route Group', 'Gateway Name', and 'Gateway Code', with 'Search' and 'Cancel' buttons. The 'Manage Gateway Code' section has a 'Cluster ID' field (COM-RTP-4XX) and a 'Gateway Code' field, with a 'Search' button highlighted by a red box and an 'Apply' button. Below the search fields, a table shows 'Filtered by: Configured Gateway' with 4 records. The table has columns for 'Gateway Name', 'Route Group', and 'Gateway Code'.

	Gateway Name	Route Group	Gateway Code
1.	10.91.127.152	WDM Backup PSTN	91,9011
2.	10.83.117.48	WSDC Backup PSTN	91,9011
3.	10.83.117.49	WSDC Primary PSTN	91,9011
4.	10.91.127.153	WDM Primary PSTN	91,9011



# Using CDR Call Reports in Service Monitor 2.3

Service Monitor 2.3 provides on demand short term CDR reports. These reports will enable users to view individual calls that fall under certain type(s) of calls for troubleshooting purposes. For example, for a SIP trunk deployment, you can use Service Monitor 2.3 to report failed SIP trunk calls, OnNet/OffNet SIP trunk calls and Incoming/Outgoing SIP trunk calls.

To generate a CDR Call Reports, one can click **Generate Report** after defining the “CDR Call Report Filter” under **Reports → CDR Call Reports**

**Figure 3.** Generating CDR Call Report in Service Monitor 2.3

The screenshot shows the 'CDR Call Report Filter' configuration page in the Cisco Service Monitor 2.3 interface. The page includes the following sections:

- CDR Call Report Filter**: A section with various filter options.
  - Call Between Endpoint 1**: A text field with a dropdown for 'DN' or 'P-Address (Example: 172.30.\*.\*)'.
  - and Endpoint 2**: A text field with a dropdown for 'DN' or 'P-Address (Example: 172.30.\*.\*)'.
  - Note**: A text area providing instructions for DN and P-Address searches.
  - Cluster ID(s)**: A text field with a dropdown for 'All'.
  - Call Category Names**: A text field with a dropdown for 'All'.
  - Source Device Type**: A text field with a dropdown for 'All'.
  - Destination Device Type**: A text field with a dropdown for 'All'.
  - Call Termination Type**: Radio buttons for 'Both', 'Success', and 'Failure'.
  - Termination Cause Code**: A dropdown menu.
  - Call Class**: Radio buttons for 'Both', 'On-Net', and 'Off-Net'.
  - Call Duration**: A range selector between 0 and 3600 seconds.
  - Call Termination Date and Time**: Radio buttons for 'Data For' (Last Hour) and 'Custom' (From/To date and time).
- Generate Report**: A button at the bottom right of the filter section.

**Figure 4.** CDR Call Report in Service Monitor 2.3

## ied Service Monitor

Tue 06-Apr-2010 20:14:56 EDT

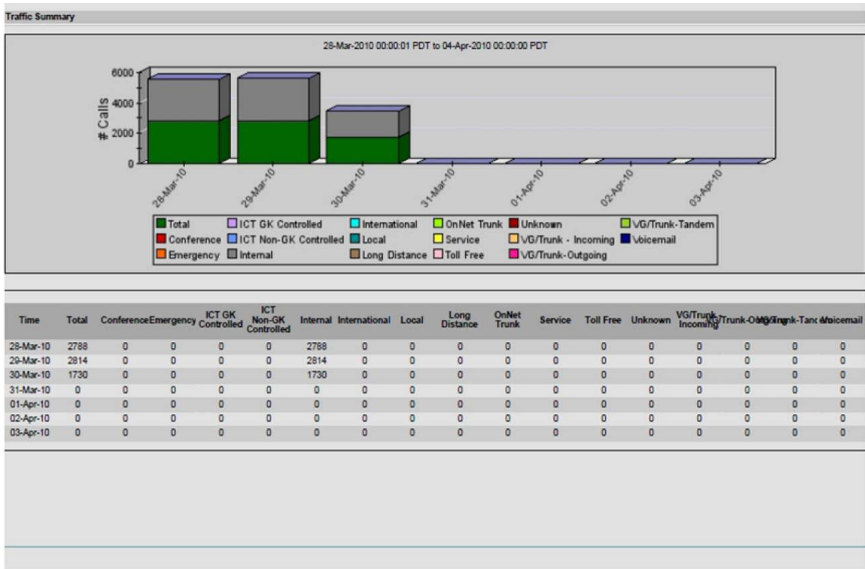
Caller			Called				Call Category Names	Call Category Types	Call Class	Call Disconnect Time	Call Duration (s)	Termination Type
Device Type	Device Name	Code	Directory Number	Signaling IP	Code	Device Type						
Cisco 7961	SEP0017595C0000 (COM-RTP-4XX)	0711Ulaw 64k	14088947127	171.70.121.14	0711Ulaw 64k	H.323 Trunk (Gatekeeper Controlled)	OK-tp5 RTP4-3X(COM-RTP-4XX)	OnNet H.323 Trunk/Trunk	OnNet	19:10:33 Tue 06-Apr-2010 EDT	393	Success
H.323 Gateway	10.88.170.2(COM-RTP-4XX)	0711Ulaw 64k	14088945000	72.163.36.143	0711Ulaw 64k	H.323 Trunk (Gatekeeper Controlled)	OK-tp5 RTP4-2X(COM-RTP-4XX)	H.323 Gateway Incoming,OnNet H.323 Trunk	OnNet	19:11:04 Tue 06-Apr-2010 EDT	76	Success
Cisco 7960	SEP0023393C0DAA (COM-RTP-4XX)	0711Ulaw 64k	19195740566	64.102.2.108	0711Ulaw 64k	H.323 Trunk (Gatekeeper Controlled)	OK-tp5 RTP4-3X(COM-RTP-4XX)	OnNet H.323 Trunk/Trunk	OnNet	19:11:08 Tue 06-Apr-2010 EDT	2	Success
H.323 Gateway	10.88.181.66(COM-RTP-4XX)	0729	14088945000	72.163.36.136	0711Ulaw 64k	H.323 Trunk (Gatekeeper Controlled)	OK-tp5 RTP4-4X(COM-RTP-4XX)	H.323 Gateway Incoming,OnNet H.323 Trunk	OnNet	19:11:16 Tue 06-Apr-2010 EDT	610	Success
H.323 Gateway	10.82.66.81(COM-RTP-4XX)	0711Ulaw 64k	14088945008	171.70.121.13	0711Ulaw 64k	H.323 Trunk (Gatekeeper Controlled)	OK-tp5 RTP4-3X(COM-RTP-4XX)	OnNet H.323 Trunk/Trunk	OnNet	19:11:50 Tue 06-Apr-2010 EDT	857	Success
H.323 Gateway	10.91.120.194(COM-RTP-4XX)	0711Ulaw 64k	14088947131	171.70.121.14	0711Ulaw 64k	H.323 Trunk (Gatekeeper Controlled)	OK-tp5 RTP4-3X(COM-RTP-4XX)	H.323 Gateway Incoming,OnNet H.323 Trunk	OnNet	19:12:03 Tue 06-Apr-2010 EDT	236	Success
H.323 Gateway	10.88.170.2(COM-RTP-4XX)	0711Ulaw 64k	14088945000	72.163.36.139	0711Ulaw 64k	H.323 Trunk (Gatekeeper Controlled)	OK-tp5 RTP4-4X(COM-RTP-4XX)	H.323 Gateway Incoming,OnNet H.323 Trunk	OnNet	19:12:16 Tue 06-Apr-2010 EDT	47	Success
3 Cisco 7970	SEP0017595EA050 (COM-RTP-4XX)	0711Ulaw 64k	14085279420	171.70.112.219	0711Ulaw 64k	H.323 Trunk (Gatekeeper Controlled)	OK-tp5 RTP4-4X(COM-RTP-4XX)	OnNet H.323 Trunk/Trunk	OnNet	19:12:26 Tue 06-Apr-2010 EDT	111	Success
H.323 Gateway	10.82.66.81(COM-RTP-4XX)	0711Ulaw 64k	14088942043	171.70.121.14	0711Ulaw 64k	H.323 Trunk (Gatekeeper Controlled)	OK-tp5 RTP4-4X(COM-RTP-4XX)	H.323 Gateway Incoming,OnNet H.323 Trunk	OnNet	19:12:32 Tue 06-Apr-2010 EDT	154	Success
H.323 Gateway	10.88.170.2(COM-RTP-4XX)	0711Ulaw 64k	14088945000	72.163.36.139	0711Ulaw 64k	H.323 Trunk (Gatekeeper Controlled)	OK-tp5 RTP4-2X(COM-RTP-4XX)	H.323 Gateway Incoming,OnNet H.323 Trunk	OnNet	19:12:37 Tue 06-Apr-2010 EDT	58	Success
H.323 Gateway	10.91.120.242(COM-RTP-4XX)	0711Ulaw 64k	14088943785	171.70.121.14	0711Ulaw 64k	H.323 Trunk (Gatekeeper Controlled)	OK-tp5 RTP4-4X(COM-RTP-4XX)	H.323 Gateway Incoming,OnNet H.323 Trunk	OnNet	19:12:54 Tue 06-Apr-2010 EDT	61	Success
5 Cisco 7961G-GE	SEP001E4AF34ADB (COM-RTP-4XX)	0711Ulaw 64k	19152525391	171.70.112.214	0711Ulaw 64k	H.323 Trunk (Gatekeeper Controlled)	OK-tp5 RTP4-2X(COM-RTP-4XX)	OnNet H.323 Trunk/Trunk	OnNet	19:13:02 Tue 06-Apr-2010 EDT	539	Success
H.323 Gateway	10.90.128.101(COM-RTP-4XX)	0711Ulaw 64k	86958201	10.19.173.22	0711Ulaw 64k	Cisco 7970	SEP000F9F2D06DE (COM-RTP-4XX)	OnNet H.323 Trunk/Trunk	OnNet	19:13:12 Tue 06-Apr-2010 EDT	1191	Success
H.323 Gateway	10.88.170.2(COM-RTP-4XX)	0711Ulaw 64k	19195741104	64.102.20.28	0711Ulaw 64k	H.323 Trunk (Gatekeeper Controlled)	OK-tp5 RTP4-3X(COM-RTP-4XX)	H.323 Gateway Incoming,OnNet H.323 Trunk	OnNet	19:13:14 Tue 06-Apr-2010 EDT	11	Success

The 'Call Category Names' column in the report above contains a comma separated list of all the categories to which call belongs. The 'Termination Type' determines whether the call was a successful or a failed call. The columns are user configurable through the Column Selector tool.

### Using Call Traffic Reports in Service Statistics Manager 1.3

Service Statistics Manager provides Call Traffic reports for long term and capacity planning. To generate out-of-box daily traffic report, one can click **Traffic Summary- Day of week** under **Reports** Tab to understand the types of calls made by the users at system level. You can also define a customized traffic summary report to just include certain call categories for selected clusters.

**Figure 5.** Traffic Summary Report in Service Statistics Manager 1.3



**Note:**

- In upgrade scenario, call classification data from Service Statistics Manager 1.2 will be purged only after 3 month. It is suggested to use dialy/weekly report instead of during the first 3 month to get consistent data.

To view individual calls that fall under certain type(s) of calls, you can create Customer Graphs on Call Volume for selected call categories. Goto **Customer Graph**-> Select the Graph type-> Select the Group Filter->Select **Call Volume** -> Click **Next**-> Select Monitor Element-> Click **Apply**, then one can select one or a few call categories form the attributes listed and click Generate Graph after defining the other graphing options.

**Figure 6.** Call Volume Customized Graph- Call Categories Selection

**Cisco Unified Service Statistics Manager**  
A product from the Cisco Unified Communications Management Suite

Views Reports Custom Graphs SLA Administration

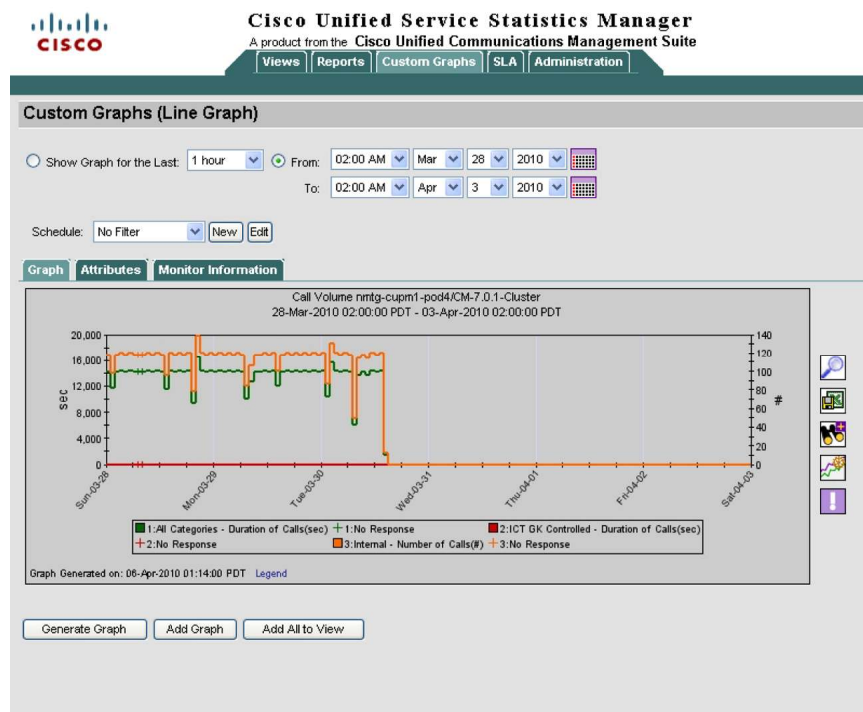
1. Call Volume nmtg-cupm1-pod4/CM-7.0.1-Cluster

device category	device name	instance name	source agent
Cluster	CM-7.0.1-Cluster	CM-7.0.1-Cluster	SSMServer

Attributes Choose a maximum of 12 attributes and 2 units of measure per graph:

<input checked="" type="checkbox"/> All Categories - Number of Failed Calls (#)	<input checked="" type="checkbox"/> All Categories - Number of Completed Calls (#)	<input checked="" type="checkbox"/> All Categories - Number of Calls (#)	<input checked="" type="checkbox"/> All Categories - Duration of Calls (sec)
<input checked="" type="checkbox"/> All Categories - Average Duration (sec)	<input type="checkbox"/> All Categories - Completion Rate (%)	<input type="checkbox"/> Availability (%)	<input type="checkbox"/> Conference - Average Duration (sec)
<input type="checkbox"/> Conference - Duration of Calls (sec)	<input type="checkbox"/> Conference - Number of Calls (#)	<input type="checkbox"/> Conference - Number of Completed Calls (#)	<input type="checkbox"/> Conference - Number of Failed Calls (#)
<input type="checkbox"/> Emergency - Average Duration (sec)	<input type="checkbox"/> Emergency - Number of Calls (#)	<input type="checkbox"/> Emergency - Number of Completed Calls (#)	<input type="checkbox"/> Emergency - Number of Failed Calls (#)
<input type="checkbox"/> Emergency - Number of Failed Calls (#)	<input type="checkbox"/> H.323 Gateway - Inbound Calls (#)	<input type="checkbox"/> H.323 Gateway - Outbound Calls (#)	<input type="checkbox"/> H.323 Gateway - Tandem Calls (#)
<input type="checkbox"/> ICT GK Controlled - Average Duration (sec)	<input type="checkbox"/> ICT GK Controlled - Duration of Calls (sec)	<input type="checkbox"/> ICT GK Controlled - Number of Calls (#)	<input type="checkbox"/> ICT GK Controlled - Number of Completed Calls (#)
<input type="checkbox"/> ICT GK Controlled - Number of Failed Calls (#)	<input type="checkbox"/> ICT Non-GK Controlled - Average Duration (sec)	<input type="checkbox"/> ICT Non-GK Controlled - Duration of Calls (sec)	<input type="checkbox"/> ICT Non-GK Controlled - Number of Calls (#)
<input type="checkbox"/> ICT Non-GK Controlled - Number of Completed Calls (#)	<input type="checkbox"/> ICT Non-GK Controlled - Number of Failed Calls (#)	<input type="checkbox"/> Internal - Average Duration (sec)	<input type="checkbox"/> Internal - Duration of Calls (sec)
<input type="checkbox"/> Internal - Number of Calls (#)	<input type="checkbox"/> Internal - Number of Completed Calls (#)	<input type="checkbox"/> Internal - Number of Failed Calls (#)	<input type="checkbox"/> International - Average Duration (sec)
<input type="checkbox"/> International - Duration of Calls (sec)	<input type="checkbox"/> International - Number of Calls (#)	<input type="checkbox"/> International - Number of Completed Calls (#)	<input type="checkbox"/> International - Number of Failed Calls (#)
<input type="checkbox"/> Local - Average Duration (sec)	<input type="checkbox"/> Local - Duration of Calls (sec)	<input type="checkbox"/> Local - Number of Calls (#)	<input type="checkbox"/> Local - Number of Completed Calls (#)
<input type="checkbox"/> Local - Number of Failed Calls (#)	<input type="checkbox"/> Long Distance - Average Duration (sec)	<input type="checkbox"/> Long Distance - Duration of Calls (sec)	<input type="checkbox"/> Long Distance - Number of Calls (#)
<input type="checkbox"/> Long Distance - Number of Completed Calls (#)	<input type="checkbox"/> Long Distance - Number of Failed Calls (#)	<input type="checkbox"/> MGCP Gateway - Inbound Calls (#)	<input type="checkbox"/> MGCP Gateway - Outbound Calls (#)
<input type="checkbox"/> MGCP Gateway - Tandem Calls (#)	<input type="checkbox"/> OnNet Trunk - Average Duration (sec)	<input type="checkbox"/> OnNet Trunk - Duration of Calls (sec)	<input type="checkbox"/> OnNet Trunk - Number of Calls (#)
<input type="checkbox"/> OnNet Trunk - Number of Completed Calls (#)	<input type="checkbox"/> OnNet Trunk - Number of Failed Calls (#)	<input type="checkbox"/> Service - Average Duration (sec)	<input type="checkbox"/> Service - Duration of Calls (sec)
<input type="checkbox"/> Service - Number of Calls (#)	<input type="checkbox"/> Service - Number of Completed Calls (#)	<input type="checkbox"/> Service - Number of Failed Calls (#)	<input type="checkbox"/> Toll Free - Average Duration (sec)
<input type="checkbox"/> Toll Free - Duration of Calls (sec)	<input type="checkbox"/> Toll Free - Number of Calls (#)	<input type="checkbox"/> Toll Free - Number of Completed Calls (#)	<input type="checkbox"/> Toll Free - Number of Failed Calls (#)
<input type="checkbox"/> Unknown - Average Duration (sec)	<input type="checkbox"/> Unknown - Duration of Calls (sec)	<input type="checkbox"/> Unknown - Number of Calls (#)	<input type="checkbox"/> Unknown - Number of Completed Calls (#)
<input type="checkbox"/> Unknown - Number of Failed Calls (#)	<input type="checkbox"/> VSI/Trunk-Incoming - Average Duration (sec)	<input type="checkbox"/> VSI/Trunk-Incoming - Duration of Calls (sec)	<input type="checkbox"/> VSI/Trunk-Incoming - Number of Calls (#)
<input type="checkbox"/> VSI/Trunk-Incoming - Number of Completed Calls (#)	<input type="checkbox"/> VSI/Trunk-Incoming - Number of Failed Calls (#)	<input type="checkbox"/> VSI/Trunk-Outgoing - Average Duration (sec)	<input type="checkbox"/> VSI/Trunk-Outgoing - Duration of Calls (sec)

**Figure 7.** Call Volume Customized Graph in Service Statistics Manager 1.3



**Note:**

- User-defined call category names do not appear in SSM for report generation and graph creation, but the data for them is aggregated and appears under the call category type in SSM.
- As Service Monitor is classifying calls into multiple categories, the total sum of calls in each category in SSM reports may be more than the total number of calls. This behavior is different from previous SSM behavior where the sum of calls under each category yields the total number of calls



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