



Understanding Common Service Faults

Service Impact Analysis (SIA) function is performed by Service Models defined within Prime Central for HCS-SV server. SV server however relies on event enrichment function which is performed primarily by CE server in conjunction with HCM-Fulfillment SDR. The following are the terms used in this chapter:

- **Service**—Voice/VoiceMail/Presence are types of services deployed by HCS customers.
- **Impact**—Service state could be Up/Down/Marginal. If the state is Marginal, it indicates that the service is at risk (for example, CUCM node goes down, phones register with standby node so service remains up but is considered at risk.) The Prime Central for HCS SIA takes the following into consideration:
 - The level of application-level redundancy deployed by customer and fault location. For example, customer-specific components as opposed to common components.
 - The initial service state. For example, the first VM failure could change the service state from UP to Marginal. Subsequent VM failure for same customer could change the service state from Marginal to Down if the initial problem is not addressed.
 - Service dependency. For example, VoiceMail and Presence services rely on Voice services provided by CUCM; so if Voice service goes Marginal/Down, it has the potential to affect VoiceMail and Presence services as well.
- **Scope**—Scope defines the level of impact for a single fault which could affect single device user/ location/ customer/multiple customers using same blade or chassis/Data Center. Prime Central for HCS SIA is currently limited to customer level. Support for further info such as Location, User, Device level are under consideration for future releases.

Table A-1 lists a few typical faults with associated impact and scope.

Table A-1 **Typical Faults in HCS System**

Type of fault	Services affected	Impact	Scope	Notes
Process failure	Related service hosted by VM with process failure	Marginal/Down	Customer	Deploy application level redundancy
VM failure	Related service hosted by affected VM	Marginal/Down	Customer	Deploy application level redundancy/ VMware HA to minimize impact

Table A-1 *Typical Faults in HCS System*

Type of fault	Services affected	Impact	Scope	Notes
Host failure	Related services hosted by all VMs deployed on host	Marginal/ Down	Multiple customers	Deploy VMware HA/distribute Apps for a given customer across different hosts to minimize impact
Blade failure	Related services hosted by all VMs deployed on host	Marginal / Down	Multiple customers	Deploy VMware HA/distribute Apps for a given customer across different to minimize impact
Chassis failure	Related services hosted by all VMs deployed on Chassis	Marginal / Down	Multiple customers	Deploy VMware HA cluster across multiple chassis to minimize impact
CPE router failure	All services on location	Marginal / Down	Customer Location (in a future release)	Deploy SRST/ redundant connectivity options -SIA not currently supported by Prime Central for HCS
WAN connectivity failure	All services on location	Marginal/ Down	Customer Location (in a future release)	Deploy SRST/ redundant connectivity options - SIA not currently supported by Prime Central for HCS
CUBE failure	Offnet services	Marginal/ Down	Multiple Customers	Deploy CUBE HA - SIA support is a in Prime Central for HCS 9.2.1

RCA Correlation Tree

This section explains the generic RCA correlation tree that applies to the failure of the scenarios listed below:

For example, when a UCS Chassis failure occurs, the UCS Chassis failure event is marked as the root cause. UCS Blade failure events correlate to the UCS Chassis failure events, ESXi host failure events correlate to UCS Blade failure events and so on.

Note that it takes a few minutes for the correlation tree to converge. This is because the correlation tree is computed and updated as events arrive. For example, if the VM failure event is seen first, before the ESXi host failure events, then the VM failure events are first marked as a root cause. When the ESXi host events are seen later, the ESXi host events are marked as root causes and the VM failure events are remarked as symptoms.

Common Failures

This section documents the use cases (UC) of events observed in Prime Central for HCS during common service faults.

There are many ways to trigger the same event. The exact events Prime Central for HCS received may vary depending on how the fault is triggered and on the environment. The examples below illustrate how to use Prime Central for HCS to identify root cause and/or service impact events for specified faults triggered. This section contains the following topics:

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- [UC5 - Application Cold Failure - CUCM, page A-17](#)
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UC1 - VMware ESXi Host Failure - CUCM

This use case describes the events that Prime Central for HCS receives if the VMware ESXi Host fails. This type of failure generates both Root Cause (RC) and Service Impact (SI) events. The CUCM VM is automatically brought up in another host if HA is enabled on the cluster. If HA is not configured for the cluster, CUCM nodes stay down until the ESXi host is recovered.

Observed RC-EL Events

When the ESXi host shuts down, many synthetic RCA events are observed, including VC_Host_Avblbty, VC_VM_Avblbty, UCS_BladeLinks, OM_CUCM_Redundancy, and OM_CUCM_Registration. Eventually, there is only one primary synthetic RCA event and VC_Host_Avblbty along with the following two events:

- OM_CUCM_Registration, which is triggered when the VM moves to the new ESXi Host.
- UCS_Bladelinks, which is a sibling event of VC_Host_Avblbty in the correlation tree.

Table A-2 *Observed Root Cause Events for UC1*

Severity	EventTypeID	Summary
Critical	VC_Host_Avblbty	Synthetic Event for VC_Host_Avblbty groupevents from 10.11.3.152
Warning	OM_CUCM_Regi stration	Synthetic Event for OM_CUCM_Registration group events from CUCM-CL-C071-1
Major	UCS_BladeLinks	Synthetic Event for UCS_BladeLinks group events from 10.11.2.8

Observed SI-EL Events

CUCM voice service impacts voice mail and presence.

Table A-3 *Observed Service Events for UC1*

Severity	Summary
Minor	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C071-1 is Marginal
Minor	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-CL-C071-1 is Marginal
Minor	Overall Attribute of the Customer_Voice_Service_Template tag of CUCM-CL-C071-1 is Marginal Observed Other Events Prime Central for HCS does not analyze these events, but they could point to potential

Observed Other-EL Events

Prime Central for HCS does not analyze these events, but they could point to potential root causes for the impacted services.

Table A-4 *Observed Other Events for UC 1*

Severity (s)/Customer (C)/ Node (N)	EventName (EN)/EventTypeID (ET)	Summary
<ul style="list-style-type: none"> S = Warning C = C071 N = CUCM-71-pub 	<ul style="list-style-type: none"> EN = KVM_VM_RestartOnAlt_Host_Cisco ET = VC_VM_Restored 	Virtual machine CUCM-71-pub was restarted on 10.11.3.148 since 10.11.3.152 failed. Message: KVM_VM_RestartOnAlt_Host_Cisco[(Event_Type=N"VmRestartedOnAlternateHostEvent" ON VM:cisco-10.11.3.148:ESX ON 30522010 (Event_Type=VmRestartedOnAlternateHostEvent)\]
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	Link Down (vethernet1060)

Table A-4 Observed Other Events for UC (continued)1

Severity (s)/Customer (C)/ Node (N)	EventName (EN)/EventTypeId (ET)	Summary
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	<ul style="list-style-type: none"> Network Interface (ifIndex = 486548517) Down, should be Up (ifEntry.486548517)
<ul style="list-style-type: none"> S = Major N = 10.11.2.9 	—	Link Down (vethernet1059)
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	Link Down (vethernet9254)
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	<ul style="list-style-type: none"> Network Interface (ifIndex = 486540323) Down, should be Up (ifEntry.486540323)
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	<ul style="list-style-type: none"> Network Interface (ifIndex = 503317541) Administratively Down (ifEntry.503317541)
<ul style="list-style-type: none"> S = Major N = 10.11.2.9 	—	Link Down (vethernet9253)
<ul style="list-style-type: none"> S = Minor N = 10.11.2.9 	—	<ul style="list-style-type: none"> Network Interface (ifIndex = 503317540) Administratively Down (ifEntry.503317540)
<ul style="list-style-type: none"> S = Major N = 10.11.2.9 	—	<ul style="list-style-type: none"> Network Interface (ifIndex = 486540322) Down, should be Up (ifEntry.486540322)
<ul style="list-style-type: none"> S = Major N = 10.11.2.9 	—	<ul style="list-style-type: none"> Network Interface (ifIndex = 486548516) Down, should be Up (ifEntry.486548516)
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	Link Down (Ethernet5/1/2)
<ul style="list-style-type: none"> S = Major N = 10.11.2.9 	—	<ul style="list-style-type: none"> Network Interface (ifIndex = 520355904) Down, should be Up (ifEntry.520355904)

Table A-4 Observed Other Events for UC (continued)¹

Severity (s)/Customer (C)/ Node (N)	EventName (EN)/EventTypeId (ET)	Summary
<ul style="list-style-type: none"> S = Major N = 10.11.2.9 	—	<ul style="list-style-type: none"> Link Down (Ethernet5/1/2)
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	<ul style="list-style-type: none"> Network Interface (ifIndex = 520355904) Down, should be Up (ifEntry.520355904)

Service Tree Event Overlay Location and Content

SIA events are overlaid on the Service Tree in the Service Availability view.

Table A-5 Observed Service Tree Events for UC¹

Location	Summary
... -> Voice Service	Meta event for Voice Service - C071
...-> Cluster_Availability--> Internode_Trunks	SDL Link Out Of Service::Component=192.6.4.124-192.6.4.123; Local Application ID= CCM; Remote Node ID= 1; Unique Link ID= 2:100:1:100; Remote Application IP Address= 192.6.4.123; Local Node ID= 2; Remote Application ID= CCM; Default Event Name= SDL Link Out Of Service; DescriptionURL= < >;
... -> CUCM-71-pub	PerformancePollingStopped::Component= cucm-71-pub.customer.com; Error Message String= 27-Jun-2012 16:23:59 EDT,cucm-71-pub.customer.com,192.6.4.123,Cannot collect data. The device is experiencing communication problems. Device may be in partially monitored state. Check HTTP(S) credentials.; Default Event Name= PerformancePollingStopped; DescriptionURL= < >;
... -> CUCM-71-pub	"DeviceRestarted::Component= cucm-71- pub.customer.com; Default Event Name= DeviceRestarted; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=DeviceRestarted >; "
... -> CUCM-71-sub	ServiceDown::Component= VS-cucm-71- sub.customer.com/Cisco DRF Local; ProductName= Cisco DRF Local; CurrentState= Stopped; Default Event Name= ServiceDown; DescriptionURL= < >;

Table A-5 Observed Service Tree Events for UC1 (continued)

Location	Summary
... -> CUCM-71-pub --> VM Resources	The virtual machine guest memory usage is high on CUCM-71-pub. Message: KVM_VM_Guest_Memory_Util_High[(Guest_Util>40) ON VM:cisco-10.11.3.148:ESX ON CUCM-71- pub (Guest_Util=75)]
... -> Call Control--> Registration	Number Of Registered MediaDevices Increased::Component=VE-CUCM-CLC071- 1-RTMTSyslog-Id#1340828781555; Detail= Number of registered Media Devices increased in consecutive polls. Current monitored precanned object has increased by 3 The alert is generated on Wed Jun 27 16:26:22 EDT 2012 on cluster CUCM-CL-C071-1.] ClusterID=: RTMT Alert; Default Event Name= Number Of Registered MediaDevices Increased; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine?tag=NumberOfRegisteredMediaDevicesIncreased >;

Next Steps

- Step 1** The VM on the host is automatically brought up in another host through HA.
- Step 2** The original host is brought back using the following steps:
- UCS Manager > Service Profiles > root > 862-10-c5b2 > Boot Server**
 - Troubleshoot and resolve the ESXi Host issue.
 - Drag and drop CUCM-71-pub from the host that it moved to back to ESXi Host (10.11.3.152).
 - Clear any alarms on the CUCM VM.

UC2 - VMware ESXi Host Failure - CUCxn

This use case describes the events that Prime Central for HCS receives if the VMware ESXi host fails. This type of incident generates both Root Cause (RC) and Service Impact (SI) events. The CUCxn VM is automatically brought up in another host if HA is enabled on the cluster. If HA is not configured for the cluster, CUCxn nodes stay down until the ESXi Host is recovered.

Observed RC-EL Events

When the ESXi host shuts down, numerous synthetic RCA events are observed, including VC_Host_Avblbty, VC_VM_Avblbty, UCS_BladeLinks, and OM_CUCxn_OM_Connectivity. Eventually, there is only one primary synthetic RCA event of VC_Host_Avblbty.

Table A-6 Observed Root Cause Events for UC2

Severity	EventTypeID	Summary
Critical	VC_Host_Avblbty	Synthetic Event for VC_Host_Avblbty group events from 10.11.3.152
Major	UCS_BladeLinks	Synthetic Event for UCS_BladeLinks group events from 10.11.2.8

Observed SI-EL Events

CUCxn voice mail service is impacted.

Table A-7 *Observed Service Events for UC2*

Severity	Summary
Minor	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C071-1 is Marginal.

Observed Other-EL Events

Prime Central for HCS does not analyze these events, but they could point to potential root causes for impacted services.

**Note**

10.11.2.8 and 10.11.2.9 are the IP addresses of UCS6140 side A and UCS6140 side B, respectively.

Table A-8 *Observed Other Events for UC2*

Severity (S)/Customer (C)/Node (N)	EventName (EN)/EventTypeId (ET)	Summary
<ul style="list-style-type: none"> S = Warning C = C071 N = CUCxn-71-pub 	<ul style="list-style-type: none"> EN = KVM_VM_RestartOnAlt_Host_Cisco ET = VC_VM_Restored 	Virtual machine CUCxn-71-pub was restarted on 10.11.3.141 since 10.11.3.152 failed. Message: KVM_VM_RestartOnAlt_Host_Cisco[(Event_Type=N"VmRestartedOnAlternateHostEvent" ON VM:cisco-10.11.3.141:ESX ON 31536476 (Event_Type=VmRestartedOnAlternateHostEvent)]
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	Link Down (vethernet1060)
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	Network Interface (ifIndex = 486540323) Down, should be Up (ifEntry.486540323)
<ul style="list-style-type: none"> S = Major N = 10.11.2.9 	—	Link Down (vethernet1059)
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	Link Down (vethernet9254)
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	Network Interface (ifIndex = 486540323) Down, should be Up (ifEntry.486540323)

Table A-8 *Observed Other Events for UC2 (continued)*

Severity (S)/Customer (C)/Node (N)	EventName (EN)/EventTypeId (ET)	Summary
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	Network Interface (ifIndex = 503317541) Administratively Down (ifEntry.503317541)
<ul style="list-style-type: none"> S = Major N = 10.11.2.9 	—	Link Down (vethernet9253)
<ul style="list-style-type: none"> S = Major N = 10.11.2.9 	—	Network Interface (ifIndex = 503317540) Administratively Down (ifEntry.503317540)
<ul style="list-style-type: none"> S = Major N = 10.11.2.9 	—	Network Interface (ifIndex = 486540322) Down, should be Up (ifEntry.486540322)
<ul style="list-style-type: none"> S = Major N = 10.11.2.9 	—	Network Interface (ifIndex = 486548516) Down, should be Up (ifEntry.486548516)
<ul style="list-style-type: none"> S = Major N = 10.11.2.9 	—	Link Down (Ethernet5/1/2)
<ul style="list-style-type: none"> S = Major N = 10.11.2.9 	—	Network Interface (ifIndex = 520355904) Down, should be Up (ifEntry.520355904)
<ul style="list-style-type: none"> S = Major N = 10.11.2.9 	—	Link Down (Ethernet5/1/2)
<ul style="list-style-type: none"> S = Major N = 10.11.2.9 	—	Network Interface (ifIndex = 520355904) Down, should be Up (ifEntry.520355904)

Service Tree Event Overlay Location and Content

SIA events are overlain on the Service Tree in the Service Availability view.

Table A-9 *Observed Service Tree Events for UC2*

Location	Summary
... -> CUCxn-71-pub	<p>PerformancePollingStopped::Component= cucxn-71-pub.customer.com; Error Message String= 06- Jul-2012 10:20:43 EDT,cucxn-71-pub.customer.com,192.6.4.125,Cannot collect data. The device returned no data from a required</p> <p>MIB.; Default Event Name= PerformancePollingStopped; DescriptionURL= < http://150.0.0.52:1741/ CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped >;</p>

Next Steps

-
- Step 1** The VM on the host is automatically brought up in another host through HA.
- Step 2** The original host is brought back via following steps:
- Select **UCS Manager > Service Profiles > root > 862-10-c5b2 > Boot Server**.
 - Troubleshoot and resolve the ESXi Host issue.
 - Drag and drop CUCxn-71-pub from the host that it moved to back to ESXi Host (10.11.3.152).
 - Clear any alarms on the CUCxn VM.
-

UC3 - UCS Blade Failure - CUCM

This fault generates both Root Cause (RC) and Service Impact (SI) events. The CUCM VM is automatically brought up in another host if HA is enabled on the cluster. If HA is not configured for the cluster, CUCM nodes stay down until the UCS blade is replaced.

Observed RC-EL Events

When the UCS blade fails, numerous synthetic RCA events are observed, including VC_Host_Avblbty, VC_VM_Avblbty, UCS_Blade_Avblbty, UCS_BladeLinks, and OM_CUCM_OM_Connectivity. Eventually, there is only one primary synthetic RCA event of UCS_Blade_Avblbty.

Table A-10 Observed Root Cause Events for UC3

Severity	EventTypeID	Summary
Critical	UCS_Blade_Avblbty	Synthetic Event for UCS_Blade_Avblbty group events from 10.11.2.10

Observed SI-EL Events

CUCM voice service impacts voice mail and presence.

Table A-11 Service Events observed for UC3 - UCS Blade Failure - CUCM

Severity	Summary
Minor	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-CL-C071-1 is Marginal.
Minor	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C071-1 is Marginal.
Minor	Overall Attribute of the Customer_Voice_Service_Template tag of CUCM-CL-C071-1 is Marginal.

Other Events Observed:

These events are not currently being analyzed by Prime Central for HCS but could point to potential root causes for the impacted services.

**Note**

10.11.2.8, 10.11.2.9, and 10.11.2.10 are the IP address of UCS6140 side A, UCS6140 side B, and UCSM, respectively.

Table A-12 Other Events Observed for UC3 - UCS Blade Failure - CUCM

Severity (S)/Customer (C)/Node (N)	EventName (EN)/EventTypeId (ET)	Summary
<ul style="list-style-type: none"> S = Warning C = C071 N = CUCM-71-pub 	<ul style="list-style-type: none"> EN = KVM_VM_RestartOnAlt_Host_Cisco ET = VC_VM_Restored 	Virtual machine CUCM-71-pub was restarted on 10.11.3.141 since 10.11.3.152 failed. Message: KVM_VM_RestartOnAlt_Host_Cisco \[(Event_Type=N"VmRestartedOnAlternateHostEvent" ON VM:cisco-10.11.3.141:ESX ON 31551556 (Event_Type=VmRestartedOnAlternateHostEvent) \]
<ul style="list-style-type: none"> S = Indeterminate N = 10.11.2.10 	<ul style="list-style-type: none"> EN = fltEquipmentFanPerfThresholdNonCritical ET = default 	Fan 2 in Fan Module 3/1-1 speed: upper-noncritical(FaultCode:fltEquipmentFanPerfThresholdNonCritical
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	Link Down (vethernet1060)
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	Link Down (vethernet1059)
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	Network Interface (ifIndex = 486540323) Down, should be Up (ifEntry.486540323)
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	Network Interface (ifIndex = 486548517) Down, should be Up (ifEntry.486548517)
<ul style="list-style-type: none"> S = Major N = 10.11.2.9 	—	Network Interface (ifIndex = 486548516) Down, should be Up (ifEntry.486548516)
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	Network Interface (ifIndex = 503317541) Administratively Down (ifEntry.503317541)
<ul style="list-style-type: none"> S = Major N = 10.11.2.9 	—	Network Interface (ifIndex = 503317540) Administratively Down (ifEntry.503317540)
<ul style="list-style-type: none"> S = Major N = 10.11.2.9 	—	Network Interface (ifIndex = 486540322) Down, should be Up (ifEntry.486540322)
<ul style="list-style-type: none"> S = Major N = 10.11.2.9 	—	Link Down (vethernet9253)
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	Link Down (vethernet9254)

Table A-12 Other Events Observed for UC3 - UCS Blade Failure - CUCM (continued) (continued)

Severity (S)/Customer (C)/Node (N)	EventName (EN)/EventTypeId (ET)	Summary
<ul style="list-style-type: none"> S = Major N = 10.11.2.9 	—	Network Interface (ifIndex = 520355904) Down, should be Up (ifEntry.520355904)
<ul style="list-style-type: none"> S = Major N = 10.11.2.9 	—	Link Down (Ethernet5/1/2)
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	Network Interface (ifIndex = 520355904) Down, should be Up (ifEntry.520355904)
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	Link Down (Ethernet5/1/2)

Service Tree Event Overlay Location and Content

SIA events are overlain on the Service Tree in the Service Availability view.

Table A-13 Service Tree events Observed for UC3 - UCS Blade Failure - CUCM

Location	Summary
... -> CUCM-71-pub	The virtual machine CUCM-71- pub running on host 10.11.3.152 is Disconnected. Message: KVM_VM_Disconnected_Cisco_HCM[(Event_Type=N"ON VM:cisco-10.11.3.152:ESX ON 31551544 (Event_Type=VmDisconnectedEvent)]
CUCxn-CL-C071-1 -> Voice Service	Meta event for Voice Service - C071
... -> CUCM-71-pub	PerformancePollingStopped::Component= cucm-71-pub.customer.com; Error Message String= 06-Jul-2012 14:47:59 EDT, cucm-71- pub.customer.com,192.6.4.123,Cannot collect data. The device is experiencing communication problems. Device may be in partially monitored state. Check HTTP(S) credentials.; Default Event Name= PerformancePollingStopped; DescriptionURL= < http://150.0.0.52:1741/ CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped >;
... -> Cluster_Availability--> Internode_Trunks	SDL Link Out Of Service::Component= 192.6.4.124-192.6.4.123; Local Application ID= CCM; Remote Node ID= 1; Unique Link ID= 2:100:1:100; Remote Application IP Address= 192.6.4.123; Local Node ID= 2; Remote Application ID= CCM; Default Event Name= SDL Link Out Of Service; DescriptionURL= < http://150.0.0.52:1741/ CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=SDLLinkOutOfService >;

Next Steps:

-
- Step 1** The VM on the host is automatically brought up in another host via HA.
- Step 2** The original host is brought back via following steps:
- Troubleshoot and resolve the blade issue.
 - ESXi Host (10.11.3.152) > Reconfigure for VMware HA.
 - Drag and drop CUCM-71-pub from the host that it moved to back to ESXi Host (10.11.3.152).
 - Clear any alarms on the CUCM VM.
-

UC4 - UCS Blade Failure - CUCxn

This use case describes the events that Prime Central for HCS receives if a UCS blade fails. This type of incident generates both Root Cause (RC) and Service Impact (SI) events. The CUCxn VM is automatically brought up in another host if HA is enabled on the cluster. If HA is not configured for the cluster, CUCM nodes stay down until the UCS blade is replaced.

Observed RC-EL Events

When the UCS blade fails, numerous synthetic RCA events are observed, including VC_Host_Avblbty, VC_VM_Avblbty, UCS_Blade_Avblbty, UCS_BladeLinks, and OM_CUCxn_OM_Connectivity. Eventually, there is only one primary synthetic RCA event of UCS_Blade_Avblbty.

Table A-14 Observed Root Cause Events for UC4

Severity	EventTypeID	Summary
Critical	UCS_Blade_Avblbty	Synthetic Event for UCS_Blade_Avblbty group events from 10.11.2.10

Observed SI-EL Events

CUCxn voice mail service is impacted.

Table A-15 Observed Service Events for UC4

Severity	Summary
Critical	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C071-1 is Marginal. (Flapping Threshold Exceeded: 5 >= 5, over the last 300 s(2012-07-06 13:56:16.000- >2012-07-06 14:01:16.000))

Observed Other-EL Events

Prime Central for HCS does not analyze these events, but they could point to potential root causes for the impacted services.



Note

10.11.2.8, 10.11.2.9, and 10.11.2.10 are UCS6140 side A, UCS6140 side B, and UCSM IP.

Table A-16 Observed Other Events for UC4

Severity (S)/Customer (C)/Node (N)	EventName (EN)/EventTypeId (ET)	Summary
<ul style="list-style-type: none"> S = Warning C = C071 N = CUCM-71-pub 	<ul style="list-style-type: none"> EN = KVM_VM_RestartOnAlt_Host_Cisco ET = VC_VM_Restored 	<p>Virtual machine CUCxn-71-pub was restarted on 10.11.3.141 since 10.11.3.152 failed. Message:</p> <p>KVM_VM_RestartOnAlt_Host_Cisco[(Event_Type=N"VmRestartedOnAlternateHostEvent" ON VM:cisco-10.11.3.141:ESX ON 31548751</p> <p>(Event_Type=VmRestartedOnAlternateHostEvent)]</p>
<ul style="list-style-type: none"> S = Indeterminate N = 10.11.2.10 	<ul style="list-style-type: none"> EN = fltAdaptorUnitAdaptorReachability ET = default 	<p>Adapter 5/2/1 is unreachable</p> <p>(FaultCode:fltAdaptorUnitAdaptorReachability,FaultIndex)</p>
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	<p>Network Interface (ifIndex = 503317541) Administratively Down (ifEntry.503317541)</p>
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	<p>Network Interface (ifIndex = 486548517) Down, should be Up (ifEntry.486548517)</p>
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	<p>Link Down (vethernet9254)</p>
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	<p>Network Interface (ifIndex = 486540323) Down, should be Up (ifEntry.486540323)</p>
<ul style="list-style-type: none"> S = Major N = 10.11.2.9 	—	<p>Network Interface (ifIndex = 486540322) Down, should be Up (ifEntry.486540322)</p>
<ul style="list-style-type: none"> S = Major N = 10.11.2.9 	—	<p>Link Down (vethernet1059)</p>
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	<p>Link Down (vethernet1060)</p>
<ul style="list-style-type: none"> S = Major N = 10.11.2.9 	—	<p>Link Down (vethernet9253)</p>
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	<p>Network Interface (ifIndex = 520355904) Down, should be Up (ifEntry.520355904)</p>
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	<p>Link Down (Ethernet5/1/2)</p>

Table A-16 Observed Other Events for UC4 (continued)

Severity (S)/Customer (C)/Node (N)	EventName (EN)/EventTypeld (ET)	Summary
<ul style="list-style-type: none"> S = Major N = 10.11.2.9 	—	Network Interface (ifIndex = 503317540) Administratively Down (ifEntry.503317540)
<ul style="list-style-type: none"> S = Major N = 10.11.2.9 	—	Network Interface (ifIndex = 486548516) Down, should be Up (ifEntry.486548516)
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	Network Interface (ifIndex = 520355904) Down, should be Up (ifEntry.520355904)
<ul style="list-style-type: none"> S = Major N = 10.11.2.8 	—	Link Down (Ethernet5/1/2)

Service Tree Event Overlay Location and Content

SIA events are overlain on the Service Tree in the Service Availability view.

Table A-17 Observed Service Tree events for UC4

Location	Summary
... -> CUCxn-71-pub	PerformancePollingStopped::Component= cucxn-71-pub.customer.com; Error Message String= 06- Jul-2012 13:59:59 EDT,cucxn-71-pub.customer.com,192.6.4.125, Cannot collect data. The device returned no data from a required MIB.; Default Event Name= PerformancePollingStopped; DescriptionURL= < http://150.0.0.52:1741/ CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped >;
...-> CUCxn-71-pub	Unresponsive::Component= cucxn-71-pub.customer.com; SystemObjectID= .1.3.6.1.4.1.9.1.1348; Description= Hardware:VMware, 1 Intel(R) Xeon(R) CPU X5680 @ 3.33GHz, 4096 MB Memory: Software:UCOS 5.0.0.0-2; DiscoveredFirstAt= 06-22-2012 11:32:41; Type= HOST; DisplayClassName= Host; SNMPAddress= 192.6.4.125; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 07-05-2012 18:07:05; Default Event Name= Unresponsive; DescriptionURL= < http://150.0.0.52:1741/ CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=Unresponsive>;

Next Steps

- Step 1** The VM on the host is automatically brought up in another host via HA.
- Step 2** The original host is brought back via following steps:
 - a. Troubleshoot and resolve the blade issue.
 - b. ESXi Host (10.11.3.152) > Reconfigure for VMware HA.

- c. Drag and drop CUCxn the host that it moved to back to ESXi Host (10.11.3.152).
- d. Clear any alarms on the CUCxn VM.

UC5 - Application Cold Failure - CUCM

This use case describes the events that Prime Central for HCS receives if a CUCM server restarts. This type of incident generates both Root Cause (RC) and Service Impact (SI) events.

Observed RC-EL Events

When the CUCM server restarts, numerous synthetic RCA events are observed, including OM_CUCM_Processes, OM_CUCM_TFTP_Processes, OM_CUCM_Endpt_Connectivity, and OM_CUCM_OM_Connectivity.

Eventually, there is only one primary synthetic RCA event of OM_CUCM_NodeRestart.

Table A-18 Observed Root Cause Events for UC5

Severity	EventTypeID	Summary
Warning	OM_CUCM_NodeRestart	DeviceRestarted::Component= cucm-71-pub.customer.com; Default Event Name= DeviceRestarted; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine?tag=DeviceRestarted >;

Observed SI-EL Events

CUCM voice service impacts voice mail and presence.

Table A-19 Observed Service Events for UC5

Severity	Summary
Minor	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C071-1 is Marginal
Minor	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-CL-C071-1 is Marginal.
Minor	Overall Attribute of the Customer_Voice_Service_Template tag of CUCM-CL-C071-1 is Marginal.

Observed Other-EL Events

None.

Service Tree Event Overlay Location and Content

SIA events are overlain on the Service Tree in the Service Availability view.

Table A-20 Service Tree events Observed for UC5 - Application Cold Failure - CUCM

Location	Summary
...-> Voice Service	Meta event for Voice Service - C071
... -> CUCM-71-pub	PerformancePollingStopped::Component= cucm-71-pub.customer.com; Error Message String= 16- Jul-2012 16:19:54 EDT,cucm-71-pub.customer.com,192.6.4.123,Cannot collect data. The device is experiencing communication problems. Device may be in partially monitored state. Check HTTP(S) credentials.; Default Event Name= PerformancePollingStopped; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped >;
... -> Cluster_Availability--> Internode_Trunks	SDL Link Out Of Service::Component= 192.6.4.124-192.6.4.123; Local Application ID= CCM; Remote Node ID= 1; Unique Link ID= 2:100:1:100; Remote Application IP Address= 192.6.4.123; Local Node ID= 2; Remote Application ID= CCM; Default Event Name= SDL Link Out Of Service; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=SDLLinkOutOfService >;

Next Steps

- A system restart automatically recovers.
- The event with the EventTypeId of OM_CUCM_NodeRestart will automatically clear in 60 minutes.

UC6 - Application Cold Failure - CUCxn

This use case describes the events that Prime Central for HCS receives if a CUCxn server restarts. This type of incident generates both Root Cause (RC) and Service Impact (SI) events.

Observed RC-EL Events

When the CUCxn server restarts, a synthetic RCA event of OM_CUCxn_OM_Connectivity is observed.

Table A-21 Observed Root Cause Events for UC6

Severity	EventTypeID	Summary
Critical	OM_CUCxn_OM_Connectivity	Synthetic Event for OM_CUCxn_OM_Connectivity group events from cucxn-71-pub.customer.com

Observed SI-EL Events

CUCxn voice mail service is impacted.

Table A-22 *Observed Service Events for UC6*

Severity	Summary
Minor	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C071-1 is Marginal.

Observed Other-EL Events

Prime Central for HCS does not analyze these events, but they could point to potential root causes for the impacted services.

Table A-23 *Observed Other Events for UC6*

Severity (S)/Customer (C)/Node (N)	EventName (EN)/EventTypeId (ET)	Summary
<ul style="list-style-type: none"> S = Warning C = C071 N = cucxn-71-pub.customer.com 	<ul style="list-style-type: none"> EN = AutoFailbackSucceeded ET = default 	AutoFailbackSucceeded::Component= 192.6.4.125-null; Detail= %1 : PEER_REBOOT
<ul style="list-style-type: none"> S = Warning C = C071 N = cucxn-71-pub.customer.com 	<ul style="list-style-type: none"> EN = DeviceRestarted ET = default CUST_C071_CLS_CUCXN_CUCx1 	DeviceRestarted::Component= cucxn-71-pub.customer.com; Default Event Name= DeviceRestarted; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine?tag=DeviceRestarted >;

Service Tree Event Overlay Location and Content

SIA events are overlaid on the Service Tree in the Service Availability view.

Table A-24 *Observed Service Tree events for UC7*

Location	Summary
... -> CUCM-71-pub	PerformancePollingStopped::Component= cucxn-71-pub.customer.com; Error Message String= 17- Jul-2012 08:51:50 EDT,cucxn-71-pub.customer.com,192.6.4.125,Cannot collect data. The device returned no data from a required MIB.; Default Event Name= PerformancePollingStopped; DescriptionURL= < http://150.0.0.52:1741/ CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine?tag=PerformancePollingStopped >;

Next Steps

- A system restart automatically recovers.
- The event with the EventTypeId of OM_CUCxn_OM_Connectivity will automatically when the issue clears on the server.
- Should there be a different type of OS failure, other recovery steps would be required.

UC7 - Changing the Number of Registered Gateways and Media Devices

This use case describes the events that the Prime Central for HCS dashboard displays if the number of registered gateways and media devices changes in the CUCM cluster. This type of incident generates both Root Cause (RC) and Service Impact (SI) events.

Observed RC-EL Events

Decreasing the number of registered gateways or media devices generates synthetic RCA events for OM_CUCM_Registration and OM_CUCM_Endpt_Connectivity. When the media device registers the event, OM_CUCM_Endpt_Connectivity is cleared. The raw events for OM_CUCM_Registration are Number Of Registered MediaDevices Decreased and Number Of Registered MediaDevices Increased.

Table A-25 *Observed Root Cause Events for UC7*

Severity	EventTypeId	Summary
Warning	OM_CUCM_Registration	Synthetic Event for OM_CUCM_Registration group events from CUCM-CL-C070-1
Critical	OM_CUCM_Endpt_Connectivity	Synthetic Event for OM_CUCM_Endpt_Connectivity group events from CUCM-CL-C070-1

Observed SI-EL Events

Changing in number of registered gateways and media devices may not impact voice mail and presence services, but Prime Central for HCS by default shows impact on voice mail and presence Services if voice service is impaired.

Table A-26 *Observed Service Events for UC7*

Severity	Summary
Minor	Overall Attribute of the Customer_Voice_Service_Template tag of CUCM-CL-C070-1 is Marginal.
Minor	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-CL-C070-1 is Marginal.
Minor	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C070-1 is Marginal.

Observed Other-EL Events

Prime Central for HCS does not analyze these events, but they point to potential root causes for impacted services. Currently, cluster-level events do not participate in RCA correlation. The raw event mapped to the cluster level EventTypeId OM_CUCM_Endpt_Connectivity is marked as unknown and does not

participate in any RCA and SIA. Therefore, OM_CUCM_Endpt_Connectivity raw event shows up in the Other-EL field. The raw event mapped to the cluster level EventTypeId OM_CUCM_Registration is marked as unknown and does not participate in RCA. But OM_CUCM_Registration does participate in SIA. Therefore, OM_CUCM_Registration raw event does not show up in the Other-EL field.

Table A-27 **Observed Other Events for UC7**

Severity (S)/Customer (C)/Node (N)	EventName (EN)/EventTypeId (ET)	Summary
<ul style="list-style-type: none"> S = Critical N = CUCM-CL-C070-1 	<ul style="list-style-type: none"> EN = EndPointLostContact ET = OM_CUCM_Endpt_Connectivity 	EndPointLostContact::Component= CUCM-CL-C070-1-CFB_2; EndPoint Name= CFB_2; EndPoint IPAddress= 200.1.1.11; EndPoint Status= UnRegistered; EndPoint Type= Conference Bridge; Device Pool= Default; CUCM Node= 192.6.4.116; Timestamp= 2012-07-18 13:36:50.326; Default Event Name= EndPointLostContact; DescriptionURL= <

Service Tree Event Overlay Location and Content

SIA events are overlaid on the Service Tree in the Service Availability view.

Table A-28 **Observed Service Tree Events for UC7**

Location	Summary
...->Call Control-->Registration	Number Of Registered MediaDevices Decreased::Component= VECUCM- CL-C070-1-RTMTSyslog- [Id#1342633009817]; Detail= Number of registered Media Devices decreased between consecutive polls. Current monitored precanned object has decreased by 1 The alert is generated on Wed Jul 18 13:37:19 EDT 2012 on cluster CUCM-CL-C070-1.][App ID=Cisco AMC Service][Cluster ID=][Node ID=CUCM-70-pub]; RTMT Alert; Default Event Name= Number Of Registered MediaDevices Decreased; DescriptionURL= < [http://150.0.0.52:1741/ CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine?tag=NumberOfRegisteredMediaDevicesDecreased] >;
...-> Voice Service	Meta event for Voice Service - C070

Next Steps

-
- Step 1** Right-click **Synthetic RC event > Show Contained Events** to display the corresponding raw events.
- Step 2** Right-click **Raw event > Event Details > Next Steps** to display the following recommendation:
Go to CUCM to verify the registration status of the reported end point. Verify that IPconnectivity exists between the cluster and the endpoint.
- Step 3** To clear this event, go to the **CUCM Administration page > Service Parameter** screen and set the Run Flag to True for the conference bridge.
-

UC8 - TFTP Server for UC Services - Critical Processes Failure

This use case describes the events that the Prime Central for HCS dashboard displays if critical processes such as TFTP service fail. In the UC environment, TFTP service is essential for new UC endpoints, which use TFTP to download code and register with CUCM servers.

Observed RC-EL Events

The TFTP process running on the CUCM Publisher system is forced to stop running.

Table A-29 *Observed Root Cause Events for UC8*

Severity	Summary
Critical	Synthetic Event for OM_CUCM_TFTP_Processes group events from cucm-81-pub.customer.com

Observed SI-EL Events

TFTP Service failure will not impact overall Voice service including voice mail and presence services. It affect only new endpoint which get stranded because unable to download the image for it to work.

Table A-30 *Observed Service Events for UC8*

Severity	Summary
Minor	Overall Attribute of the Customer_Voice_Service_Template tag of CUCM-CL-C081-1 is Marginal.
Minor	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-CL-C081-1 is Marginal.
Minor	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C081-1 is Marginal.

Observed Other-EL Events

None.

Service Tree Event Overlay Location and Content

SIA events are overlaid on the Service Tree in the Service Availability view.

Table A-31 Observed Service Tree Events for UC8

Location	Summary
...->TFTP_App	ServiceDown::Component= VScucm-81-pub.customer.com/ Cisco Tftp; ProductName= Cisco Tftp; CurrentState= Stopped; Default Event Name= ServiceDown; DescriptionURL= <http://150.0.0.52:1741/ CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine?tag=ServiceDown >;
...-> Voice Service	Meta event for Voice Service - C081

Next Steps

- Step 1** Right-click **Synthetic RC event** > **Show Contained Events** to display the corresponding raw events.
- Step 2** Right-click **Raw event** > **Event Details** > **Next Steps** to display the following recommendation:
Identify which services are not running. You can start the service manually from the Administrator Service Control page. To disable monitoring for a specific service, go to the Detailed Device View of the device, select the specific service, and change the managed state to False.
- Step 3** Check whether there are any core and service trace files. If they are available, then download them.

UC9 - Detecting and Correlating Customer Voice Quality Degradation

This use case describes what events dash board of Prime Central for HCS will show if voice quality degradation is detected using aggregated quality event generation per cluster. This type of incident generates only Service Impact (SI) events.

Observed RC-EL Events

None.

Observed SI-EL Events

Table A-32 Observed Service Events for UC9

Severity	Summary
Minor	Overall Attribute of the Customer_Voice_Service_Template tag of CUCM-CL-C072-1 is Marginal.

Table A-32 *Observed Service Events for UC9 (continued)*

Severity	Summary
Minor	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C072-1 is Marginal.
Minor	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-CL-C072-1 is Marginal.

Observed Other-EL Events

None.

Service Tree Event Overlay Location and Content**Table A-33** *Observed Service Tree Events for UC9*

Location	Summary
...-> Voice Service	Meta event for Voice Service - C072
...-> VoiceQuality	ServiceQualityThresholdCrossed::Component= Device Pool:devicepool3449; Source= Cisco Unified Operations Manager; Impacted Endpoints at the time event was raised= 1; Threshold Percentage at the time event was raised= 10.0; Registered Phone Count at the time event was raised= 1; Default Event Name= ServiceQualityThresholdCrossed; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine?tag=ServiceQualityThresholdCrossed >;

Next Steps

-
- Step 1** Go to CUOM/SM and generate a call quality report.
- Step 2** Check network for possible delay/jitter issues.
-

UC11 - VMware VM Failure - CUCM

This use case describes the events that the Prime Central for HCS dashboard displays if a VM fails abruptly. This type of incident generates both Root Cause (RC) and Service Impact (SI) events.

Observed RC-EL Events

When the VM shuts down, numerous synthetic RCA events are observed, including VC_VM_Avblbty, OM_CUCM_NodeRestart, OM_CUCM_Redundancy, and OM_CUCM_Endpt_Connectivity. The CUCM-C081-pub node generates an OM_CUCM_Redundancy event. This event should be treated as the root cause event for the CUCM publisher node because correlation between publisher and subscriber nodes (sibling correlation) is not currently supported.

Table A-34 *Observed Root Cause Events for UC11*

Severity	EventTypeID	Summary
Critical	VC_VM_Avblbty	Synthetic Event for VC_VM_Avblbty groupevents from CUCM-81-sub2
Critical	OM_CUCM_Endpt_Connectivity	Synthetic Event for OM_CUCM_Endpt_Connectivity group events from CUCM-CL-C081-1
Critical	OM_CUCM_Redundancy	Synthetic Event for OM_CUCM_Redundancy group events from cucm-81-tftp.customer.com
Critical	OM_CUCM_Redundancy	Synthetic Event for OM_CUCM_Redundancy group events from cucm-81-pub.customer.com
Critical	OM_CUCM_Redundancy	Synthetic Event for OM_CUCM_Redundancy group events from cucm-81-sub1.customer.com

Observed SI-EL Events**Table A-35** *Observed Service Events for UC11*

Severity	Summary
Minor	Overall Attribute of the Customer_Voice_Service_Template tag of CUCM-CL-C081-1 is Marginal.
Minor	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-CL-C081-1 is Marginal.
Minor	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C081-1 is Marginal.

Observed Other-EL Events

Prime Central for HCS does not analyze these events, but they could point to potential root causes for impacted services.

Table A-36 Observed Other Events for UC11

Severity (S)/Customer (C)/Node (N)	EventName (EN)/EventTypeId (ET)	Summary
<ul style="list-style-type: none"> S = Critical C = C081 N = CUCM-CLC081-1 	<ul style="list-style-type: none"> EN = DBReplicationFailure ET = OM_CUCM_BackupRestore 	DBReplicationFailure::Component= VECUCM-CL-C081-1; CallManagerList= 192.6.4.195,192.6.4.202,192.6.4.197,192.6.4.196 ; ReplicationStatus= Replication is bad in the cluster; CustomerName= C081; Default Event Name= DBReplicationFailure; DescriptionURL= < [http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine?tag=DBReplicationFailure] >;
<ul style="list-style-type: none"> S = Critical C = C081 N = CUCM-CLC081-1 	<ul style="list-style-type: none"> EN = EndPointLostContact ET = OM_CUCM_Endpt_Connectivity 	EndPointLostContact::Component= CUCM-CL-C081-1-MTP_6; EndPoint Name= MTP_6; EndPoint IPAddress= 200.1.1.17; EndPoint Status= UnRegistered; EndPoint Type= Media Termination Point; Device Pool= Default; CUCM Node= 192.6.4.195; Timestamp= 2012-06-25 17:38:06.634; Default Event Name= EndPointLostContact; DescriptionURL= < [http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine?tag=EndPointLostContact] >;
Critical	OM_CUCM_Redundancy	Synthetic Event for OM_CUCM_Redundancy group events from cucm-81-tftp.customer.com
Critical	OM_CUCM_Redundancy	Synthetic Event for OM_CUCM_Redundancy group events from cucm-81-pub.customer.com
Critical	OM_CUCM_Redundancy	Synthetic Event for OM_CUCM_Redundancy group events from cucm-81-sub1.customer.com

Service Tree Event Overlay Location and Content

SIA events are overlaid on the Service Tree in the Service Availability view. Table 19-36 shows service tree events observed during testing.

Table A-37 Observed Service Tree Events for UC11

Location	Summary
...-> Cluster_Availability --> Internode_Trunks	SDL Link Out Of Service::Component= 192.6.4.195-192.6.4.197; Local Application ID= CCM; Remote Node ID= 5; Unique Link ID= 1:100:5:100; Remote Application IP Address= 192.6.4.197; Local Node ID= 1; Remote Application ID= CCM; Default Event Name= SDL Link Out Of Service; DescriptionURL= < [http://150.0.0.52:1741/ CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=SDLLinkOutOfService] >;
...-> CUCM-81-sub2 --> VM Availability	The virtual machine CUCM-81-sub2 running on 10.11.3.147 is offline. Message: KVM_VM_Powered_Off_Cisco_HCM[(Event_Type=N"ON VM:cisco-10.11.3.147:ESX ON 30374781 (Event_Type=VmPoweredOffEvent)]
...-> CUCM-81-pub --> VM Resources	Alarm "Virtual Machine Disk Latency High" on CUCM-81-sub2 changed from Green to Gray. Message: KVM_VM_Disk_Latency[(Event_Type=N"AlarmStatusChangedEvent" AND Event_TextLIKEN"Virtual*Machine*Disk*Latency" ON VM:cisco-10.11.3.147:ESX ON 30374777 (Event_Type=AlarmStatusChangedEvent Event_Text=Alarm "Virtual Machine Disk Latency High" on CUCM-81-sub2 changed from Green to Gray)]
...-> Cluster_Availability --> Sub: CUCM-81-sub2	Unresponsive::Component= cucm-81-sub2.customer.com; SystemObjectID= .1.3.6.1.4.1.9.1.1348; Description= Linux release:2.6.18-194.26.1.el5PAE machine:i686; DiscoveredFirstAt= 06-22-2012 16:43:59; Type= HOST; DisplayClassName= Host; SNMPAddress= 192.6.4.197; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 06-24-2012 18:06:21; Default Event Name= Unresponsive; DescriptionURL= < [http://150.0.0.52:1741/ CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=Unresponsive] >;
...-> Cluster_Availability --> Sub: CUCM-81-sub2	PerformancePollingStopped::Component= cucm-81-sub2.customer.com; Error Message String= 25- Jun-2012 17:39:58 EDT,cucm-81- sub2.customer.com,192.6.4.197, Cannot collect data. The device is experiencing communication problems. Device may be in partially monitored state. Check HTTP(S) credentials.; Default Event Name= PerformancePollingStopped; DescriptionURL= < [http://150.0.0.52:1741/ CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped] >;
...-> Voice Service	Meta event for Voice Service - C081

Next Steps

-
- Step 1** Right-click **Synthetic RC event > Show Contained Events** to display the corresponding raw events.
- Step 2** Right-click the **Raw event > Event Details > Next Steps** to display the following recommendation:
Go to CUCM to verify the registration status of the reported endpoint.
- Step 3** Verify whether IP connectivity exists between the cluster and endpoints.
-

UC12 - CUCM Clustering Problems

This use case describes the events that the Prime Central for HCS dashboard displays for CUCM clustering issues, such as a server running a different version of software and database replication issues in the cluster. Prime Central for HCS generates Root Cause (RC) and Service Impact (SI) events for such incidents.

Such problems impair CUCM cluster performance as call processing nodes, so immediate attention is needed to fix these issues.

Observed RC-EL Events

When CUCM Publisher is brought up with old version of software when the Subscriber nodes run a newer software version, many synthetic RCA events will be noticed, including OM_CUCM_Processes, OM_CUCM_NodeRestart, and OM_CUCM_Redundancy as follows.

Table A-38 Observed Root Cause Events for UC12

Severity	EventTypeId	Summary
Critical	OM_CUCM_Processes	Synthetic Event for OM_CUCM_Processes group events from cucm-70-sub.customer.com.
Warning	OM_CUCM_Redundancy	Synthetic Event for OM_CUCM_Redundancy group events from CUCM-CL-C070-1
Warning	OM_CUCM_Registration	Synthetic Event for OM_CUCM_Registration group events from CUCM-CL-C070-1
Critical	OM_CUCM_Redundancy	Synthetic Event for OM_CUCM_Redundancy group events from cucm-70-pub.customer.com
Warning	OM_CUCM_NodeRestart	Synthetic Event for OM_CUCM_NodeRestart group events from cucm-70-pub.customer.com

Observed SI-EL Events

CUCM voice service impacted voice mail and presence. Table 19-38 shows Service Events observed during testing

Table A-39 **Observed Service Events for UC12**

Severity	Summary
Minor	Overall Attribute of the Customer_Voice_Service_Template tag of CUCM-CL-C070-1 is Marginal.
Minor	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-CL-C070-1 is Marginal.
Minor	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C070-1 is Marginal.

Observed Other-EL Events

Prime Central for HCS does not analyze these events, but they could point to potential root causes for impacted services.

Table A-40 **Observed Other Events for UC12**

Severity (s)/Customer (C)/Node (N)	EventName (EN)/EventTypeId (ET)	Summary
<ul style="list-style-type: none"> S = Critical C = C070 N = CUCM-CLC070-1 	<ul style="list-style-type: none"> EN = DBReplicationFailure ET = OM_CUCM_BackupRestore 	DBReplicationFailure::Component= VECUCM-CL-C070-1; CallManagerList= 192.6.4.116,192.6.4.117; ReplicationStatus= Replication is bad in the cluster; CustomerName= C070; Default Event Name= DBReplicationFailure; DescriptionURL= < [http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine?tag=DBReplicationFailure] >;
<ul style="list-style-type: none"> S = Warning C = C070 N = CUCM-CLC070-1 	<ul style="list-style-type: none"> EN = SystemVersionMismatched ET = OM_CUCM_Redundancy 	SystemVersionMismatched::Component= VE-CUCM-CL-C070-1; NodeVersionInformation= cucm-70-pub.customer.com(8.6.2.20000-2),cucm-70-sub.customer.com(8.6.2.21900-5); CustomerName= C070; Default Event Name= SystemVersionMismatched; DescriptionURL= < [http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine?tag=SystemVersionMismatched] >;

Service Tree Event Overlay Location and Content

SIA events are overlaid on the Service Tree in the Service Availability view.

Table A-41 Observed Service Tree events for UC12

Location	Summary
...-> Cluster_Availability --> Internode_Trunks	SDL Link Out Of Service::Component= 192.6.4.117-192.6.4.116; Local Application ID= CCM; Remote Node ID= 1; Unique Link ID= 2:100:1:100; Remote Application IP Address= 192.6.4.116; Local Node ID= 2; Remote Application ID= CCM; Default Event Name= SDL Link Out Of Service; DescriptionURL= < http://150.0.0.52:1741/ CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=SDLLinkOutOfService >;
...-> Cluster_Availability --> Internode_Trunks	SystemVersionMismatched::Component= VE-CUCM-CL-C070-1; NodeVersionInformation= cucm-70-pub.customer.com(8.6.2.20000-2),cucm-70-sub.customer.com(8.6.2.21900-5); CustomerName= C070; Default Event Name= SystemVersionMismatched; DescriptionURL= < http://150.0.0.52:1741/ CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=SystemVersionMismatched >;
...-> Voice Service	Meta event for Voice Service - C070

Next Steps

- Step 1** Right-click the **Synthetic RC event** > **Show Contained Events** to display the corresponding raw events.
- Step 2** Right-click the **Raw event** > **Event Details** > **Next Steps** to display the following recommendation:
- Investigate why the remote Communications Manager is not running or whether a network problem exists.
- Step 3** Correct the version issue by switching back to the original version.

UC13 - Change in Number of Registered Phones

This use case describes the events that the Prime Central for HCS dashboard displays if the number of registered phones in the cluster drops more than a configured percentage between consecutive polls. Prime Central for HCS generates Root Cause (RC) and Service Impact (SI) events for such incidents.

Observed RC-EL Events

When the number of registered phones decreases, only one synthetic RCA event, OM_CUCM_Registration, is observed.

Table A-42 Observed Root Cause Events for UC13

Location	EventTypeID	Summary
Warning	OM_CUCM_Registra tion	Synthetic Event for OM_CUCM_Registration group events from CUCM-CL-C072-1.

Observed SI-EL Events

CUCM voice service impacts presence and voice mail. Table 19-41 shows the Service Events observed 'during testing.

Table A-43 **Observed Service Events for UC13**

Location	Summary
Minor	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-CL-C072-1 is Marginal.
Minor	CUST_C072_CLS_CUCXN_CUCxn- CL-C072-1 Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C072-1 is Marginal.
Minor	CUST_C072_CLS_CUCM_CUCM-CLC072- Overall Attribute of the Customer_Voice_Service_Template tag of CUCM-CL-C072-1 is Marginal.

Observed Other-EL Events

None.

Service Tree Event Overlay Location and Content

Table A-44 **Observed Service Tree Events for UC13**

Location	Summary
...-> Call Control --> Registration	Number Of Registered Phones Dropped::Component= VECUCM-CL-C072-1-RTMTSyslog- [Id#1342640053391]; Detail= Number of registered phones in the cluster drop more than configured percentage between consecutive polls. Configured high threshold is 30%.
...-> Call Control --> Registration	PhoneUnregThresholdExceeded::Component= Device Pool:devicepool3449; Unreg Count= 1;Total Count= 1;Threshold In %= 10.0;ClusterName= CUCM-CL-C072-1;Device Pool= devicepool3449;Default Event Name= PhoneUnregThresholdExceeded; DescriptionURL= <
...-> Voice Service	Meta event for Voice Service - C072

Next Steps

- Step 1** Right-click the **Synthetic RC event > Show Contained Events** to display the corresponding raw events.
- Step 2** Right-click the **Raw event > Event Details > Next Steps** to display the following recommendation:
- Phone registration status must be monitored for sudden changes. If the registration status changes slightly and readjusts quickly over a short time frame, it could indicate a phone move, addition, or change. A sudden smaller drop in the phone registration counter could indicate a localized outage; for instance, an access switch or a WAN circuit outage or malfunction. A significant drop in registered phone level requires immediate attention from the administrator.
- Step 3** Register the phones to clear the event.

UC15 - CUCxn Critical Process Failure

This use case describes the events that the Prime Central for HCS dashboard displays if a critical process fails in CUCxn. Prime Central for HCS generates Root Cause (RC) and Service Impact (SI) events for such incidents.

Observed RC-EL Events

If a critical process is killed in voice mail service (CUCxn), only one synthetic RCA event, OM_CUCxn_processes, is generated.

Table A-45 *Observed Root Cause Events for UC15*

Severity	EventTypeID	Summary
Critical	OM_CUCxn_Processes	Synthetic Event for OM_CUCxn_Processes group events from cucxn-72-pub.customer.com

Observed SI-EL Events

Critical process failures impact voice mail service.

Table A-46 *Observed Service Events for UC15*

Severity	EventTypeID	Summary
Minor	CUST_C072_CLS_CUCXN_CUCxn-CL-C072-1	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C072-1 is Marginal.

Observed Other-EL Events

None.

Service Tree Event Overlay Location and Content

Table A-47 **Observed Service Tree Events for UC15**

Severity	Summary
Cluster Availability ->Pub-CUCxn-72-pub	ServiceDown::Component= VScucxn-72-pub.customer.com/ Connection Conversation Manager; ProductName= Connection Conversation Manager; CurrentState= Stopped; Default Event Name= ServiceDown;

Next Steps

-
- Step 1** Right-click the **Synthetic RC event> Show Contained Events** to display the corresponding raw events.
- Step 2** Right-click the **Raw event > Event Details> Next Steps** to display the following recommendation:
- Identify which services are not running. You can start the service manually from the Administrator Service Control page. To disable monitoring for a specific service, go to the device's Detailed Device View, select the specific service, and change the managed state to False. Check to see if there are any core files. Download the core files, if any, as well as service trace files. Events are removed for Unified CM only. You may need to manually clear these Unified CM events after your upgrade is complete.
- Step 3** Type the IP address in CUCxn and select **Cisco Unity connection service availability > Tools > Service management > Connection Conversation Manager** to start the service.
-

UC16 - VMware VM Failure - CUCxn

This use case describes the events that the Prime Central for HCS dashboard displays if a VM running CUCxn fails abruptly. Prime Central for HCS generates Root Cause (RC) and Service Impact (SI) events for such incidents.

Observed RC-EL Events

When the VM shuts down, numerous synthetic RCA events are observed, including VC_VM_Avblbty, OM_CUCM_NodeRestart, and OM_CUCM_OM_Connectivity. Eventually, Prime Central for HCS stabilizes to one root cause, VC_VM_Avblbty.

Table A-48 Observed Root Cause Events for UC16

Severity	EventTypeID	Summary
Critical	VC_VM_Avblbty	Synthetic Event for VC_VM_Avblbty group events from CUCxn-72-pub.

Observed SI-EL Events

VM failure impacts voice mail service.

Table A-49 Observed Service Events for UC16

Severity	Summary
Minor	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C072-1 is Marginal.

Observed Other-EL

None.

Service Tree Event Overlay Location and Content

SIA events are overlaid on the Service Tree in the Service Availability view.

Table A-50 **Observed Service Tree Events for UC16**

Location	Summary
...-> Cluster_Availability --> PUB:CUCXn-72-pub	PerformancePollingStopped::Component= cucxn-72-pub.customer.com; Error Message String= 06- Jul-2012 11:08:43 EDT,cucxn-72- pub.customer.com,192.6.4.132,Cannot collect data. The device returned no data from a required MIB.; Default Event Name= PerformancePollingStopped; DescriptionURL= < [http://150.0.0.52:1741/ CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped] >;
...-> Cluster_Availability --> PUB:CUCXn-72-pub	Unresponsive::Component= cucxn-72-pub.customer.com; SystemObjectID= .1.3.6.1.4.1.9.1.1348; Description= Hardware:VMware, 1 Intel(R) Xeon(R) CPU X5680 @ 3.33GHz, 4096 MB Memory: Software:UCOS 5.0.0.0-2; DiscoveredFirstAt= 06-22-2012 11:32:48; Type= HOST; DisplayClassName= Host; SNMPAddress= 192.6.4.132; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 07-05-2012 18:07:17; Default Event Name= Unresponsive; DescriptionURL= < [http://150.0.0.52:1741/ CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=Unresponsive] >;
...-> CUCXn-72-pub--> VM Availability	The virtual machine CUCXn-72-pub running on 10.11.3.148 is offline. Message: KVM_VM_Powered_Off_Cisco_HCM[(Event_Type=N"ON VM:cisco-10.11.3.148:ESX ON 31539282 (Event_Type=VmPoweredOffEvent)]

Next Steps

-
- Step 1** Right-click the **Synthetic RC event > Show Contained Events** to display the corresponding raw events.
- Step 2** Right-click the **Raw event > Event Details > Next Steps** to display the following recommendation:
- Check if the device is reachable from Unified Operations Manager.
-

UC17 - CUCXn Clustering Problems

This use case describes the events that the Prime Central for HCS dashboard displays for CUCXn clustering issues, such as a server running a different version of software and database replication issues in the cluster. Prime Central for HCS generates Root Cause (RC) and Service Impact (SI) events for such incidents.

Observed RC-EL Events

When there is a mismatch in CUCXn publisher and subscriber software versions, three Synthetic RCA events, OM_CUCXn_Redundancy, OM_CUCXn_Processes, and OM_CUCXn_Processes are observed.

Table A-51 *Observed Root Cause Events for UC17*

Severity	EventTypeID	Summary
Critical	OM_CUCxn_Redundancy	Synthetic Event for OM_CUCxn_Redundancy group events from cucxn-72-pub.customer.com
Critical	OM_CUCxn_Processes	Synthetic Event for OM_CUCxn_Processes group events from cucxn-72-sub.customer.com
Critical	OM_CUCxn_Processes	ServiceDown::Component= VS-cucxn-72-sub.customer.com/Connection Inbox RSS Feed; ProductName= Connection Inbox RSS Feed; CurrentState= Stopped; Default Event Name= ServiceDown; DescriptionURL= <

Observed SI-EL Events

Version mismatch impacts Voice mail service.

Table A-52 *Observed Service Events for UC17*

Severity	Summary
Minor	CUST_C072_CLS_CUCXN_CUCxn-CL-C072-1 Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C072-1 is Marginal.

Observed Other-EL Events

None.

Service Tree Event Overlay Location and Content**Table A-53** *Observed Service Tree Events for UC17*

Severity	Summary
...->Cluster_Availability -->Internode_Trunks	NoConnectionToPeer::Component= 192.6.4.132-RTMTSyslog; Detail= %1 : cucxn-72-pub.customer.com AppID : CuSrm ClusterID : NodeID : ;
cucxn-72-pub.customer.com	ServiceDown::Component= VScucxn- 72-pub.customer.com/ Connection Voice Mail Web Service; ProductName= Connection;
cucxn-72-pub.customer.com	ServiceDown::Component= VScucxn- 72-sub.customer.com/ Connection Inbox RSS Feed; ProductName= Connection Inbox ;
cucxn-72-pub.customer.com	ServiceDown::Component= VScucxn- 72-pub.customer.com/ Connection Serviceability; ProductName= Connection ;
cucxn-72-pub.customer.com	ServiceDown::Component= VScucxn- 72-sub.customer.com/ Connection Administration; ProductName= Connection ;

Table A-53 *Observed Service Tree Events for UC17*

Severity	Summary
cucxn-72-pub.customer.com	ServiceDown::Component= VScucxn- 72-sub.customer.com/ Connection Administration; ProductName= Connection ;
cucxn-72-pub.customer.com	ServiceDown::Component= VScucxn- 72-pub.customer.com/ Connection SNMP Agent; ProductName= Connection SNMP ;

Next Steps

- Step 1** Right-click the **Synthetic RC event > Show Contained Events** to display the corresponding raw events.
- Step 2** Right-click the **Raw event > Event Details > Next Steps** to display the following recommendation:
Make sure that the secondary server is active and connected to primary.
- Step 3** Correct the version issue by switching back to the original version.

UC18 - CUCM Critical Process Failure

This use case describes the events that the Prime Central for HCS dashboard displays if a critical process fails in CUCM. Prime Central for HCS generates Root Cause (RC) and Service Impact (SI) events for such incidents.

Observed RC-EL Events

When a critical process is killed, two Synthetic RCA events, OM_CUCM_Processes, and OM_CUCM_Redundancy are observed.

Table A-54 *Observed Root Cause Events for UC18*

Severity	EventTypeID	Summary
Critical	OM_CUCM_Processes	Synthetic Event for OM_CUCM_Processes group events from cucm-72-pub.customer.com
Critical	OM_CUCM_Redundancy	Synthetic Event for OM_CUCM_Redundancy group events from cucm-72-sub.customer.com

Observed SI-EL Events

CUCM voice service impacts presence and voice mail.

Table A-55 *Observed Service Events for UC18*

Severity	Summary
Minor	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-CL-C072-1 is Marginal.
Minor	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C072-1 is Marginal.
Minor	Overall Attribute of the Customer_Voice_Service_Template tag of CUCM-CL-C072-1 is Marginal.

Observed Other-EL Events

None.

Service Tree Event Overlay Location and Content**Table A-56** *Observed Service Tree Events for UC18*

Severity	Summary
...->Cluster_availability -- >PUB:CUCM-72-pub	ServiceDown::Component= CCM-cucm-72- pub.customer.com/1; CallManagerName= 192.6.4.130; CallManagerStatus= Stopped; Default Event Name= ServiceDown; DescriptionURL= < ;
...->Cluster_availability -- >Internode_Trunks	SDL Link Out Of Service::Component= 192.6.4.131-192.6.4.130; Local Application ID= CCM; Remote Node ID= 1; Unique Link ID= 2:100:1:100; Remote Application IP Address= 192.6.4.130; Local Node ID= 2; Remote;
Cust_C072 -> VoiceService	Meta event for Voice Service - C072.

Next Steps

-
- Step 1** Right-click the **Synthetic RC event > Show Contained Events** to display the corresponding raw events.
- Step 2** Right-click the **Raw event > Event Details > Next Steps** to display the following recommendation:
- Identify which services are not running. You can start the service manually from the Administrator Service Control page. To disable monitoring for a specific service, go to the device's Detailed Device View, select the specific service, and change the managed state to False. Check to see if there are any core files. Download the core files, if any, as well as service trace files. Events are removed for Unified CM only. You may need to manually clear these Unified CM events after your upgrade is complete.
- Step 3** Use **Ctrl-C** to end the running process.
- Step 4** Log into the CUCM application. Type the IP address of CUCM and select **Cisco Unified service Availability > Tools > Feature services** to start the service.
-

UC19 - UCS Chassis Failure - CUCM

This use case describes the events that Prime Central for HCS receives if the chassis hosting CUCM nodes loses power. This type of incident generates both Root Cause (RC) and Service Impact (SI) events. The CUCM VM is automatically brought up in another host if HA is enabled on the cluster. If HA is not configured for the cluster, CUCM nodes stay down until the chassis is powered on. In the following example, the same chassis hosts all UC VMs for customer 80.

Observed RC-EL Events

When the chassis powers off, numerous synthetic RCA events are observed, including UCS_Chassis_Fault, UCS_Blade_Avblbty, VC_Host_Avblbty, and UCS_BladeLinks. Eventually, the UCS_Chassis_Fault synthetic RCA event remains as the root cause.

Table A-57 Observed Root Cause Events for UC19

Severity	EventTypeID	Summary
Critical	UCS_Chassis_Fault	Synthetic Event for UCS_Chassis_Fault group events from 10.13.2.1
Critical	OM_CUCM_OM_Connectivity	Synthetic Event for OM_CUCM_OM_Connectivity group events from CUCM-CL-C080-1
Critical	VC_Host_Avblbty	Synthetic Event for VC_Host_Avblbty group events from 10.13.3.31

Observed SI-EL Events

CUCM voice service impacts voice mail and presence. In this example, CUCxn and CUP VMs are hosted in the same chassis, and all voice, voice mail, and presence services are affected.

Table A-58 Service Events for UC19

Severity	Summary
Critical	Overall Attribute of the Customer_Voice_Service_Template tag of CUCM-CL-C080-1 is Bad.
Critical	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-80-pub is Bad.
Critical	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C080-1 is Bad.

Observed Other-EL Events

Prime Central for HCS does not analyze these events, but they could point to potential root causes for impacted services. The following table presents a list of events observed during internal testing if HA is not enabled on the cluster.

**Note**

10.11.2.8, 10.11.2.9, and 10.11.2.10 are UCS6140 side A, UCS6140 side B, and UCSM IP. Georedundancytemp-sa is the cluster name in the vCenter containing the C080 customer VMs.

Table A-59 **Observed Other Events for UC19 (No HA)**

Severity(S)/Customer (C)/Node (N)	EventName (EN)/EventTypeId (ET)/	Summary
<ul style="list-style-type: none"> S = Major N = 10.13.2.10 	<ul style="list-style-type: none"> EN = fltAdaptorExtIfLinkDown ET = UCS_Adapter 	Adapter uplink interface 3/4/1/1 link state: unavailable(FaultCode:fltAdaptorExtIfLinkDown,FaultIndex)
<ul style="list-style-type: none"> S = Indeterminate N = 10.13.2.8 	<ul style="list-style-type: none"> EN = fltAdaptorUnitAdaptorReachability ET = default 	Adapter 3/1/1 is unreachable (FaultCode:fltAdaptorUnitAdaptorReachability, FaultIndex:3695955)
<ul style="list-style-type: none"> S = Major N = 10.13.2.8 	<ul style="list-style-type: none"> EN = fltEtherSwitchIntFioSatelliteConnection Absent ET = UCS_PortsLinks 	No link between IOM port 3/1/1 and fabric interconnect A:1/9 (FaultCode:fltEtherSwitchIntFioSatelliteConnectionAbsent, FaultIndex:3468974)
<ul style="list-style-type: none"> S = Major N = 10.13.2.8 	<ul style="list-style-type: none"> EN = fltDcxVcMgmtVifDown ET = UCS_Mgmt_Link 	IOM 3 / 1 (A) management VIF 3 down, reason None (FaultCode:fltDcxVcMgmtVifDown, FaultIndex:3468977)
<ul style="list-style-type: none"> S = Indeterminate N = 10.13.2.10 	<ul style="list-style-type: none"> EN = fltPortPIoLinkDown ET = UCS_Etherne 	Ether port 10 on fabric interconnect A oper state: link-down, reason: Link failure or notconnected (FaultCode:fltPortPIoLinkDown,FaultIndex).
<ul style="list-style-type: none"> S = Major N = 10.13.2.10 	<ul style="list-style-type: none"> EN = fltEquipmentIOCardUnsupportedConnectivity ET = default 	IOM 3/2 (B) current connectivity does not match discovery policy: unsupported connectivity(FaultCode:fltEquipmentIOCardUnsupportedConnectivity
<ul style="list-style-type: none"> S = Major N = 10.13.2.8 	<ul style="list-style-type: none"> EN = fltEquipmentIOCardUnsupported Connectivity ET = default 	IOM 3/1 (A) current connectivity does not match discovery policy: unsupported-connectivity (FaultCode:fltEquipmentIOCardUnsupportedConnectivity,FaultIndex:3695902).

Table A-59 Observed Other Events for UC19 (No HA) (continued)

Severity(S)/Customer (C)/Node (N)	EventName (EN)/EventTypeId (ET)/	Summary
<ul style="list-style-type: none"> S = Major N = 10.13.2.8/li> 	<ul style="list-style-type: none"> EN = fltLsServerInaccessible ET = default 	Service profile c3b1 cannot be accessed (FaultCode:fltLsServerInaccessible, FaultIndex:3695961)
<ul style="list-style-type: none"> S = Warning C = C080 	<ul style="list-style-type: none"> EN = RTMTDataMissing ET = OM_CUCM_OM_Connectivity 	RTMTDataMissing::Component= VECUCM- CL-C080-1; CallManagerList= 192.6.4.186,192.6.4.193,192.6.4.188,192.6.4.187; ReasonForRTMTDataMissing = Unable to communicate with RTMT on publisher; CustomerName= C080; Default Event Name= RTMTDataMissing; DescriptionURL= < http://150.0.0.52:1741/CSCONM/servlet/com.cisco.nm.help.ServerHelpEngine? tag=RTMTDataMissing>;
<ul style="list-style-type: none"> S = Warning C = C080 	<ul style="list-style-type: none"> EN = RTMTDataMissing ET = Default 	RTMTDataMissing::Component= cucxn-80-pub.customer.com; Name= cucxn-80-pub.customer.com; HostDescription= Hardware:VMware, 1 Intel(R) Xeon(R) CPU X5680 @ 3.33GHz, 6144 MB Memory: Software:UCOS 5.0.0.0-2; Reason= Error collecting RTMT data. Error reason: HTTP communication error; Default Event Name= RTMTDataMissing; DescriptionURL= < http://150.0.0.52:1741/CSCONM/servlet/com.cisco.nm.help.ServerHelpEngine? tag=RTMTDataMissing >;

Service Tree Event Overlay Location and Content

Table A-60 Observed Service Tree Events for UC19

Location	Summary
...-> Cluster_Availability --> Node:CUP-80-pub	PerformancePollingStopped::Component= cup-80-pub.customer.com; Error Message String= 29-Jun-2012 14:15:49 EDT,cup-80- pub.customer.com,192.6.4.191,Cannot collect data. The device is experiencing communication problems. Device may be in partially monitored state. Check HTTP(S) credentials.; Default Event Name= PerformancePollingStopped; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped >;12 and 19.
...-> Cluster_Availability--> Node:CUP-80-pub	Unresponsive::Component= cup-80-pub.customer.com; SystemObjectID= .1.3.6.1.4.1.99.1.1.3.28; Description= Hardware:VMware, 4 Intel(R) Xeon(R) CPU X5680 @ 3.33GHz, 6144 MB Memory: Software:UCOS 4.0.0.0-44; DiscoveredFirstAt= 06-28-2012 15:58:29; Type= HOST; DisplayClassName= Host; SNMPAddress= 192.6.4.191; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 06-28-2012 18:06:25; Default Event Name= Unresponsive; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=Unresponsive >;
...-> Cluster_Availability--> Sub: CUCM-80-sub1	Unresponsive::Component= cucm-80-sub1.customer.com; SystemObjectID= .1.3.6.1.4.1.9.1.1348; Description= Linux release:2.6.18-194.26.1.el5PAE machine:i686; DiscoveredFirstAt= 06-28-2012 15:58:42; Type= HOST; DisplayClassName= Host; SNMPAddress= 192.6.4.187; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 06-28-2012 18:06:34; Default Event Name= Unresponsive; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=Unresponsive >;
...-> Cluster_Availability--> Sub: CUCM-80-sub1	PerformancePollingStopped::Component= cucm-80-sub1.customer.com; Error Message String= 29-Jun-2012 14:15:49 EDT, cucm-80- sub1.customer.com,192.6.4.187,Cannot collect data. The device is experiencing communication problems. Device may be in partially monitored state. Check HTTP(S) credentials.; Default Event Name= PerformancePollingStopped; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped >;

Table A-60 Observed Service Tree Events for UC19 (continued)

Location	Summary
...-> Cluster_Availability--> Sub: CUCM-80-sub2	PerformancePollingStopped::Component= cucm-80-sub2.customer.com; Error Message String= 29-Jun-2012 14:15:49 EDT,cucm-80-sub2.customer.com,192.6.4.188,Cannot collect data. The device is experiencing communication problems. Device may be in partially monitored state. Check HTTP(S) credentials.; Default Event Name= PerformancePollingStopped; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped >;
...-> Cluster_Availability--> Sub: CUCM-80-sub2	Unresponsive::Component= cucm-80-sub2.customer.com; SystemObjectID= .1.3.6.1.4.1.9.1.1348; Description= Linux release:2.6.18-194.26.1.el5PAE machine:i686; DiscoveredFirstAt= 06-28-2012 15:58:33; Type= HOST; DisplayClassName= Host; SNMPAddress= 192.6.4.188; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 06-29-2012 12:09:39; Default Event Name= Unresponsive; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=Unresponsive >;
...-> Cluster_Availability--> Pub: CUCM-80-pub	PerformancePollingStopped::Component= cucm-80-pub.customer.com; Error Message String= 29-Jun-2012 14:15:49 EDT,cucm-80-pub.customer.com,192.6.4.186,Cannot collect data. The device is experiencing communication problems. Device may be in partially monitored state. Check HTTP(S) credentials.; Default Event Name= PerformancePollingStopped; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped >;
...-> Cluster_Availability--> Pub: CUCM-80-pub	Unresponsive::Component= cucm-80-pub.customer.com; SystemObjectID= .1.3.6.1.4.1.9.1.1348; Description= Linux release:2.6.18-194.26.1.el5PAE machine:i686; DiscoveredFirstAt= 06-28-2012 15:58:33; Type= HOST; DisplayClassName= Host; SNMPAddress= 192.6.4.186; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 06-29-2012 12:09:39; Default Event Name= Unresponsive; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/

Table A-60 Observed Service Tree Events for UC19 (continued)

Location	Summary
...-> Cluster_Availability--> Sub: CUCxn-80-sub	Unresponsive::Component= cucxn-80-sub.customer.com; SystemObjectID= .1.3.6.1.4.1.9.1.1348; Description= Hardware:VMware, 1 Intel(R) Xeon(R) CPU X5680 @ 3.33GHz, 6144 MB Memory: Software:UCOS 5.0.0.0-2; DiscoveredFirstAt= 06-28-2012 15:58:33; Type= HOST; DisplayClassName= Host; SNMPAddress= 192.6.4.190; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 06-28-2012 18:06:45; Default Event Name= Unresponsive; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=Unresponsive >;
...-> Cluster_Availability--> Sub: CUCxn-80-sub	PerformancePollingStopped::Component= cucxn-80-sub.customer.com; Error Message String= 29-Jun-2012 14:15:49 EDT,cucxn-80-sub.customer.com,192.6.4.190,Cannot collect data. The device returned no data from a required MIB.; Default Event Name= PerformancePollingStopped; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped >;
...-> Cluster_Availability--> Pub: CUCxn-80-pub	PerformancePollingStopped::Component= cucxn-80-pub.customer.com; Error Message String= 29-Jun-2012 14:15:49 EDT,cucxn-80-pub.customer.com,192.6.4.189,Cannot collect data. The device returned no data from a required MIB.; Default Event Name= PerformancePollingStopped; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped >;
...-> Cluster_Availability--> Pub: CUCxn-80-pub	Unresponsive::Component= cucxn-80-pub.customer.com; SystemObjectID= .1.3.6.1.4.1.9.1.1348; Description= Hardware:VMware, 1 Intel(R) Xeon(R) CPU X5680 @ 3.33GHz, 6144 MB Memory: Software:UCOS 5.0.0.0-2; DiscoveredFirstAt= 06-28-2012 15:58:37; Type= HOST; DisplayClassName= Host; SNMPAddress= 192.6.4.189; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 06-28-2012 18:06:38; Default Event Name= Unresponsive; DescriptionURL=< http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=Unresponsive >;
...-> VM Availability	The virtual machine CUCxn-80-sub running on host 10.13.3.31 is Disconnected. Message: KVM_VM_Disconnected_Cisco_HCM[(Event_Type=N"VmDisconnectedEvent" ON VM:tb3- vcent-10.13.3.31:ESX ON 2301156 (Event_Type=VmDisconnectedEvent))]

Table A-60 **Observed Service Tree Events for UC19 (continued)**

Location	Summary
...-> VM Availability	The virtual machine CUCM-80-sub1 running on host 10.13.3.34 is Disconnected. Message: KVM_VM_Disconnected_Cisco_HCM[(Event_Type=N"VmDisconnectedEvent" ON VM:tb3- vcent-10.13.3.34:ESX ON 2301145 (Event_Type=VmDisconnectedEvent))]
...-> VM Availability	The virtual machine CUCM-80-sub2 running on host 10.13.3.33 is Disconnected. Message: KVM_VM_Disconnected_Cisco_HCM[(Event_Type=N"VmDisconnectedEvent" ON VM:tb3- vcent-10.13.3.33:ESX ON 2301136 (Event_Type=VmDisconnectedEvent))]
...-> VM Availability	The virtual machine CUP-80-pub running on host 10.13.3.31 is Disconnected. Message: KVM_VM_Disconnected_Cisco_HCM[(Event_Type=N"VmDisconnectedEvent" ON VM:tb3-vcent-10.13.3.31:ESX ON 2301155 (Event_Type=VmDisconnectedEvent))]
...-> VM Availability	The virtual machine CUCM-80-pub running on host 10.13.3.31 is Disconnected. Message: KVM_VM_Disconnected_Cisco_HCM[(Event_Type=N"VmDisconnectedEvent" ON VM:tb3- vcent-10.13.3.31:ESX ON 2301158 (Event_Type=VmDisconnectedEvent))]
...-> VM Availability	The virtual machine CUCxn-80-pub running on host 10.13.3.32 is Disconnected. Message: KVM_VM_Disconnected_Cisco_HCM[(Event_Type=N"VmDisconnectedEvent" ON VM:tb3- vcent-10.13.3.32:ESX ON 2301185 (Event_Type=VmDisconnectedEvent))]
...-> VoiceService	Meta event for Voice Service - C080

Next Steps

- Step 1** Cross-launch to the domain manager UCSM to confirm that the chassis is powered off. Power on the chassis to clear the events.

UC20 - UCS Chassis Failure - CUCxn

This use case describes the events that Prime Central for HCS receives if the chassis hosting CUCxn nodes lost power. Prime Central for HCS performs SIA and RCA for this use case. The CUCxn VM is automatically brought up in another host if HA is enabled on the cluster. If HA is not configured for the cluster, CUCxn nodes stay down until the chassis is powered on.

For the following example, the same chassis hosts all UC VMs for customer 80.

Observed RC-EL Events

When the chassis powers off, numerous synthetic RCA events are observed, including UCS_Chassis_Fault, UCS_Blade_Avblbty, VC_Host_Avblbty, and UCS_BladeLinks. Eventually, only one synthetic RCA event, UCS_Chassis_Fault, remains as the root cause.

Table A-61 *Observed Root Cause Events for UC20*

Severity	EventTypeID	Summary
Critical	UCS_Chassis_Fault	Synthetic Event for UCS_Chassis_Fault group events from 10.13.2.10
Critical	OM_CUCM_OM_Connectivity	Synthetic Event for OM_CUCM_OM_Connectivity group events from CUCM-CL-C080-1
Critical	VC_Host_Avblbty	Synthetic Event for VC_Host_Avblbty group events from 10.13.3.31

Observed SI-EL Events

CUCM voice service impacts voice mail and presence. In this example, CUCM VMs are hosted in the same chassis and all voice, voice mail, and presence services are affected because of this dependency. If only a CUCxn cluster is on the failed chassis, only CUCxn service is affected. The following table presents the list of events observed during internal testing.

Table A-62 *Observed Service Events for UC20*

Severity	Summary
Critical	Overall Attribute of the Customer_Voice_Service_Template tag of CUCM-CL-C080-1 is Bad.
Critical	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-80-pub is Bad.
Critical	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C080-1 is Bad.

Observed Other-EL Events

Prime Central for HCS does not analyze these events, but they could point to potential root causes for impacted services. The following table presents the list of events observed during internal testing.

**Note**

10.11.2.8, 10.11.2.9, and 10.11.2.10 are UCS6140 side A, UCS6140 side B, and UCSM IP. georedundancytemp-sa is the cluster name in the vcenter containing Customer C080 VMs.

Table A-63 Observed Other Events for UC20 (No HA)

Severity (S)/Customer (C)/Node (N)	EventName (EN)/EventTypeId (ET)	Summary
<ul style="list-style-type: none"> S = Major N = 10.13.2.8 	<ul style="list-style-type: none"> EN = fltAdaptorExtIfLinkDown ET = UCS_Adapter 	Adapter uplink interface 3/1/1/1 link state: unavailable(FaultCode:fltAdaptorExtIfLinkDown,FaultIndex:
<ul style="list-style-type: none"> S = Indeterminate N = 10.13.2.8 	<ul style="list-style-type: none"> EN = fltAdaptorUnitAdaptorReachability ET = default 	Adapter 3/1/1 is unreachable(FaultCode:fltAdaptorUnitAdaptorReachability
<ul style="list-style-type: none"> S = Major N = 10.13.2.10 	<ul style="list-style-type: none"> EN = fltEtherSwitchIntFioSatelliteConnectionAbsent ET = UCS_PortsLinks 	No link between IOM port 3/1/1 and fabric interconnect A:1/9(FaultCode:fltEtherSwitchIntFioSatelliteConnectionAbsent
<ul style="list-style-type: none"> S = Major N = 10.13.2.10 	<ul style="list-style-type: none"> EN = fltDcxVcMgmtVifDown ET = UCS_Mgmt_Link 	IOM 3 / 1 (A) management VIF 3 down, reason None(FaultCode:fltDcxVcMgmtVifDown,FaultIndex
<ul style="list-style-type: none"> S = Major N = 10.13.2.10 	<ul style="list-style-type: none"> EN = fltPortPIoLinkDown ET = UCS_Etherne 	Ether port 10 on fabric interconnect A oper state: link-down, reason: Link failure or notconnected (FaultCode:fltPortPIoLinkDown,FaultIndex
<ul style="list-style-type: none"> S = Major N = 10.13.2.8 	<ul style="list-style-type: none"> EN = fltEquipmentIOCardUnsupportedConnectivity ET = default 	IOM 3/1 (A) current connectivity does not match discovery policy: unsupported-connectivity (FaultCode:fltEquipmentIOCardUnsupportedConnectivity, FaultIndex:3695902)
<ul style="list-style-type: none"> S = Major N = 10.13.2.8 	<ul style="list-style-type: none"> EN = fltEquipmentIOCardUnsupportedConnectivity ET = default 	IOM 3/1 (A) current connectivity does not match discovery policy: unsupported connectivity(FaultCode:fltEquipmentIOCardUnsupportedConnectivity, FaultIndex:3695902)
<ul style="list-style-type: none"> S = Major N = 10.13.2.8 	<ul style="list-style-type: none"> EN = fltLsServerInaccessible ET = default 	Service profile c3b1 cannot be accessed (FaultCode:fltLsServerInaccessible, FaultIndex:3695961)

Table A-63 Observed Other Events for UC20 (No HA)

Severity (S)/Customer (C)/Node (N)	EventName (EN)/EventTypeId (ET)	Summary
<ul style="list-style-type: none"> S = Warning C = C080 	<ul style="list-style-type: none"> EN = RTMTDataMissing ET = OM_CUCM_OM_Connectivity 	RTMTDataMissing::Component= VECUCM- CL-C080-1; CallManagerList= 192.6.4.186,192.6.4.193,192.6.4.188,192.6.4.187; ReasonForRTMTDataMissing= Unable to communicate with RTMT on publisher; CustomerName= C080; Default Event Name= RTMTDataMissing; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=RTMTDataMissing >;
<ul style="list-style-type: none"> S = Warning C = C080 	<ul style="list-style-type: none"> EN = RTMTDataMissing ET = Default 	RTMTDataMissing::Component= cucxn-80-pub.customer.com; Name= cucxn-80-pub.customer.com; HostDescription= Hardware:VMware, 1 Intel(R) Xeon(R) CPU X5680 @ 3.33GHz, 6144 MB Memory: Software:UCOS 5.0.0.0-2; Reason= Error collecting RTMT data. Error reason: HTTP communication error; Default Event Name=RTMTDataMissing; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=RTMTDataMissing >;

The following table presents the list of events observed during internal testing, if HA is enabled on the cluster.

Table A-64 Observed Other Events for UC20 (HA)

Severity (S)/Customer (C)/Node (N)	EventName (EN)/EventTypeId (ET)	Summary
<ul style="list-style-type: none"> S = Warning N = geo-redundancytemp-sa 	<ul style="list-style-type: none"> EN = KVM_Cluster_Effective_CPU_Low ET = VC_Cluster_Resources 	The effective CPU amount of the cluster is low on georedundancytemp-sa. Message: KVM_Cluster_Effective_CPU_Low [(Percent_Effective_AND Percent_Effective_CPU<50) ON tb3-vcenter:hcm-es-itm-m2:VM ON tb3 (Percent_Effective_CPU=29)]
<ul style="list-style-type: none"> S = Warning N = geo-redundancytemp-sa 	<ul style="list-style-type: none"> EN = KVM_Cluster_Effective_Mem_Low ET = VC_Cluster_Resources 	The effective memory of the cluster amount is low on georedundancytemp-sa. Message: KVM_Cluster_Effective_Mem_Low [(Percent_Effective AND Percent_Effective_Memory<50) ON tb3-vcenter:hcm-es-itm-m2:VM ON tb3 (Percent_Effective_Memory=30)]
<ul style="list-style-type: none"> S = Warning C = C080 N = CUP-80-pub 	<ul style="list-style-type: none"> EN = KVM_VM_RestartOnAlt_Host_Cisco ET = VC_VM_Restored 	Virtual machine CUP-80-pub was restarted on 10.13.3.12 since 10.13.3.31 failed. Message: KVM_VM_RestartOnAlt_Host_Cisco[(Event_Type=N"VmRestartedOnAlternateHostEvent" ON VM:tb3-vcent-10.13.3.12:ESX ON 2312823 (Event_Type=VmRestartedOnAlternateHostEvent)]
<ul style="list-style-type: none"> S = Warning C = C080 N = CUCM-80-pub 	<ul style="list-style-type: none"> EN = KVM_VM_RestartOnAlt_Host_Cisco ET = VC_VM_Restored 	Virtual machine CUCM-80-pub was restarted on 10.13.3.15 since 10.13.3.31 failed. Message: KVM_VM_RestartOnAlt_Host_Cisco[(Event_Type=N"VmRestartedOnAlternateHostEvent" ON VM:tb3-vcent-10.13.3.15:ESX ON 2312730 (Event_Type=VmRestartedOnAlternateHostEvent)]
<ul style="list-style-type: none"> S = Warning C = C080 N = CUCM-80-sub2 	<ul style="list-style-type: none"> EN = KVM_VM_RestartOnAlt_Host_Cisco ET = VC_VM_Restored 	Virtual machine CUCM-80-sub2 was restarted on 10.13.3.12 since 10.13.3.31 failed. Message: KVM_VM_RestartOnAlt_Host_Cisco[(Event_Type=N"VmRestartedOnAlternateHostEvent" ON VM:tb3-vcent-10.13.3.12:ESX ON 2312744 (Event_Type=VmRestartedOnAlternateHostEvent)]

Table A-64 Observed Other Events for UC20 (HA) (continued)

Severity (S)/Customer (C)/Node (N)	EventName (EN)/EventTypeId (ET)	Summary
<ul style="list-style-type: none"> S = Warning C = C080 N = CUCM-80-sub1 	<ul style="list-style-type: none"> EN = KVM_VM_RestartOnAlt_Host_Cisco ET = VC_VM_Restored 	Virtual machine CUCM-80- sub1 was restarted on 10.13.3.12 since 10.13.3.31 failed. Message: KVM_VM_RestartOnAlt_Host_Cisco[(Event_Type=N"VmRestartedOnAlternateHostEvent" ON VM:tb3-vcent-10.13.3.12:ESX ON 2312743 (Event_Type=VmRestartedOnAlternateHostEvent)]
<ul style="list-style-type: none"> S = Warning C = C080 N = CUCxn-80-pub 	<ul style="list-style-type: none"> EN = KVM_VM_RestartOnAlt_Host_Cisco ET = VC_VM_Restored 	Virtual machine CUCxn-80- pub was restarted on 10.13.3.15 since 10.13.3.31 failed. Message: KVM_VM_RestartOnAlt_Host_Cisco[(Event_Type=N"VmRestartedOnAlternateHostEvent" ON VM:tb3-vcent-10.13.3.15:ESX ON 2312727 (Event_Type=VmRestartedOnAlternateHostEvent)].

Service Tree Event Overlay Location and Content

The following table presents the list of events observed during internal testing.

Table A-65 Observed Service Tree Events for UC20

Severity (S)/Customer (C)/Node (N)	Summary
...-> Cluster_Availability --> Node:CUP-80-pub	cup-80-pub.customer.com; Error Message String= 29-Jun-2012 14:15:49 EDT,cup-80- pub.customer.com,192.6.4.191,Cannot collect data. The device is experiencing communication problems. Device may be in partially monitored state. Check HTTP(S) credentials.; Default Event Name= PerformancePollingStopped; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped >;12 and 19, i meant CUP-80-pub -> Cluster_Availability--> Node:CUP-80-pub CUST_C080_CLS_CUP_CUP-80- pub_CUP-80-pub
...-> Cluster_Availability--> Node:CUP-80-pub	Unresponsive::Component= cup-80-pub.customer.com; SystemObjectID= .1.3.6.1.4.1.99.1.1.3.28; Description= Hardware:VMware, 4 Intel(R) Xeon(R) CPU X5680 @ 3.33GHz, 6144 MB Memory; Software:UCOS 4.0.0.0-44; DiscoveredFirstAt= 06-28-2012 15:58:29; Type= HOST; DisplayClassName= Host; SNMPAddress= 192.6.4.191; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 06-28-2012 18:06:25; Default Event Name= Unresponsive; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=Unresponsive >;

Table A-65 Observed Service Tree Events for UC20 (continued)

Severity (S)/Customer (C)/Node (N)	Summary
...-> Cluster_Availability--> Sub: CUCM-80-sub1	Unresponsive::Component= cucm-80-sub1.customer.com; SystemObjectID= .1.3.6.1.4.1.9.1.1348; Description= Linux release:2.6.18-194.26.1.el5PAE machine:i686; DiscoveredFirstAt= 06-28-2012 15:58:42; Type= HOST; DisplayClassName= Host; SNMPAddress= 192.6.4.187; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 06-28-2012 18:06:34; Default Event Name= Unresponsive; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=Unresponsive >;
...-> Cluster_Availability--> Sub: CUCM-80-sub1	PerformancePollingStopped::Component= cucm-80-sub1.customer.com; Error Message String= 29-Jun-2012 14:15:49 EDT, cucm-80-sub1.customer.com,192.6.4.187,Cannot collect data. The device is experiencing communication problems. Device may be in partially monitored state. Check HTTP(S) credentials.; Default Event Name= PerformancePollingStopped; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped >;
...-> Cluster_Availability--> Sub: CUCM-80-sub2	PerformancePollingStopped::Component= cucm-80-sub2.customer.com; Error Message String= 29-Jun-2012 14:15:49 EDT,cucm-80-sub2.customer.com,192.6.4.188,Cannot collect data. The device is experiencing communication problems. Device may be in partially monitored state. Check HTTP(S) credentials.; Default Event Name= PerformancePollingStopped; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped >;
...-> Cluster_Availability--> Sub: CUCM-80-sub2	Unresponsive::Component= cucm-80-sub2.customer.com; SystemObjectID= .1.3.6.1.4.1.9.1.1348; Description= Linux release:2.6.18-194.26.1.el5PAE machine:i686; DiscoveredFirstAt= 06-28-2012 15:58:33; Type= HOST; DisplayClassName= Host; SNMPAddress= 192.6.4.188; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 06-29-2012 12:09:39; Default Event Name= Unresponsive; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=Unresponsive >;
...-> Cluster_Availability--> Pub: CUCM-80-pub	PerformancePollingStopped::Component= cucm-80-pub.customer.com; Error Message String= 29-Jun-2012 14:15:49 EDT,cucm-80-pub.customer.com,192.6.4.186,Cannot collect data. The device is experiencing communication problems. Device may be in partially monitored state. Check HTTP(S) credentials.; Default Event Name= PerformancePollingStopped; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped >;

Table A-65 Observed Service Tree Events for UC20 (continued)

Severity (S)/Customer (C)/Node (N)	Summary
...-> Cluster_Availability--> Pub: CUCM-80-pub	Unresponsive::Component= cucm-80-pub.customer.com; SystemObjectID= .1.3.6.1.4.1.9.1.1348; Description= Linux release:2.6.18-194.26.1.el5PAE machine:i686; DiscoveredFirstAt= 06-28-2012 15:58:33; Type= HOST; DisplayClassName= Host; SNMPAddress= 192.6.4.186; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 06-29-2012 12:09:39; Default Event Name= Unresponsive; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=Unresponsive >;
...-> Cluster_Availability--> Sub: CUCxn-80-sub	Unresponsive::Component= cucxn-80-sub.customer.com; SystemObjectID= .1.3.6.1.4.1.9.1.1348; Description= Hardware:VMware, 1 Intel(R) Xeon(R) CPU X5680 @ 3.33GHz, 6144 MB Memory: Software:UCOS 5.0.0.0-2; DiscoveredFirstAt= 06-28-2012 15:58:33; Type= HOST; DisplayClassName= Host; SNMPAddress= 192.6.4.190; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 06-28-2012 18:06:45; Default Event Name= Unresponsive; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=Unresponsive >;
...-> Cluster_Availability--> Sub: CUCxn-80-sub	PerformancePollingStopped::Component= cucxn-80-sub.customer.com; Error Message String= 29-Jun-2012 14:15:49 EDT,cucxn-80-sub.customer.com,192.6.4.190,Cannot collect data. The device returned no data from a required MIB.; Default Event Name= PerformancePollingStopped; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped >;
...-> Cluster_Availability--> Pub: CUCxn-80-pub	PerformancePollingStopped::Component= cucxn-80-pub.customer.com; Error Message String= 29-Jun-2012 14:15:49 EDT,cucxn-80-pub.customer.com,192.6.4.189,Cannot collect data. The device returned no data from a required MIB.; Default Event Name= PerformancePollingStopped; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped >;
...-> Cluster_Availability--> Pub: CUCxn-80-pub	Unresponsive::Component= cucxn-80-pub.customer.com; SystemObjectID= .1.3.6.1.4.1.9.1.1348; Description= Hardware:VMware, 1 Intel(R) Xeon(R) CPU X5680 @ 3.33GHz, 6144 MB Memory: Software:UCOS 5.0.0.0-2; DiscoveredFirstAt= 06-28-2012 15:58:37; Type= HOST; DisplayClassName= Host; SNMPAddress= 192.6.4.189; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 06-28-2012 18:06:38; Default Event Name= Unresponsive; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=Unresponsive >;

Table A-65 Observed Service Tree Events for UC20 (continued)

Severity (S)/Customer (C)/Node (N)	Summary
...-> VM Availability	The virtual machine CUCxn-80-sub running on host 10.13.3.31 is Disconnected. Message: KVM_VM_Disconnected_Cisco_HCM[(Event_Type=N"VmDisconnectedEvent" ON VM:tb3- vcent-10.13.3.31:ESX ON 2301156 (Event_Type=VmDisconnectedEvent))]
...-> VM Availability	The virtual machine CUCM-80-sub1 running on host 10.13.3.34 is Disconnected. Message: KVM_VM_Disconnected_Cisco_HCM[(Event_Type=N"VmDisconnectedEvent" ON VM:tb3- vcent-10.13.3.34:ESX ON 2301145 (Event_Type=VmDisconnectedEvent))]
...-> VM Availability	The virtual machine CUCM-80-sub2 running on host 10.13.3.33 is Disconnected. Message: KVM_VM_Disconnected_Cisco_HCM[(Event_Type=N"VmDisconnectedEvent" ON VM:tb3- vcent-10.13.3.33:ESX ON 2301136 (Event_Type=VmDisconnectedEvent))]
...-> VM Availability	The virtual machine CUP-80-pub running on host 10.13.3.31 is Disconnected. Message: KVM_VM_Disconnected_Cisco_HCM[(Event_Type=N"VmDisconnectedEvent" ON VM:tb3-vcent-10.13.3.31:ESX ON 2301155 (Event_Type=VmDisconnectedEvent))]
...-> VM Availability	The virtual machine CUCM-80-pub running on host 10.13.3.31 is Disconnected. Message: KVM_VM_Disconnected_Cisco_HCM[(Event_Type=N"VmDisconnectedEvent" ON VM:tb3- vcent-10.13.3.31:ESX ON 2301158 (Event_Type=VmDisconnectedEvent))]
...-> VM Availability	The virtual machine CUCM-80-pub running on host 10.13.3.31 is Disconnected. Message: KVM_VM_Disconnected_Cisco_HCM[(Event_Type=N"VmDisconnectedEvent" ON VM:tb3- vcent-10.13.3.31:ESX ON 2301158 (Event_Type=VmDisconnectedEvent))]
...-> VM Availability	The virtual machine CUCxn-80-pub running on host 10.13.3.32 is Disconnected. Message: KVM_VM_Disconnected_Cisco_HCM[(Event_Type=N"VmDisconnectedEvent" ON VM:tb3- vcent-10.13.3.32:ESX ON 2301185 (Event_Type=VmDisconnectedEvent))]
...-> VoiceService	Meta event for Voice Service - C080

Next Steps

- Step 1** Cross-launch to the domain manager UCSM to confirm that the chassis is powered off. Power on the chassis to clear the events.

UC21 - Insufficient Virtual Memory

This use case describes the events that Prime Central for HCS receives if a CUCM server runs out of virtual memory. This type of incident generates Service Impact (SI) events.

Observed RC-EL Events

None.

Observed SI-EL Events

CUCM voice service impacted voice mail and presence. The following table presents the list of events observed during internal testing.

Table A-66 *Observed Service Events for UC21*

Severity	Summary
Minor	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C071-1 is Marginal.
Minor	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-CL-C071-1 is Marginal.
Minor	Overall Attribute of the Customer_Voice_Service_Template tag of CUCM-CL-C071-1 is Marginal.

Observed Other-EL Events

None.

Service Tree Event Overlay Location and Content

SIA events are overlaid on the Service Tree in the Service Availability view. The following table presents the list of events observed during internal testing.

Table A-67 *Observed Service Tree Events for UC21*

Location	Summary
...-> Voice Service	Meta event for Voice Service - C071
...-> Application Resources	LowAvailableVirtualMemory::Component= VMEM-cucm-71-pub.customer.com/ Memory; VmPercentageUsed= 84; LowAvailableVirtualMemoryThreshold= 25; Default Event Name= LowAvailableVirtualMemory; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=LowAvailableVirtualMemory >;
...-> VM_Resources	The virtual machine guest memory usage is high on CUCM-71-pub. Message: KVM_VM_Guest_Memory_Util_High[(Guest_Util>40 ON VM:cisco-10.11.3.152:ESX ON CUCM-71-pub (Guest_Util=66)]

Next Steps

- Step 1** Right-click the **Synthetic RC event > Show Contained Events** to display the corresponding raw events.
- Step 2** Right-click the **Raw event > Event Details** and select **Next Steps** to display the following recommendation:

Check CUCM Windows Task Manager or the RTMT tool to verify insufficient memory. This event may be caused by a memory leak. It is important to identify which process is using excessive memory. After the process is identified, if you suspect a memory leak (for example, if memory use for a process increases continually, or a process uses more memory than it should), you may want to contact your support team.

UC22 - CPU Utilization Problems

This use case describes what events the Prime Central for HCS will receive if a CUCM server has a heavy load on its CPU. Service Impact (SI) Events will be generated due to this type of incident.

Observed RC-EL Events

None.

Observed SI-EL Events

CUCM voice service impacts voice mail and presence.

Table A-68 *Observed Service Events for UC22*

Severity	Summary
Minor	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C071-1 is Marginal.
Minor	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-CL-C071-1 is Marginal.
Minor	Overall Attribute of the Customer_Voice_Service_Template tag of CUCM-CL-C071-1 is Marginal.

Observed Other-EL Events

None.

Service Tree Event Overlay Location and Content

SIA events are overlaid on the Service Tree in the Service Availability view. The following table presents the list of events observed during internal testing.

Table A-69 Observed Service Tree Events for UC20

Location	Summary
...-> Application Resources	CPUpegging::Component= PROCcucm- 71-pub.customer.com/_Total; PercentageCPU= 99; TopProcessesDetails= tomcat(5%);RisDC(1%);cmoninit(1%); CallProcessingNodeCpuPeggingThreshold= 90; Default Event Name= CPUpegging; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=CPUpegging >;
...-> Voice Service	Meta event for Voice Service - C071
...-> VM_Resources	CPU use high on CUCM-71-pub. Message: KVM_VM_CPU_Util_High[(Utilization>90) ON VM:cisco-10.11.3.152:ESX ON CUCM-71-pub (Utilization=93)\]

Next Steps

Step 1 Right-click the **Synthetic RC event > Show Contained Events** to display the corresponding raw events.

Step 2 Right-click the **Raw event > Event Details > Next Steps** to display the following recommendation:

Check the Communications Manager Windows Task Manager or Real Time Monitoring Tool (RTMT) to verify CPU high utilization. The most common cause is one or more processes that use excessive CPU resources. The event has information on which process is using the most CPU. After the process is identified, you may want to take action, which could include:

- * Restarting the process
- * Checking the trace setting for that process; using detailed trace level can take up excessive CPUresources
- * Checking for events, such as Code Yellow, and launching Operations Manager synthetic tests, such as Dial Tone Test to see if there is any impact on call processing.
- * You may want to take more drastic measures, such as stopping nonessential services.

For more information, see

- http://www.cisco.com/en/US/products/sw/voicesw/ps556/products_tech_note09186a00808ef0f4.shtml
- http://www.cisco.com/en/US/products/sw/voicesw/ps556/products_tech_note09186a00807f32e9.shtml.

For a video tutorial on troubleshooting the CPUpegging event, click the E-Learning button in online help.

UC23 - Call Throttling Failures (Code Red)

This use case describes the events that Prime Central for HCS receives if a CUCM server has Call Throttling failures in the Code Red range. This type of incident generates Service Impact (SI) events.

Observed RC-EL Events

None.

Observed SI-EL Events

CUCM voice service impacted voice mail and presence.

The following table presents the list of events observed during internal testing.

Table A-70 *Observed Service Events for UC23*

Location	Summary
Minor	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C071-1 is Marginal.
Minor	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-CL-C071-1 is Marginal.
Minor	Overall Attribute of the Customer_Voice_Service_Template tag of CUCM-CL-C071-1 is Marginal.

Observed Other-EL Events

None.

Service Tree Event Overlay Location and Content

SIA events are overlaid on the Service Tree in the Service Availability view. The following table presents the list of events observed during internal testing.

Table A-71 *Observed Service Tree Events for UC23*

Location	Summary
...-> Voice Service	Meta event for Voice Service - C071
...-> Application Resources	Code Red::Component= 192.6.4.123- System; Code Yellow Duration= 300 NumberOfCallsRejectedDueToCallThrottling=0 TotalCodeYellowEntry=2 HighPriorityQueueDepth=0 NormalPriorityQueueDepth=0 LowPriorityQueueDepth=0 AppID=Cisco CallManager ClusterID=CUCM-CL-C071-1 NodeID=CUCM-71-pub : Unified CM has entered Code Red condition and will restart; Default Event Name= Code Red; DescriptionURL= < http://150.0.0.52:1741/ CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=CodeRed >;

Next Steps

Generally, repeated call throttling events require assistance. CUCM SDI and SDL trace files record call-throttling events and can provide useful information. Your support team may request these trace files for closer examination.

Step 1 Right-click the **Synthetic RC event > Show Contained Events** to display the corresponding raw events.

Step 2 Right-click the **Raw event > Event Details** and select **Next Steps** to display the following recommendation:

When CUCM enters a Code Red state, the CUCM service restarts and produces a memory dump that may be helpful for analyzing the failure.



Note

Events are cleared after 24 hours automatically or manually clear the event on Unified Operations Manager once you rectify the fault.

UC24 - Call Throttling Failures (Code Yellow)

This use case describes the events that Prime Central for HCS receives if a CUCM server has Call Throttling Failures in the Code Yellow Range. This type of incident generates Service Impact (SI) events.

Observed RC-EL Events

None.

Observed SI-EL Events

CUCM voice service impacts voice mail and presence.

The following table presents the list of events observed during internal testing.

Table A-72 *Observed Service Events for UC24*

Location	Summary
Minor	Overall Attribute of the Customer_Voice_Service_Template tag of CUCM-CL-C071-1 is Marginal.

Observed Other-EL Events

None.

Service Tree Event Overlay Location and Content

SIA events are overlaid on the Service Tree in the Service Availability view. The following table presents the list of events observed during internal testing.

Table A-73 *Observed Service Tree Events for UC24*

Location	Summary
...-> Voice Service	Meta event for Voice Service - C071
...-> Application Resources	Code Yellow::Component= 192.6.4.123-System; Exit Latency= 8; Expected Average Delay= 0; Total Code Yellow Entry= 4; Entry Latency= 20; Sample Size= 10; Default Event Name= Code Yellow; DescriptionURL= < http://150.0.0.52:1741/ CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=CodeYellow >;

Next Steps

Step 1 Right-click the **Synthetic RC event > Show Contained Events** to display the corresponding raw events.

Step 2 Right-click the **Raw event > Event Details** and select **Next Steps** to display the following recommendation:

While this event generates, check process CPU usage and memory usage. Check for call bursts and an increased number of registered devices (phones, gateways, and so on) generated.

Continuously monitor whether CUCM is out of the Code Yellow state. You can launch synthetic tests, such as the Dial Tone Test, to check for any impact on call processing. To try to circumvent the possibility of a Code Yellow event, consider the possible causes of system overload, such as heavy call activity, low CPU availability for CUCM, routing loops, disk I/O limitations, disk fragmentation, and so on, and investigate those possibilities.

For more information, see [Call Throttling and the Code Yellow State](#).

UC25 - Route List Exhausted

This use case describes the events that the Prime Central for HCS dashboard displays if calls fail on Route List fail because no channels are available for call routing. Prime Central for HCS performs SIA for this use case. This event alerts a Network Operator that calls to a particular destination are failing and demand immediate attention to stop further failures. This can happen for several reasons, for example, a remote IP address is not reachable on a SIP/H323 trunk; a gateway is not reachable; the call failed at next call processing node across an IP trunk or TDM trunk, or not a TDM trunk lacked sufficient channels for the call.

Observed RC-EL Events

None.

Observed SI-EL Events

A Route List Exhausted failure may not impact voice mail and presence services, but by default Prime Central for HCS indicates impact on voicemail and presence services if Voice service is impaired.

The following table presents the list of events observed during internal testing.

Table A-74 *Observed Service Events for UC25*

Severity	Summary
Minor	Overall Attribute of the Customer_Voice_Service_Template tag of CUCM-CL-C070-1 is Marginal.
Minor	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-CL-C070-1 is Marginal.
Minor	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C070-1 is Marginal.

Observed Other-EL Events

None.

Service Tree Event Overlay Location and Content

SIA events are overlaid on the Service Tree in the Service Availability view. The following table presents the list of events observed during internal testing.

Table A-75 Observed Service Tree Events for UC25

Severity	Summary
...-> Voice Service	Meta event for Voice Service - C070
...-> Call Control -->Resources	CUST_C070_CLS_CUCM_CUCMCL- C070-1 RouteGroups(RG-AGGR); Default Event Name= Route List Exhausted; DescriptionURL= <

Next Steps

Step 1 Right-click **Raw event > Event Details > Next Steps** to display the following recommendation:

Check the RTMT Syslog Viewer for verification and further details. Assess whether additional resources should be added in the indicated route.

UC26 - Media List Exhausted

This use case describes the events that Prime Central for HCS receives if calls fail because of unavailable media resources. Prime Central for HCS performs SIA for this use case. This event alert network operators that calls requiring media resources such as Annunciator, Transcoder, Conference Bridge, and Music On Hold are failing.

Observed RC-EL Events

None.

Observed SI-EL Events

Media List Exhausted failures may not impact voice mail and presence services, but by default Prime Central for HCS indicates impact on voice mail and presence services if voice service is impaired. [Table A-76](#) shows the Service Events observed during testing.

Table A-76 Observed Service Events for UC26

Severity	Summary
Minor	Overall Attribute of the Customer_Voice_Service_Template tag of CUCM-CL-C070-1 is Marginal.
Minor	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-CL-C070-1 is Marginal.
Minor	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C070-1 is Marginal.

Observed Other-EL Events

None.

Service Tree Event Overlay Location and Content

SIA events are overlaid on the Service Tree in the Service Availability view. The following table presents the list of events observed during internal testing.

Table A-77 *Observed Service Tree Events for UC26*

Severity	Summary
...-> Voice Service	Meta event for Voice Service - C070
...-> Call Control -->Resources	Media List Exhausted::Component= VE-CUCM-CL-C070-1-cucm-70-pub.customer.com-- NULL_LIST; Media Resource Type= Annunciator; Media Resource List Name= NULL_LIST; Default Event Name= Media List Exhausted; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=MediaListExhausted >;

Next Steps

- Step 1** Right-click **Route List Exhausted > Event Details > Next Steps** to display the following recommendation:

Install additional resources to the indicated media resource list. This event indicates a network failure or device failure.

UC27 - High Resource Utilization by all Customer Sites

This use case describes the event that Prime Central for HCS receives if the High Utilization of Resources by all Customer sites event is encountered. Prime Central for HCS performs SIA for this use case.

Observed RC-EL Events

None.

Observed SI-EL Events

Media List Exhausted failures may not impact voice mail and presence services, but by default Prime Central for HCS indicates impacts to voice mail and presence services if voice service is impaired.

The following table presents the list of events observed during internal testing.

Table A-78 *Observed Service Events for UC27*

Severity	Summary
Minor	Overall Attribute of the Customer_Voice_Service_Template tag of CUCM-CL-C070-1 is Marginal.
Minor	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-CL-C070-1 is Marginal.
Minor	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C070-1 is Marginal.

Observed Other-EL Events

None.

Service Tree Event Overlay Location and Content

SIA events are overlaid on the Service Tree in the Service Availability view.

Table A-79 **Observed Service Events for UC27**

Location	Summary
...-> Voice Service	Meta event for Voice Service - C070.
...-> Call Control -->Resources	HighResourceUtilization::Component= Transcoder-cucm-70-pub.customer.com; Threshold Value(%)= 10; Violation Value(%)= 20; Port or Resource Type= Transcoder; Default Event Name= HighResourceUtilization; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=HighResourceUtilization >;

Next Steps

- Step 1** Right-click the **Media List Exhausted > Event Details > Next Steps** to display the the following recommendation:

Assess whether you should install additional resources. While this event is generated, click the event ID to view event details and identify which resource exceeded the threshold.

Use the performance graph or RTMT (for CUCM) to monitor resource utilization in real time and over the past 72 hours to verify high utilization and determine whether you need to install additional resources.

UC28 - Memory, CPU, Disk Threshold Exceeded - CUCxn

This use case describes the events that Prime Central for HCS receives if there is a memory, CPU, or disk threshold exceeded issue on Unity Connection (CUCxn). Prime Central for HCS displays Service Impact (SI) events only for such incidents.

Observed RC-EL Events

None.

Observed SI-EL Events

These CUCxn issues affect Voice mail. The following table presents the list of events observed during internal testing.

Table A-80 **Observed Service Events for UC27**

Severity	Summary
Minor	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C071-1 is Marginal.

Observed Other-EL Events

None.

Service Tree Event Overlay Location and Content**Table A-81** *Observed Service Tree Events for UC28*

Location	Summary
...-> ApplicationResources	InsufficientFreeMemory::Component= RAM-cucxn-71-pub.customer.com/1; RAMTotalSize= 3920 MB; FreePhysicalMemoryThreshold= 15; UsedRAM= 3488 MB; FreePhysicalMemoryInPercentage= 11 %; Default ;
...-> ApplicationResources	HighUtilization::Component= PSRCucxn- 71-pub.customer.com/0; ProcessorUtilizationThreshold= 90; CpuUtilFiveMin= 99 %; Default Event Name= HighUtilization; DescriptionURL= < ;
...-> ApplicationResources	InsufficientFreeHardDisk::Component= DISK-cucxn-71-pub.customer.com/9; HardDiskTotalSize= 99404 MB; FreeHardDiskThreshold= 15; FreeHardDiskInPercentage= 11 %; HardDiskUsed= 87824 MB; Default ;

Next Steps

Step 1 Right-click **Synthetic RC event > Show Contained Events** to display the corresponding raw events.

Step 2 Right-click **Raw event > Event Details > Next Steps** to display the following recommendation:

***Insufficient free memory**

On Cisco IOS devices, run `show memory` to check memory utilization. Sometimes high memory utilization indicates a memory leak. Identify which process is using excessive memory and take action (including restarting the process). On other devices, close any unnecessary applications and stop the services that are not being used or are not required.

***High utilization**

Identify the processes using excessive CPU space. You may want to take action, which can include restarting the identified process or processes.

***Insufficient free disk space**

Uninstall unnecessary applications, delete temporary files to free disk space, and clean up unnecessary files.

UC29 - Low Number Of Available Licenses - CUCxn

This use case describes the events that Prime Central for HCS display if there are few available licenses in CUCxn. Prime Central for HCS displays Service Impact (SI) events for such incidents.

Observed RC-EL Events

None.

Observed SI-EL Events

Unavailable CUCxn licenses impacts Voicemail service.

Table A-82 *Observed Service Events for UC29*

Severity	Summary
Minor	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C072-1 is Marginal.

Observed Other-EL Events

None.

Service Tree Event Overlay Location and Content**Table A-83** *Observed Service Tree Events for UC29*

Location	Summary
...-> VoicemailResources	Subscriber License Violated::Component= 192.6.4.133- System; Detail= CUCxn-72-sub]: An insufficient license violation has occurred. For details,open the Licensing screens on Cisco Unity Connection Administration web pages. Tag LicSubscribersMax licenses 10 subscribers, but 502 are being used. Please reduce usage to match the licensed limits or purchase additional licensed functionality.

Next Steps

- Step 1** Right-click **Synthetic RC event > Show Contained Events** to display the corresponding raw events.
- Step 2** Right-click **Raw event > Event Details > Next Steps** to display the recommendation.

UC30 - VM Resources - Memory

This use case describes the event that receives if a VM exceed its memory threshold. Prime Central for HCS performs SIA for this use case; no RCA is performed.

Observed RC-EL Events

None.

Observed SI-EL Events

CUCM voice service impacts voice mail and presence. In this example, a CUCM VM is used and all voice, VM, and presence services are affected because of the dependency. If CUCxN or CUP VM memory is used, you should see only one service impacted (CUCxn or CUP).

Table A-84 *Observed Service Events for UC30*

Severity	Summary
Minor	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C070-1 is Marginal.
Minor	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-CL-C070-1 is Marginal.
Minor	Overall Attribute of the Customer_Voice_Service_Template tag of CUCM-CL-C070-1 is Marginal.

Observed Other-EL Events

None.

Service Tree Event Overlay Location and Content

Table A-85 *Observed Service Tree Events for UC30*

Location	Summary
...-> VM_Resources	The virtual machine guest memory usage is high on CUCM-70-sub. Message: KVM_VM_Guest_Memory_Util_High[(Guest_Util>ON VM:cisco-10.11.3.145:ESX ON CUCM-70-sub (Guest_Util=76)]
...-> Voice Service	Meta event for Voice Service - C070

Next Steps

-
- Step 1** Check vCenter to confirm the alarm.
- Step 2** Add additional memory resources, if required to rectify the alarm.
-

UC31 - VM Resources - CPU

This use case describes what event will Prime Central for HCS receive if VM exceed the threshold for the CPU. Prime Central for HCS will only perform SIA for this use case and no RCA will be performed.

Root Cause Events Observed

None.

Service Events Observed

CUCM voice service impacted voice mail and presence. In this example, CUCM VM is used and all Voice/ VM/Presence services are affected due to dependency. If CUCxN or CUP VM CPU threshold is violated, it should only see one service affected: CUCxn or CUP service.

Table A-86 *SI events Observed for UC31 - VM Resources - CPU*

Severity	Summary
Minor	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C071-1 is Marginal.
Minor	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-CL-C071-1 is Marginal.
Minor	Overall Attribute of the Customer_Voice_Service_Template tag of CUCM-CL-C071-1 is Marginal.

Other Events Observed

None.

Table A-87 *SI events Observed for UC31 - VM Resources - CPU*

Location	Summary
...-> VM_Resources	CPU use high on CUCM-71-pub. Message: KVM_VM_CPU_Util_High[(Utilization>5) ON VM:cisco-10.11.3.152:ESX ON CUCM-71-pub (Utilization=10)]
...-> Voice Service	Meta event for Voice Service - C071

Next Steps

Check vCenter to confirm the alarm. Add additional CPU resources to VM as needed to rectify the alarm.

UC32 - VM Resources - Disk usage

This use case describes what event will Prime Central for HCS receive if VM exceed the threshold for the disk usage. Prime Central for HCS will only perform SIA for this use case and no RCA will be performed.

Root Cause Events Observed

None.

Service Events Observed

CUCM voice service impacted voice mail and presence. In this example, CUCM VM is used and all Voice/ VM/Presence services are affected due to dependency. If CUCxN or CUP VM disk is used, it should only see one service affected: CUCxN or CUP service.

Table A-88 *SI events Observed for UC32 - VM Resources - Disk usage*

Severity	Summary
Minor	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxN-CL-C070-1 is Marginal.
Minor	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-CL-C070-1 is Marginal.
Minor	Overall Attribute of the Customer_Voice_Service_Template tag of CUCM-CL-C070-1 is Marginal.

Other Events Observed

None.

Service tree event overlay location

Table A-89 *SI events Observed for UC32 - VM Resources - Disk usage*

Location	Summary
...-> VM_Resources	The virtual machine disk partition free space is low on CUCM-70-sub.Message: KVM_VM_Disk_Free_Low \[(Percent_Free>=0 AND Percent_Free<10) ON VM:cisco-10.11.3.145:ESX ON CUCM-70-sub (Percent_Free=0)\]
...-> Voice Service	Meta event for Voice Service - C070

Next Steps

Check vCenter to confirm the alarm and remove files in VM to free up disk space.

UC33 - VM Resources - CPU ready time

This use case describes what event will Prime Central for HCS receive if VM exceed the threshold for the CPU Ready Time. Prime Central for HCS will only perform SIA for this use case and no RCA will be performed.

Root Cause Events Observed

None.

Service Events Observed

CUCM voice service impacted voice mail and presence. In this example, event is triggered on CUCM VM and all Voice/ VM/Presence services are affected due to dependency. If event is triggered on CUCxN or CUP VM, it should only see one service affected: CUCxn or CUP service.

Table A-90 Service Events Observed for UC33 - VM Resources - CPU ready time

Severity	Summary
Minor	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxn-CL-C070-1 is Marginal.
Minor	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-CL-C070-1 is Marginal.
Minor	Overall Attribute of the Customer_Voice_Service_Template tag of CUCM-CL-C070-1 is Marginal.

Other Events Observed

None.

Table A-91 Service Tree events Observed for UC33 - VM Resources - CPU ready time

Location	Summary
...-> VM_Resources	The CPU percent ready is high on CUCM-70-sub. Message: KVM_VM_CPU_Ready_High[(Percent_Rdy>5) ON VM:cisco-10.11.3.148:ESX ON CUCM-70-sub (Percent_Rdy=7)]
...-> VM_Resources	The CPU percent ready is high on CUCM-70-pub. Message: KVM_VM_CPU_Ready_High[(Percent_Rdy>5) ON VM:cisco-10.11.3.148:ESX ON CUCM-70-pub (Percent_Rdy=8)]
...-> Voice Service	Meta event for Voice Service - C070

Next Steps

-
- Step 1** Check vCenter DM to confirm the alarm and make sure host is not overstressed by hosting VMs.
 - Step 2** Manually move some VMs to other hosts if needed.
 - Step 3** Configure DRS if possible to minimize the stress on any particular hosts among the cluster.
-

UC34 - VM Resources - Disk latency

This use case describes what event will Prime Central for HCS receive if VM exceed the threshold for the Disk Latency. Prime Central for HCS will only perform SIA for this use case and no RCA will be performed.

Root Cause Events Observed

None.

Service Events Observed

CUCM voice service impacted voice mail and presence. In this example, event is triggered on CUCM VM and all Voice/ VM/Presence services are affected due to dependency. If event is triggered on CUCxN or CUP VM, it should only see one service affected: CUCxN or CUP service.

Table A-92 **Root Cause Events Observed for UC34 - VM Resources - Disk latency**

Severity	Summary
Minor	Overall Attribute of the Customer_Voicemail_Service_Template tag of CUCxN-CL-C070-1 is Marginal.
Minor	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-CL-C070-1 is Marginal.
Minor	Overall Attribute of the Customer_Voice_Service_Template tag of CUCM-CL-C070-1 is Marginal.

Other Events Observed

None.

Table A-93 **Service tree events Observed for UC34 - VM Resources - Disk latency**

Location	Summary
...-> VM_Resources	Alarm "Virtual Machine Disk Latency High" on CUCM-70- sub changed from Red to Yellow. Message: KVM_VM_Disk_Latency \\(Event_Type=N"AlarmStatusChangedEvent" AND Event_TextLIKEN"*Virtual*Machine*Disk*Latency*" ON VM:cisco-10.11.3.148:ESX ON 31448316 (Event_Type=AlarmStatusChangedEventEvent_Text=Alarm "Virtual Machine Disk Latency High" on CUCM-70-sub changed from Red to Yellow))]
...-> VM_Resources	Alarm "Virtual Machine Disk Latency High" on CUCM-70- pub changed from Red to Yellow. Message: KVM_VM_Disk_Latency \\(Event_Type=N"AlarmStatusChangedEvent" AND Event_TextLIKEN"*Virtual*Machine*Disk*Latency*" ON VM:cisco-10.11.3.148:ESX ON 31448313 (Event_Type=AlarmStatusChangedEventEvent_Text=Alarm "Virtual Machine Disk Latency High" on CUCM-70-pub changed from Red to Yellow))]
...-> Voice Service	Meta event for Voice Service - C070.

Next Steps

-
- Step 1** Check vCenter DM to confirm the alarm and make sure LUN is not overstressed by hosting VMs.
- Step 2** Manually move some VMs to other LUN if needed.
- Step 3** Configure Storage DRS if possible to minimize the stress on any particular LUN.
-

UC35 - ASR1K - Chassis Failure

This use case describes the impact on offnet service in the event of a chassis failure in the physical ASR1K router.

Root Cause Events Observed

None

Service Events Observed

offnet voice service events are listed in the following table:

Table A-94 *Service Events Observed for UC35 - ASR1K - Chassis Failure*

Severity	Summary
Critical	<Customer-Name> offnet voice service is bad. When all ASR1Ks under CUBE-SP service are down.
Minor	<Customer-Name> offnet voice service is marginal. When one or more (but not all) ASR1Ks under CUBE-SP service are down.

Other Events Observed

None

Table A-95 *Service Tree events Observed for UC35 - ASR1K - Chassis Failure*

Location	Summary
...->Router Availability	Unresponsive::Component= 172.20.127.100; SystemObjectID=.1.3.6.1.4.1.9.1.923; Description= Cisco IOS Software, IOS-XE Software (PPC_LINUX_IOSD-ADVENTERPRISEK9-M), Version 15.3(1)S, RELEASE SOFTWARE (fc4)\X0D\X0ATechnical Support: http://www.cisco.com/techsupport/X0D\X0ACopyright (c) 1986-2012 by Cisco Systems, Inc.\X0D\X0ACompiled Tue 27-Nov-12 11:05 by mcpre; DiscoveredFirstAt= 01-28-2013 10:20:18; Type= ROUTER; DisplayClassName= Router; SNMPAddress= 172.20.127.100; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 01-28-2013 10:20:18; Default Event Name= Unresponsive; Description URL= < http://172.23.2.235:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine?tag=Unresponsive >;

Next Steps

-
- Step 1** Check vCenter DM to confirm the alarm and make sure the host is not overstressed by hosting VMs.
- Step 2** Manually move some VMs to other hosts, if needed.
- Step 3** Configure DRS, if possible, to minimize the stress on any particular hosts among the cluster.
-

UC36 - ASR1K - Power Supply/Fan Failure

This use case describes the impact on offnet voice service in the event of a power supply or fan failure in the physical ASR1K router.

Root Cause Events Observed

None

Service Events Observed

offnet voice service events are listed in the following table:

Table A-96 *Service Events Observed for UC35- ASR1K - Power Supply/Fan Failure*

Severity	Summary
Minor	<Customer-Name> offnet voice service is marginal

Other Events Observed

None

Table A-97 *Service Tree events Observed for UC35 - ASR1K - Power Supply/Fan Failure*

Location	Summary
...->Router Environmental	TemperatureHigh::Component= 172.20.127.100; SystemObjectID=.1.3.6.1.4.1.9.1.923; Description= Cisco IOS Software, IOS-XE Software (PPC_LINUX_IOSD-ADVENTERPRISEK9-M), Version 15.3(1)S, RELEASE SOFTWARE (fc4)\X0D\X0ATechnical Support: http://www.cisco.com/techsupport/X0D\X0ACopyright (c) 1986-2012 by Cisco Systems, Inc.\X0D\X0ACompiled Tue 27-Nov-12 11:05 by mcpre; DiscoveredFirstAt= 01-28-2013 10:20:18; Type= ROUTER; DisplayClassName= Router; SNMPAddress= 172.20.127.100; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 01-28-2013 10:20:18; Default Event Name= TemperatureHigh; DescriptionURL= < http://172.23.2.235:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine?tag=TemperatureHigh >;

UC37 - ASR1K - RP/ES/SPA Failure

This use case describes the impact on offnet voice service in the event of a router card failure that results in interface down events.

Root Cause Events Observed

None

Service Events Observed

offnet voice service events are listed in the following table:

Table A-98 **Service Events Observed for UC35- ASR1K - Chassis Failure**

Severity	Summary
Minor	<Customer-Name> offnet voice service is marginal.

Other Events Observed

None

Table A-99 **Service Free Events Observed for UC37 - ASR1K - RP/ES/SPA Failure**

Location	Summary
...->Router Interface Availability	OperationallyDown::Component= IF-10.13.1.72/33 [SB86]; AdminStatus= UP; DuplexMode= FULLDUPLEX; OperStatus= UP; MaxSpeed= 56000; Type= GENERIC; Mode= NORMAL; IsFlapping= false; InterfaceCode= CODEUNKNOWN; LastChangedAt= 01-08-2013 22:11:02; Default Event Name= OperationallyDown; DescriptionURL= < http://150.0.0.44:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine?tag=OperationallyDown >;

UC38 - SIP Trunk from Leaf to CUBE-SP - Loss of SIP Trunk

This use case describes the impact on offnet voice service when there is a loss of SIP trunk between CUBE-SP and leaf cluster without losing IP connectivity.

Root Cause Events Observed

None

Service Events Observed

offnet voice service events are listed in the following table:

Table A-100 **Service Events Observed for UC38 - SIP Trunk from Leaf to CUBE-SP - Loss of SIP Trunk**

Severity	Summary
Critical	<Customer-Name> offnet voice service is bad. When all SIP Trunks are out of service.
Minor	<Customer-Name> offnet voice service is marginal. When one or more SIP trunks are out of service.

Other Events Observed

None

Table A-101 **Service Tree events Observed for UC38 - SIP Trunk from Leaf to CUBE-SP - Loss of SIP Trunk**

Location	Summary
...->SIP Trunk under CUCM Offnet Service	SIP Trunk Out Of Service::Component= 172.23.2.200-hcs-asr-1; SIP Trunk Name= hcs-asr-1; Unavailable remote peers with Reason Code= [local=2, 172.23.218.2]; Default Event Name= SIP Trunk Out Of Service; DescriptionURL= < http://172.23.2.235:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine?tag=SIPTrunkOutOfService >;
...->SIP Trunk under CUCM Offnet Service	SIP Trunk Partially In Service::Component= 172.23.2.200-hcs-asr-1; SIP Trunk Name= hcs-asr-1; Available remote peers for this SIP trunk= [195.5.171.1]; Unavailable remote peers with Reason Code= [local=2, 1.1.1.1]; Default Event Name= SIP Trunk Partially In Service; DescriptionURL= < http://172.23.2.235:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine?tag=SIPTrunkPartiallyInService >;

UC39 - CUBE-SP Adjacency Status

This use case describes the impact on offnet voice service when there is a loss of adjacency when CUCM application is down.

Root Cause Events Observed

Root cause events are generated when CUCM is shut down. The following events are displayed as synthetic root cause events:

- OM_CUCM_OM_Connectivity—Indicates that Cisco Unified Communications Manager is down.
- OM_CUCM_NodeRestart—Indicates that Cisco Unified Communications Manager node has been restarted.
- OM_CUCM_Processes—Indicates that Cisco Unified Communications Manager services are down.

Service Events Observed

offnet voice service events are listed in the following table:

Table A-102 Service Events Observed for UC39 - CUBE-SP Adjacency Status

Severity	Summary
Critical	<Customer-Name> offnet voice service is bad. When all northbound or southbound adjacencies are down.
Minor	<Customer-Name> offnet voice service is marginal. When one or more northbound or southbound adjacencies are down.

Other Events Observed

None

Table A-103 Service Tree events Observed for UC39 - CUBE-SP Adjacency Status

Location	Summary
Southbound Adjacency Service -> Adjacency Name -> Adjacency Status	AdjacencyDetached::Component= hcs-sbc/Cust1/SIP; SBCServiceName= hcs-sbc; AdjacencyType= SIP; AdjacencyName= Cust1; AdjacencyAccountName= Aggregation; Default Event Name= AdjacencyDetached; DescriptionURL= < http://172.23.2.235:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine?tag=AdjacencyDetached >;
Northbound Adjacency Service -> Adjacency Name -> Adjacency Status	AdjacencyDetached::Component= hcs-sbc/NB-hcs-sbc-1/SIP; SBCServiceName= hcs-sbc; AdjacencyType= SIP; AdjacencyName= NB-hcs-sbc-1; AdjacencyAccountName= NB-hcs-sbc-1; Default Event Name= AdjacencyDetached; DescriptionURL= < http://172.23.2.235:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine?tag=AdjacencyDetached >;

UC40 - Voice Quality Degradation

This use case describes the impact on offnet service when MOS quality is critical or major.

Root Cause Events Observed

None

Service Events Observed

offnet voice service events are listed in the following table:

Table A-104 Service Events Observed for UC35 - Voice Quality Degradation

Severity	Summary
Minor	<Customer-Name> offnet voice service is marginal.

Other Events Observed

None

Table A-105 Service Tree events Observed for UC40 - Voice Quality Degradation

Location	Summary
Southbound Adjacency Service -> Adjacency Name -> Adjacency QoS	MOSCQEReachedMajorThreshold::Component= hcs-sbc/Cust1; SBCServiceName= hcs-sbc; AdjacencyName= Cust1; MOSCurrentValue= 41; AlertPreviousLevel= Normal; NormalAlertCount= 0; MinorAlertCount= 1; MajorAlertCount= 0; CriticalAlertCount= 0; AlertSummaryPeriod= 5 minutes; AlarmDescription= Approximated MOSCQE value crossed major level configured; Default Event Name= MOSCQEReachedMajorThreshold; DescriptionURL= < http://172.23.85.117:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine?tag=MOSCQEReachedMajorThreshold >
Northbound Adjacency Service -> Adjacency Name -> Adjacency QoS	MOSCQEReachedCriticalThreshold::Component= hcs-sbc/NB-hcs-sbc-1; SBCServiceName= hcs-sbc; AdjacencyName= NB-hcs-sbc-1; MOSCurrentValue= 41; AlertPreviousLevel= Normal; NormalAlertCount= 0; MinorAlertCount= 1; MajorAlertCount= 0; CriticalAlertCount= 0; AlertSummaryPeriod= 5 minutes; AlarmDescription= Approximated MOSCQE value crossed critical level configured; Default Event Name= MOSCQEReachedCriticalThreshold; DescriptionURL= < http://172.23.85.117:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine?tag=MOSCQEReachedCriticalThreshold >;

UC41 - CUBE - SP Security Violation

This use case describes the impact on offnet voice service when CUBE-SP security events take place.

Root Cause Events Observed

None

Service Events Observed

offnet voice service events are listed in the following table:

Table A-106 Service Events Observed for UC41 - CUBE - SP Security Violation

Severity	Summary
Minor	<Customer-Name> offnet voice service is marginal.

Other Events Observed

None

Table A-107 Service Tree events Observed for UC41 - CUBE-SP Security Violation

Location	Summary
...-> CUBE-SP Security	SourceAlert::Component= hcs-sbc/3/1/3/3.3.3.33/1/1.1.1.112/3/VPNID; SBCServiceName= hcs-sbc; VdbId= 3; GateId= 1; FlowPairId= 3; LocalAddressType= dns; LocalAddress= 3.3.3.33; LocalPort= 1; RemoteAddressType= ipv4z; RemoteAddress= 1.1.1.112; RemotePort= 3; VpnId= VPNID; AlarmDescription= This is to alert that some unwanted data packets are received by the system from an undesirable IP/port.; Default Event Name= SourceAlert; DescriptionURL= < http://172.23.85.117:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine?tag=SourceAlert >;
..-> CUBE-SP Security	DynamicBlackList::Component= hcs-sbc/globalnew12/0.0.0.23/0; SBCServiceName= hcs-sbc; SubFamily= Blacklist VPN; VpnId= globalnew12; AddressType= ipv4; Address= 0.0.0.23; TransportType= UDP; PortNumber= 0; AlarmDescription= source is added to or removed from the blacklist table; Default Event Name= DynamicBlackList; DescriptionURL= < http://172.23.85.117:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine?tag=DynamicBlackList >;

UC42 - CUBE-SP Resource Performance Degradation

This use case describes the impact on offnet voice service when CUBE-SP resource performance degrades.

Root Cause Events Observed

None

Service Events Observed

offnet voice service events are listed in the following table:

Table A-108 Service Events Observed for UC42 - CUBE-SP Resource Performance Degradation

Severity	Summary
Minor	<Customer-Name> offnet voice service is marginal.

Other Events Observed

None

Table A-109 Service Tree events Observed for UC42 - CUBE-SP Resource Performance Degradation

Location	Summary
...->CUBE-SP Performance	MemoryCongestion::Component= hcs-sbc/3; SBCServiceName= hcs-sbc; AlarmDescription= CPU/Memory congestion in SBC is raised; Default Event Name= MemoryCongestion; DescriptionURL= < http://172.23.85.117:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine?tag=MemoryCongestion >;
...->CUBE-SP Performance	CPUCongestion::Component= hcs-sbc/2; SBCServiceName= hcs-sbc; AlarmDescription= CPU/Memory congestion in SBC is raised; Default Event Name= CPUCongestion; DescriptionURL= < http://172.23.85.117:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine?tag=CPUCongestion >;

UC43 - CUBE-SP SLA Violation

This use case describes the impact on offnet voice service when CUBE-SP SLA violation takes place.

Root Cause Events Observed

None

Service Events Observed

offnet voice service events are listed in the following table:

Table A-110 Service Events Observed for UC43 - CUBE-SP SLA Violation

Severity	Summary
Minor	<Customer-Name> offnet voice service is marginal.

Other Events Observed

None

Table A-111 Service Tree events Observed for UC43 - CUBE-SP SLA Violation

Location	Summary
...->CUBE-SP Performance	SLAViolation::Component= hcs-sbc/unknown/global/call setup; SBCServiceName= hcs-sbc; SLAPolicyAccountName= unknown; SLAPolicyScope= global; SLAPolicyLimit= 700; SLACurrentUsage= 700; SLAViolationEvent= call setup; SLAPolicyRestriction= allowable number of concurrent calls; AlarmDescription= Violation of Service Level Agreement as described in the policy tables; Default Event Name= SLAViolation; DescriptionURL= < http://172.23.85.117:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine?tag=SLAViolation >;

CP1 - CUCMIP Critical Processes Failure

This use case describes the events that the Prime Central for HCS dashboard displays if a critical process fails in CUCMIP. Prime Central for HCS generates RC and SI events for such incidents.

Observed RC-EL Events

When the critical process such as **sipd** is down, the CUMIP server generate Service Down event and CUOM process it and transmit it to Prime Central for HCS system.

Table A-112 Observed RC-EL Events for CP1)

Severity	EventTypeId	Summary
<ul style="list-style-type: none"> Critical 	<ul style="list-style-type: none"> OM_CUP_OM_ Processes 	Synthetic Event for OM_CUP_Processes group events from cup-82- pub.customer.com

Observed SI-EL Events

If critical process such as **sipd** is down, it will affect presence and IM feature of soft clients like Cisco Jabber.

Table A-113 Observed SI-EL Events for CP1

Severity	Summary
<ul style="list-style-type: none"> Minor 	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-87-pub is Marginal.

Observed Other-EL Events

None

Correlated Events in Service Tree

The following table shows the events that are overlaid in Service Tree.

Table A-114 Observed SI-EL Events for CP1

Node	Summary
<ul style="list-style-type: none"> 87-pub.customer.com 	ServiceDown::Component= VS-cup-87-pub.customer.com/ Cisco SIP Proxy; ProductName= Cisco SIP Proxy; CurrentState= Stopped; Default Event Name= ServiceDown; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=ServiceDown >;

Next Steps

-
- Step 1** Abort the script that will kill the **sipd** process.
- Step 2** Go to the UC Serviceability page and Start the Cisco SIP Proxy service.
-

CP2 - Application Cold Failure - CUCMIP

This use case describes the events that Prime Central for HCS receives if a CUCMIP server restarts. This type of incident generates RC and SI events.

Observed RC-EL Events

When the CUCMIP server restarts, synthetic RCA events of type OM_CUP_OM_Connectivity is Observed.

Table A-115 **Observed RC-EL Events for CP2**

Severity	EventTypeId	Summary
<ul style="list-style-type: none"> Critical 	<ul style="list-style-type: none"> OM_CUP_OM_Connectivity 	Synthetic Event for OM_CUP_OM_Connectivity group events from cup-82-pub.customer.com

Observed SI-EL Events

CUP voice service impacts voice mail and presence. The following table shows SI-EL events observed during testing.

Table A-116 **Observed SI-EL Events for CP2**

Severity	Summary
<ul style="list-style-type: none"> Minor 	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-82-pub is Marginal.

Observed Other-EL Events

None.

Correlated Events in Service Tree

The following table shows events which are correlated in Service Tree.

Table A-117 Observed Service Tree Events for CP2

Severity	Summary
...-> Cluster_Availabilit y--> Pub: CUP-82-pub	RTMTDataMissing::Component= cup-82-pub.customer.com; Name= cup-82-pub.customer.com; HostDescription= Hardware:VMware, 4 Intel(R) Xeon(R) CPU X5680 @ 3.33GHz, 6144 MB Memory: Software:UCOS 4.0.0.0-44; Reason= Error collecting RTMT data. Error reason: HTTP communication error; Default Event Name= RTMTDataMissing; DescriptionURL= < http://150.0.0.52:1741/ CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=RTMTDataMissing >;
...-> Cluster_Availabilit y--> Pub: CUP-82-pub	PerformancePollingStopped::Component= cup-82-pub.customer.com; Error Message String= 16- Oct-2012 15:07:59 EDT,cup-82-pub.customer.com,192.6.4.210,Cannot collect data. The device is experiencing communication problems. Device may be in partially monitored state. Check HTTP(S) credentials.; Default Event Name= PerformancePollingStopped; DescriptionURL= < http://150.0.0.52:1741/ CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped >;

Next Steps

The system restarts automatically and the events are also cleared in 60 minutes.

CP3 - VMware VM Failure - CUCMIP

This use case describes the events that the Prime Central for HCS dashboard displays if a VM running CUCMIP fails abruptly. Prime Central for HCS generates RC and SI events for such incidents.

Observed RC-EL Events

When the VM shuts down, numerous synthetic RCA events are observed, including VC_VM_Avlblty, and OM_CUP_OM_Connectivity. Eventually, Prime Central for HCS stabilizes to one root cause, VC_VM_Avlblty.

Table A-118 Observed RC-EL Events for CP3

Severity	EventTypeId	Summary
<ul style="list-style-type: none"> Critical 	<ul style="list-style-type: none"> VC_VM_Avlblty 	Synthetic Event for VC_VM_Avlblty group events from CUP-82-pub

Observed SI-EL Events

VM failure impacts presence service. Table 20-99 shows SI-EL events observed during testing.

Table A-119 **Observed SI-EL Events for CP3**

Severity	Summary
<ul style="list-style-type: none"> Minor 	Overall attribute of the Customer_Presence_Service_Template tag of CUP-82-pub is Marginal.

Observed Other-EL Events

None.

Service Tree Event Overlay Location and Content

SIA events are overlaid in the service tree view portlet. The following table shows service tree events observed during testing:

Table A-120 **Observed Service Tree Events for CP3**

Location	Summary
...-> Cluster_Availabilit y--> Pub: CUP-82-pub	RTMTDataMissing::Component= cup-82-pub.customer.com; Name= cup-82-pub.customer.com; HostDescription= Hardware:VMware, 4 Intel(R) Xeon(R) CPU X5680 @ 3.33GHz, 6144 MB Memory: Software:UCOS 4.0.0.0-44; Reason= Error collecting RTMT data. Error reason: HTTP communication error; Default Event Name= RTMTDataMissing; DescriptionURL= < http://150.0.0.52:1741/ CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=RTMTDataMissing >;
...-> Cluster_Availabilit y--> Pub: CUP-82-pub	PerformancePollingStopped::Component= cup-82-pub.customer.com; Error Message String= 16- Oct-2012 13:28:00 EDT,cup-82- pub.customer.com,192.6.4.210,Cannot collect data. The device is experiencing communication problems. Device may be in partially monitored state. Check HTTP(S) credentials.; Default Event Name= PerformancePollingStopped; DescriptionURL= <http://150.0.0.52:1741/ CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped >;
...-> Cluster_Availabilit y--> Pub: CUP-82-pub	Unresponsive::Component= cup-82-pub.customer.com; SystemObjectID= .1.3.6.1.4.1.9.1.1348; Description= Hardware:VMware, 4 Intel(R) Xeon(R) CPU X5680 @ 3.33GHz, 6144 MB Memory: Software:UCOS 4.0.0.0-44; DiscoveredFirstAt= 10-11-2012 13:53:45; Type= HOST; DisplayClassName= Host; SNMPAddress= 192.6.4.210; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 10-16-2012 06:03:55; Default Event Name= Unresponsive; DescriptionURL= < http://150.0.0.52:1741/ CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=Unresponsive >;
...-> Cluster_Availabilit y--> Pub: CUP-82-pub	The virtual machine CUP-82- pub running on 10.11.3.158 is offline. Message: KVM_VM_Powered_Off_Cisco_HCM [(Event_Type=N"VmPoweredOffEvent") ON VM:tb1-vcent-10.11.3.158:ESX ON 39450127 (Event_Type=VmPoweredOffEvent)]

Next Steps

Power on the affected VM.

CP4 - CUCMIP VMware ESXi Host Failure

This use case describes the events that Prime Central for HCS receives if the VMware ESXi host fails. This type of incident generates RC and SI events. The CUCMIP VM is automatically brought up in another host if HA is enabled on the cluster. If HA is not configured for the cluster, CUCMIP nodes stay down until the ESXi Host is recovered.

Observed RC-EL Events

When the ESXi host shuts down, numerous synthetic RCA events are observed, including VC_Host_Avblbty, VC_VM_Avblbty, UCS_BladeLinks, and OM_CUP_OM_Connectivity. Eventually, there are two synthetic RCA events outstanding: VC_Host_Avblbty and UCS_Bladelinks. These two are sibling events in the correlation tree. The following table shows RC-EL events observed during testing.

Table A-121 Observed RC-EL Events for CP4

Severity	EventTypeId	Summary
Major	UCS_BladeLinks	Synthetic Event for UCS_BladeLinks group events from 10.13.2.8
Critical	VC_Host_Avblbty	Synthetic Event for VC_Host_Avblbty group events from 10.13.3.34

Observed SI-EL Events

CUCMIP service is impacted.

Table A-122 Observed SI-EL Events for CP4

Severity	Summary
Critical	Overall attribute of the Customer_Presence_Service_Template tag of CUP-80-pub is Bad.

Observed Other-EL Events

Prime Central for HCS does not analyze these events, but they could point to potential root causes for impacted services.

Table A-123 Observed Other-EL Events for CP4

Severity	Summary
<ul style="list-style-type: none"> S = Major N = 10.13.2.8 	Network Interface (ifIndex = 469775808) Down, should be Up (ifEntry.469775808)
<ul style="list-style-type: none"> S = Major N = 10.13.2.9 	Network Interface (ifIndex = 469775824) Down, should be Up (ifEntry.469775824)

Table A-123 Observed Other-EL Events for CP4

Severity	Summary
<ul style="list-style-type: none"> S = Major N = 10.13.2.8 	Link Down (server 3/4, VNIC eth0)
<ul style="list-style-type: none"> S = Major N = 10.13.2.9 	Link Down (server 3/4, VNIC eth1)
<ul style="list-style-type: none"> S = Major N = 10.13.2.8 	Link Down (server 3/4, VHBA fc0)
<ul style="list-style-type: none"> S = Major N = 10.13.2.9 	Link Down (server 3/4, VHBA fc1)
<ul style="list-style-type: none"> S = Minor N = 10.13.2.8 	Fibre Channel Trunk Interface Down, Port Gracefully Shutdown (fcTrunkIfEntry.503317342.301)
<ul style="list-style-type: none"> S = Minor N = 10.13.2.9 	Fibre Channel Trunk Interface Down, Port Gracefully Shutdown (fcTrunkIfEntry.503317343.302)

Service Tree Event Overlay Location and Content

SIA events are overlaid on the service tree view portlet.

Table A-124 Observed Service Tree Events for CP4

Severity	Summary
...-> Cluster_Availabilit y--> Node:CUP-80-pub	PerformancePollingStopped::Component= cup-80-pub.customer.com; Error Message String= 23- Oct-2012 15:15:41 EDT,cup-80- pub.customer.com,192.6.6.190,Cannot collect data. The device is experiencing communication problems. Device may be in partially monitored state. Check HTTP(S) credentials.; Default Event Name= PerformancePollingStopped; DescriptionURL= < http://150.0.0.52:1741/ CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped >;
...-> Cluster_Availabilit y--> Node:CUP-80-sub	PerformancePollingStopped::Component= cup-80-sub.customer.com; Error Message String= 23- Oct-2012 15:15:41 EDT,cup-80- sub.customer.com,192.6.6.191,Cannot collect data. The device is experiencing communication problems. Device may be in partially monitored state. Check HTTP(S) credentials.; Default Event Name= PerformancePollingStopped; DescriptionURL= < http://150.0.0.52:1741/ CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped >;

Table A-124 Observed Service Tree Events for CP4

Severity	Summary
...-> Cluster_Availabilit y--> Node:CUP-80-pub	Unresponsive::Component= cup-80-pub.customer.com; SystemObjectID= .1.3.6.1.4.1.9.1.1348; Description= Hardware:VMware, 4 Intel(R) Xeon(R) CPU X5680 @ 3.33GHz, 6144 MB Memory: Software:UCOS 4.0.0.0-44; DiscoveredFirstAt= 10-17-2012 18:48:37; Type= HOST; DisplayClassName= Host; SNMPAddress= 192.6.6.190; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 10-23-2012 06:04:21; Default Event Name= Unresponsive; DescriptionURL= < http://150.0.0.52:1741/ CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=Unresponsive >;
...-> Cluster_Availabilit y--> Node:CUP-80-sub	Unresponsive::Component= cup-80-sub.customer.com; SystemObjectID= .1.3.6.1.4.1.9.1.1348; Description= Hardware:VMware, 4 Intel(R) Xeon(R) CPU X5680 @ 3.33GHz, 6144 MB Memory: Software:UCOS 4.0.0.0-44; DiscoveredFirstAt= 10-17-2012 19:37:09; Type= HOST; DisplayClassName= Host; SNMPAddress= 192.6.6.191; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 10-23-2012 06:04:05; Default Event Name= Unresponsive; DescriptionURL= < http://150.0.0.52:1741/ CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=Unresponsive >;
...-> VM Availability	The virtual machine CUP-80- pub running on host 10.13.3.34 is Disconnected. Message: KVM_VM_Disconnected_Cisco_HCM [(Event_Type=N"VmDisconnectedEvent") ON VM:tb3- vcent-10.13.3.34:ESX ON 2530557 (Event_Type=VmDisconnectedEvent)]
...-> VM Availability	The virtual machine CUP-80- sub running on host 10.13.3.34 is Disconnected. Message: KVM_VM_Disconnected_Cisco_HCM [(Event_Type=N"VmDisconnectedEvent") ON VM:tb3- vcent-10.13.3.34:ESX ON 2530557 (Event_Type=VmDisconnectedEvent)]

Next Steps

-
- Step 1** The VM on the host is automatically brought up in another host if HA is enabled.
- Step 2** Follow the steps given below to bring back the original host:
- Go to UCSM to bring the host back through boot server.
 - Manually power on CUCMIP VM if HA is not configured and VM is not configured to restart with host.
 - Drag and drop CUCMIP VM to the original host if HA is enabled.
-

CP5 - CUCMIP UCS Blade Failure

This use case describes the events that Prime Central for HCS receives if a UCS blade fails. This type of incident generates RC and SI events. The CUCMIP VM is automatically brought up in another host if HA is enabled on the cluster. If HA is not configured for the cluster, CUCMIP nodes stay down until the UCS blade is replaced.

Table A-125 **Observed RC-EL Events for CP5**

Severity	EventTypeld	Summary
Critical	UCS_Blade_Avblbty	Synthetic Event for UCS_Blade_Avblbty group events from 10.13.2.8

Observed SI-EL Events

CUCMIP service is impacted.

Table A-126 **Observed SI-EL Events for CP5**

Severity	EventTypeld	Summary
Critical	CUST_C080_CLS_CUP_CUP-80-pub	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-80-pub is Bad.

Observed Other-EL Events

Prime Central for HCS does not analyze these events, but they could point to potential root causes for the impacted services.

Table A-127 **Observed Other-EL Events for CP5**

Severity (s)/Customer (C)/Node (N)	EventName (EN)/EventTypeld (ET)	Summary
<ul style="list-style-type: none"> S = Indeterminate N = 10.13.2.8 	<ul style="list-style-type: none"> EN = fltAdaptorUnitAdaptorReachability ET = default 	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-80-pub is Bad.
<ul style="list-style-type: none"> S = Major N = 10.13.2.8 	<ul style="list-style-type: none"> EN = fltLsServerRemoved ET = UCS_Blade_ServiceProfile 	Service profile c3b4 underlying resource removed (FaultCode:fltLsServerRemoved, FaultIndex:3860463)
<ul style="list-style-type: none"> S = Major N = 10.13.2.8 	<ul style="list-style-type: none"> EN = fltAdaptorExtIfLinkDown ET = UCS_Adapter 	Adapter uplink interface 3/4/1/2 link state: unavailable (FaultCode:fltAdaptorExtIfLinkDown, FaultIndex:3860496)

Table A-127 Observed Other-EL Events for CP5 (continued)

Severity (s)/Customer (C)/Node (N)	EventName (EN)/EventTypeId (ET)	Summary
<ul style="list-style-type: none"> S = Major N = 10.13.2.8 		Network Interface (ifIndex = 469775808) Down, should be Up (ifEntry.469775808)
<ul style="list-style-type: none"> S = Major N = 10.13.2.9 		Network Interface (ifIndex = 469775824) Down, should be Up (ifEntry.469775824)
<ul style="list-style-type: none"> S = Major N = 10.13.2.8 		Link Down (server 3/4, VNIC eth0)
<ul style="list-style-type: none"> S = Major N = 10.13.2.9 		Link Down (server 3/4, VNIC eth1)
<ul style="list-style-type: none"> S = Major N = 10.13.2.8 		Link Down (server 3/4, VHBA fc0)
<ul style="list-style-type: none"> S = Major N = 10.13.2.9 		Link Down (server 3/4, VHBA fc1)
<ul style="list-style-type: none"> S = Major N = 10.13.2.8 		Network Interface (ifIndex = 520224960) Down, should be Up (ifEntry.520224960)
<ul style="list-style-type: none"> S = Major N = 10.13.2.9 		Network Interface (ifIndex = 520224960) Down, should be Up (ifEntry.520224960)
<ul style="list-style-type: none"> S = Minor N = 10.13.2.8 		Fibre Channel Trunk Interface Down, Port Gracefully Shutdown (fcTrunkIfEntry.503317342.301)
<ul style="list-style-type: none"> S = Minor N = 10.13.2.9 		Fibre Channel Trunk Interface Down, Port Gracefully Shutdown (fcTrunkIfEntry.503317343.302)

Service Tree Event Overlay Location and Content

SIA events are overlaid on the service tree view portlet.

Table A-128 **Observed Other-EL Events for CP5**

Location	Summary
...-> Cluster_Availability --> Node:CUP-80-pub	PerformancePollingStopped::Component= cup-80-pub.customer.com; Error Message String= 26- Oct-2012 16:16:28 EDT,cup-80-pub.customer.com,192.6.6.190,Cannot collect data. The device is experiencing communication problems. Device may be in partially monitored state. Check HTTP(S) credentials.; Default Event Name= PerformancePollingStopped; DescriptionURL= < http://150.0.0.52:1741/ CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped >;
...-> Cluster_Availability --> Node:CUP-80-sub	PerformancePollingStopped::Component= cup-80-sub.customer.com; Error Message String= 26- Oct-2012 16:16:28 EDT,cup-80-sub.customer.com,192.6.6.191,Cannot collect data. The device is experiencing communication problems. Device may be in partially monitored state. Check HTTP(S) credentials.; Default Event Name= PerformancePollingStopped; DescriptionURL= < http://150.0.0.52:1741/ CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped >;
...-> Cluster_Availability --> Node:CUP-80-pub	Unresponsive::Component= cup-80-pub.customer.com; SystemObjectID= .1.3.6.1.4.1.9.1.1348; Description= Hardware:VMware, 4 Intel(R) Xeon(R) CPU X5680 @ 3.33GHz, 6144 MB Memory; Software:UCOS 4.0.0.0-44; DiscoveredFirstAt= 10-24-2012 19:08:32; Type= HOST; DisplayClassName= Host; SNMPAddress= 192.6.6.190; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 10-26-2012 06:05:53; Default Event Name= Unresponsive; DescriptionURL= < http://150.0.0.52:1741/ CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=Unresponsive >;
...-> Cluster_Availability --> Node:CUP-80-sub	Unresponsive::Component= cup-80-sub.customer.com; SystemObjectID= .1.3.6.1.4.1.9.1.1348; Description= Hardware:VMware, 4 Intel(R) Xeon(R) CPU X5680 @ 3.33GHz, 6144 MB Memory; Software:UCOS 4.0.0.0-44; DiscoveredFirstAt= 10-24-2012 22:21:22; Type= HOST; DisplayClassName= Host; SNMPAddress= 192.6.6.191; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 10-26-2012 06:05:47; Default Event Name= Unresponsive; DescriptionURL= < http://150.0.0.52:1741/ CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=Unresponsive >;

Table A-128 Observed Other-EL Events for CP5 (continued)

Location	Summary
...-> VM Availability	The virtual machine CUP-80- pub running on host 10.13.3.34 is Disconnected. Message: KVM_VM_Disconnected_Cisco_HCM [(Event_Type=N"VmDisconnectedEvent") ON VM:tb3-vcnt-10.13.3.34:ESX ON 2530557 (Event_Type=VmDisconnectedEvent)]
...-> VM Availability	The virtual machine CUP-80- sub running on host 10.13.3.34 is Disconnected. Message: KVM_VM_Disconnected_Cisco_HCM [(Event_Type=N"VmDisconnectedEvent") ON VM:tb3-vcnt-10.13.3.34:ESX ON 2530558 (Event_Type=VmDisconnectedEvent)]

Next Steps

-
- Step 1** The VM on the host is automatically brought up in another host if HA is enabled.
- Step 2** The original host is brought back via following steps:
- a. Troubleshoot and resolve the blade issue.
 - a. Manually power on CUCMIP VM if HA is not enabled and VM is not configured to restart with host.
 - b. Drag and drop CUCMIP VM to the original host if HA is enabled.
-

CP6 - CUCMIP UCS Chassis Failure

This use case describes the events that Prime Central for HCS receives if the chassis hosting CUCM, CUCxn, and CUCMIP nodes loses power. This type of incident generates RC and SI events. The CUCMIP VM is automatically brought up in another host if HA is enabled on the cluster. If HA is not configured for the cluster, CUCMIP nodes stay down until the chassis is powered on.

In the following example, the same chassis hosts all UC VMs for customer 80.

Observed RC-EL Events

During the chassis powers off/on, numerous synthetic RCA events may be observed, including UCS_Chassis_Fault, UCS_Blade_Avblty, VC_Host_Avblty, and UCS_BladeLinks. The UCS_Chassis_Fault synthetic RCA event is the root cause. Additional root cause events were observed during our testing because of issues outlined in the note following the table.

Table A-129 Observed RC-EL Events for CP6

Severity	EventTypeId	Summary
Critical	UCS_Chassis_Fault	Synthetic Event for UCS_Chassis_Fault group events from 10.13.2.8
Critical	OM_CUCM_OM_Connectivity	Synthetic Event for OM_CUCM_OM_Connectivity group events from CUCM-CL-C080-1
Critical	VC_Host_Avblbty	Synthetic Event for VC_Host_Avblbty group events from 10.13.3.33

**Note**

Event OM_CUCM_OM_Connectivity shows up as the root cause event because the cluster level event does not participate in the event correlation dependency tree in the current release. VC_Host_Avblbty shows up as the root cause event because of the DDTS CSCuc06575 - Some VC_Host_Avblbty events remained as root cause during chassis failure.

Observed SI-EL Events

CUCM voice service impacts voice mail and presence. In this example, CUCxn and CUCMIP VMs are hosted in the same chassis, and all voice, voice mail, and presence services are affected.

Table A-130 Observed SI-EL Events for CP6

Severity (S)/Customer (C)/Node (N)	EventName (EN)/EventTypeId (ET)	Summary
<ul style="list-style-type: none"> S = Major N = 10.13.2.8 	<ul style="list-style-type: none"> EN = fltAdaptorExtIfLinkDown ET = UCS_Adapter 	Adapter uplink interface 3/1/1/2 link state: unavailable (FaultCode:fltAdaptorExtIfLinkDown, FaultIndex:3711164)
<ul style="list-style-type: none"> S = Indeterminate N = 10.13.2.8 	<ul style="list-style-type: none"> EN = fltAdaptorUnitAdaptorReachability ET = default 	Adapter 3/1/1 is unreachable (FaultCode:fltAdaptorUnitAdaptorReachability, FaultIndex:3695955)
<ul style="list-style-type: none"> S = Major N = 10.13.2.8 	<ul style="list-style-type: none"> EN = fltEtherSwitchIntFioSatelliteConnection Absent ET = UCS_PortsLinks 	No link between IOM port 3/1/1 and fabric interconnect A:1/9 (FaultCode:fltEtherSwitchIntFioSatelliteConnection Absent, FaultIndex:3468974)
<ul style="list-style-type: none"> S = Major N = 10.13.2.8 	<ul style="list-style-type: none"> EN = fltDcxVcMgmtVifDown ET = UCS_Mgmt_Link 	IOM 3 / 1 (A) management VIF 3 down, reason None (FaultCode:fltDcxVcMgmtVifDown, FaultIndex:3468977)

Table A-130 Observed SI-EL Events for CP6 (continued)

Severity (S)/Customer (C)/Node (N)	EventName (EN)/EventTypeId (ET)	Summary
<ul style="list-style-type: none"> S = Major N = 10.13.2.8 	<ul style="list-style-type: none"> EN = fltPortPioLinkDown ET = UCS_Etherne 	ether port 10 on fabric interconnect A oper state: link-down, reason: Link failure or notconnected(FaultCode:fltPortPioLinkDown, FaultIndex:3468975)
<ul style="list-style-type: none"> S = Major N= 10.13.2.8 	<ul style="list-style-type: none"> EN = fltEquipmentIOCardUnsupportedConnectivity ET = default 	IOM 3/1 (A) current connectivity does not match discovery policy: unsupported-connectivity (FaultCode: fltEquipmentIOCardUnsupportedConnectivity, FaultIndex:3695902)
<ul style="list-style-type: none"> S = Major N = 10.13.2.8 	<ul style="list-style-type: none"> EN = fltEquipmentIOCardUnsupportedConnectivity ET = default 	IOM 3/1 (A) current connectivity does not match discovery policy: unsupported-connectivity (FaultCode: fltEquipmentIOCardUnsupportedConnectivity, FaultIndex:3695902)
<ul style="list-style-type: none"> S = Major N= 10.13.2.8 	<ul style="list-style-type: none"> EN = fltLsServerInaccessible ET = default 	Service profile c3b1 cannot be accessed (FaultCode:fltLsServerInaccessible, FaultIndex:3695961)

Table A-130 Observed SI-EL Events for CP6 (continued)

Severity (S)/Customer (C)/Node (N)	EventName (EN)/EventTypeId (ET)	Summary
<ul style="list-style-type: none"> S = Warning C = C080 	<ul style="list-style-type: none"> EN = RTMTDataMissing ET = OM_CUCM_OM_Connectivity 	RTMTDataMissing::Component= VECUCM- CL-C080-1; CallManagerList= 192.6.4.186,192.6.4.193,192.6.4.188,192.6.4.187; ReasonForRTMTDataMissing= Unable to communicate with RTMT on publisher; CustomerName= C080; Default Event Name= RTMTDataMissing; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/ser vlet/ com.cisco.nm.help.ServerHelpEngi ne? tag=RTMTDataMissing >;
<ul style="list-style-type: none"> S = Warning C = C080 	<ul style="list-style-type: none"> EN = RTMTDataMissing ET = Default 	RTMTDataMissing::Component= cucxn-80-pub.customer.com; Name= cucxn-80-pub.customer.com; HostDescription= Hardware:VMware, 1 Intel(R) Xeon(R) CPU X5680 @ 3.33GHz, 6144 MB Memory: Software:UCOS 5.0.0.0-2; Reason= Error collecting RTMT data. Error reason: HTTP communication error; Default Event Name= RTMTDataMissing; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/ser vlet/ com.cisco.nm.help.ServerHelpEngi ne? tag=RTMTDataMissing >;

Chassis failures were observed for few instances of UCS_Chassis_Avblbty EventTypeId from fltEquipmentChassisPowerProblem event and the it is marked as 'Unknown' and not as 'Root Cause' or 'Symptom' event.

Service Tree Event Overlay Location and Content

Table A-131 Observed Service Tree Events for CP6

Location	Summary
...-> Cluster_Availability--> Node:CUP-80-pub	PerformancePollingStopped::Component= cup-80-sub.customer.com; Error Message String= 25-Oct-2012 16:16:33 EDT,cup-80-sub.customer.com,192.6.6.191,Cannot collect data. The device is experiencing communication problems. Device may be in partially monitored state. Check HTTP(S) credentials.; Default Event Name= PerformancePollingStopped; DescriptionURL= <http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped>;
...-> Cluster_Availability--> Sub: CUCM-80-sub2	PerformancePollingStopped::Component= cucm-80-sub2.customer.com; Error Message String= 25-Oct-2012 16:16:33 EDT,cucm-80-sub2.customer.com,192.6.6.192,Cannot collect data. The device is experiencing communication problems. Device may be in partially monitored state. Check HTTP(S) credentials.; Default Event Name= PerformancePollingStopped; DescriptionURL= <http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped>;
...-> Cluster_Availability--> Pub: CUCM-80-pub	PerformancePollingStopped::Component= cucm-80-pub.customer.com; Error Message String= 25-Oct-2012 16:16:33 EDT,cucm-80-pub.customer.com,192.6.6.186,Cannot collect data. The device is experiencing communication problems. Device may be in partially monitored state. Check HTTP(S) credentials.; Default Event Name= PerformancePollingStopped; DescriptionURL= <http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped>;
...-> Cluster_Availability--> Sub: CUCxn-80-sub	PerformancePollingStopped::Component= cucxn-80-sub.customer.com; Error Message String= 25-Oct-2012 16:16:33 EDT,cucxn-80-sub.customer.com,192.6.4.190,Cannot collect data. The device returned no data from a required MIB.; Default Event Name= PerformancePollingStopped; DescriptionURL= <http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped>;
...-> Cluster_Availability--> Pub: CUCxn-80-pub	PerformancePollingStopped::Component= cucxn-80-pub.customer.com; Error Message String= 25-Oct-2012 16:16:33 EDT,cucxn-80-pub.customer.com,192.6.4.189,Cannot collect data. The device returned no data from a required MIB.; Default Event Name= PerformancePollingStopped; DescriptionURL= <http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelpEngine? tag=PerformancePollingStopped>;

Table A-131 Observed Service Tree Events for CP6 (continued)

Location	Summary
...-> Cluster_Availabilit y--> Node:CUP-80-pub	Unresponsive::Component= cup-80-pub.customer.com; SystemObjectID= .1.3.6.1.4.1.9.1.1348; Description= Hardware:VMware, 4 Intel(R) Xeon(R) CPU X5680 @ 3.33GHz, 6144MB Memory: Software:UCOS 4.0.0.0-44; DiscoveredFirstAt= 10-24-2012 19:08:32; Type= HOST; DisplayClassName= Host; SNMPAddress= 192.6.6.190; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 10-25-2012 06:06:03; Default Event Name= Unresponsive; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=Unresponsive >;
...-> Cluster_Availabilit y--> Sub: CUCM-80-sub1	Unresponsive::Component= cucm-80-sub1.customer.com; SystemObjectID= .1.3.6.1.4.1.9.1.1348; Description= Linux release:2.6.18-194.26.1.el5PAE machine:i686; DiscoveredFirstAt= 10-17-2012 18:49:30; Type= HOST; DisplayClassName= Host; SNMPAddress= 192.6.6.187; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 10-24-2012 06:04:52; Default Event Name= Unresponsive; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=Unresponsive >;
...-> Cluster_Availabilit y--> Sub: CUCM-80-sub2	Unresponsive::Component= cucm-80-sub2.customer.com; SystemObjectID= .1.3.6.1.4.1.9.1.1348; Description= Linux release:2.6.18-194.26.1.el5PAE machine:i686; DiscoveredFirstAt= 10-24-2012 23:13:45; Type= HOST; DisplayClassName= Host; SNMPAddress= 192.6.6.192; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 10-25-2012 06:02:42; Default Event Name= Unresponsive; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=Unresponsive >;
...-> Cluster_Availabilit y--> Pub: CUCM-80-pub	Unresponsive::Component= cucm-80-pub.customer.com; SystemObjectID= .1.3.6.1.4.1.9.1.1348; Description= Linux release:2.6.18-194.26.1.el5PAE machine:i686; DiscoveredFirstAt= 10-17-2012 18:49:27; Type= HOST; DisplayClassName= Host; SNMPAddress= 192.6.6.186; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 10-25-2012 06:03:58; Default Event Name= Unresponsive; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/com.cisco.nm.help.ServerHelp Engine? tag=Unresponsive >;
...-> Cluster_Availabilit y--> Sub: CUCxn-80-sub	Unresponsive::Component= cucxn-80-sub.customer.com; SystemObjectID= .1.3.6.1.4.1.9.1.1348; Description= Hardware:VMware, 1 Intel(R) Xeon(R) CPU X5680 @ 3.33GHz, 6144 MB Memory: Software:UCOS 5.0.0.0-2; DiscoveredFirstAt= 10-24-2012 17:05:42; Type= HOST; DisplayClassName= Host; SNMPAddress= 192.6.4.190; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 10-25-2012 05:06:03; Default Event Name= Unresponsive; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=Unresponsive >;

Table A-131 Observed Service Tree Events for CP6 (continued)

Location	Summary
...-> Cluster_Availability-> Pub: CUCxn-80-pub	Unresponsive::Component= cucxn-80-pub.customer.com; SystemObjectID= .1.3.6.1.4.1.9.1.1348; Description= Hardware:VMware, 1 Intel(R) Xeon(R) CPU X5680 @ 3.33GHz, 6144 MB Memory: Software:UCOS 5.0.0.0-2; DiscoveredFirstAt= 10-24-2012 19:05:42; Type= HOST; DisplayClassName= Host; SNMPAddress= 192.6.6.188; IsManaged= true; Vendor= CISCO; DiscoveredLastAt= 10-25-2012 06:06:03; Default Event Name= Unresponsive; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=Unresponsive >;
...-> VM Availability	The virtual machine CUCxn-80-sub running on host 10.13.3.31 is Disconnected. Message: KVM_VM_Disconnected_Cisco_HCM [(Event_Type=N"VmDisconnectedEvent") ON VM:tb3-vcent-10.13.3.31:ESX ON 2301156 (Event_Type=VmDisconnectedEvent)]
...-> VM Availability	The virtual machine CUCM-80-sub1 running on host 10.13.3.32 is Disconnected. Message: KVM_VM_Disconnected_Cisco_HCM [(Event_Type=N"VmDisconnectedEvent") ON VM:tb3-vcent-10.13.3.32:ESX ON 2529034 (Event_Type=VmDisconnectedEvent)]
...-> VM Availability	The virtual machine CUCM-80-sub2 running on host 10.13.3.32 is Disconnected. Message: KVM_VM_Disconnected_Cisco_HCM [(Event_Type=N"VmDisconnectedEvent") ON VM:tb3-vcent-10.13.3.32:ESX ON 2529036 (Event_Type=VmDisconnectedEvent)]
...-> VM Availability	The virtual machine CUP-80-pub running on host 10.13.3.34 is Disconnected. Message: KVM_VM_Disconnected_Cisco_HCM [(Event_Type=N"VmDisconnectedEvent") ON VM:tb3-vcent-10.13.3.34:ESX ON 2529027 (Event_Type=VmDisconnectedEvent)]
...-> VM Availability	The virtual machine CUCM-80-pub running on host 10.13.3.32 is Disconnected. Message: KVM_VM_Disconnected_Cisco_HCM [(Event_Type=N"VmDisconnectedEvent") ON VM:tb3-vcent-10.13.3.32:ESX ON 2529032 (Event_Type=VmDisconnectedEvent)]
...-> VM Availability	The virtual machine CUCxn-80-pub running on host 10.13.3.33 is Disconnected. Message: KVM_VM_Disconnected_Cisco_HCM [(Event_Type=N"VmDisconnectedEvent") ON VM:tb3-vcent-10.13.3.33:ESX ON 2529018 (Event_Type=VmDisconnectedEvent)]
...-> CUP-80-pub-> VoiceService	Meta event for CUP Voice Service - C080
...-> CUCxn-CL-C080- 1-> VoiceService	Meta event for CUCxn Voice Service - C080

Next Steps

-
- Step 1** Cross-launch to UCSM to confirm that the chassis is powered off.
- Step 2** Power on the chassis to clear the events.
-

CP7 - Application Resources Degradation - CUCMIP

This use case describes the events that are generated if the threshold for available hard disk space is crossed. This type of incident generates RC and SI events.

Observed RC-EL Events

The following table shows RC-EL events observed during testing.

Table A-132 *Observed RC-EL Events for CP7*

Severity	EventTypeID	Summary
Minor	OM_CUP_App_Resour	Synthetic Event for OM_CUP_App_Resources group events from cup-82-pub.customer.com

Observed SI-EL Events

Table A-133 *Observed SI-EL Events for CP7*

Severity	Summary
Minor	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-82-pub is Marginal.

Observed Other-EL Events

None.

Service Tree Event Overlay Location and Content

SIA events are overlaid on the service in the tree view portlet. [Table A-134](#) shows service tree events observed during testing.

Table A-134 *Observed Service Tree for CP7*

Severity	Summary
...-> Cluster_Availability--> Pub: CUP-82-pub	InsufficientFreeHardDisk::Component= DISK-cup-82-pub.customer.com/3; HardDiskTotalSize= 19280 MB; FreeHardDiskThreshold= 15; FreeHardDiskInPercentage= 0 %; HardDiskUsed= 19268 MB; Default Event Name= InsufficientFreeHardDisk; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=InsufficientFreeHardDisk >;

Next Steps

- Manually remove the dummy file from the CUCMIP server.

- The events automatically clear, however some take up to 60 minutes.
- Should there be a different type of OS failure, other recovery steps would be required.

CP11 - IM Resources Exceeded - CUCMIP

This use case describes the events that the Prime Central for HCS dashboard displays if a VM running CUCMIP exceeds the threshold value for the number of TextConferenceRooms opened via the Jabber client. Prime Central for HCS generates RC and SI events for such incidents.

Observed RC-EL Events

When the threshold value is reached, numerous synthetic RCA events are observed, including VC_VM_Avblbty and OM_CUP_IM_Resources.

Table A-135 **Observed RC-EL Events for CP11**

Severity	EventTypeID	Summary
Critical	OM_CUP_IM_Resour ces	Synthetic Event for OM_CUP_IM_Resources group events from cup-82-pub.customer.com

Observed SI-EL Events

Table A-136 **Observed SI-EL Events for CP11**

Severity	Summary
Critical	Overall Attribute of the Customer_Presence_Service_Template tag of CUP-82-pub is Marginal.

Observed Other-EL Events

None.

Service Tree Event Overlay Location and Content

SIA events are overlaid on the service in the tree view portlet. [Table A-114](#) shows service tree events observed during testing.

Table A-137 **Observed Service Tree for CP11**

Severity	Summary
...-> Cluster_Availability --> Pub: CUP-82-pub	TextConferenceRoomsExceeded::Component= TextConferenceRooms-cup-82- pub.customer.com; Threshold Value= 3; Violation Value= 5; Default Event Name= TextConferenceRoomsExceeded; DescriptionURL= < http://150.0.0.52:1741/CSCOnm/servlet/ com.cisco.nm.help.ServerHelpEngine? tag=TextConferenceRoomsExceeded >;

Next Steps

Close chat rooms until the number of open chat rooms becomes less than the threshold value.