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Some content has been moved!

Its new location is :

http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/virtualization-unified-contact-c

Please update your bookmark.

Unified CCE Network Configuration in a Virtualized Environment

For network configuration requirements and reference designs for Cisco Unified Contact Center Enterprise deployed on VMware vSphere, see [Unified CCE Network Configuration in a Virtualized Environment](#).

Follow these guidelines for enabling Quality of Service (QoS) in Unified CCE:

- **Enable QoS for all Unified CCE Private network traffic.**
- For Visible (Public) network traffic, you can use QoS in the 2000 Agent and 4000 Agent Reference Designs.
- **For Visible (Public) network traffic in a 12,000 Agent Reference Design, QoS can delay the detection of server failures.**
- For details, refer to the appropriate Quality of Service (QoS) section in the [Cisco Unified Contact Center Enterprise Design Guide](#).

Unified CCE applications require highly available network connections. Please see [Unified CCE Network Configuration in a Virtualized Environment](#) for requirements and further guidance.

Microsoft Windows Server software based IPSec is not supported.

For details on using the Nexus 1000v with Unified CCE, see [Nexus 1000v Support in Unified CCE](#).

Virtualization Support for ICM Network Interface Controllers

The following table lists the ICM Network Interface Controllers (NICs) and their status.

NIC	Status
AT&T	See note ¹ .
CRSP	Supported.
CWC	See note ¹ . Supported.
GKTMP	Deprecated in Version 9.0.
ICRP	Deprecated in Version 9.0.
MCI	Supported.
Nortel	Supported.
NTL	Supported.
SS7In	See note ¹ .
TIM	See note ¹ .
Unisource	See note ¹ .

¹This NIC is connected to the IXC switching domain through its Sigtran or SS7 Gateways (NGW).

Hybrid Unified CCE Deployment Options

Unified CCE 10.0(x) and later supports only virtualized deployment on VMware vSphere ESXi.

Unified CCE releases prior to 10.0(x) support Hybrid deployment where some components could be deployed bare metal (OS on Server) on MCS servers alongside virtualized Unified CCE applications. Hybrid deployment does not allow A/B application processes to be disparate hardware server type or virtualized/bare metal deployed.

The following Unified CCE applications do not support hybrid A/B:

- Router
- Logger
- Rogger
- Peripheral Gateway (all types)

Unified CCE Hardware Requirements for Duplex Synchronized Applications

Unified CCE allows for application VMs to be deployed on different supported servers, whether Cisco UCS or 3rd Party Specs-based within the same or multiple data center sites, excepting duplex and synchronized operation applications, which have a more restrictive requirement.

The following Unified CCE applications are hardware-constrained for side A and B pairings:

- Router
- Logger
- Rogger
- Peripheral Gateway (PG, all types)

These require that the A and B application instances be installed to separate host servers and have exact matching:

- Processor make, model and speed
- Memory type and speed
- Mainboard chipset controller

Remote Expert Mobile Co-residency Support

Remote Expert Mobile can co-reside with other applications (VMs occupying same host) subject to the following conditions:

- No oversubscription of CPU: 1:1 allocation of vCPU to physical cores must be used
- No oversubscription of RAM: 1:1 allocation of vRAM to physical memory
- Sharing disk storage

Note: Remote Expert Mobile must be installed on its own pair of Side A and Side B servers. It must not be installed co-resident on Packaged CCE Side A and Side B servers.

Installing VMware Tools

You must install the VMware Tools on each of the VMs, and you must use all of the VMware Tools default settings. Please refer to VMware documentation for instructions on installing or upgrading VMware Tools on the VM with the Windows operating system.

Timekeeping Best Practices for Windows

Follow the instructions provided in the VMware Knowledge Base article [VMware KB: Timekeeping best practices for Windows](#).

- ESXi hosts and domain controllers must synchronize the time from the same NTP source.
- When Unified CCE virtual machines join the domain, they synchronize the time with the domain controller automatically using w32time.
- Be sure that **Time synchronization between the virtual machine and the host operating system** in the VMware Tools tool box GUI of the Windows Server guest operating system remains unchecked; this check box is checked by default.

For more details about time synchronization, see the relevant section in the [Cisco Unified Contact Center Enterprise Design Guide](#).

System Performance Monitoring Using ESXi Counters

- ◇ Make sure that you follow VMware's ESXi requirements and the SAN vendor's instructions for optimal system performance.
- ◇ VMware provides a set of system monitoring tools for the ESXi platform and the VMs. These tools are accessible through the VMware Infrastructure Client or through VirtualCenter.
- ◇ You can use Windows Performance Monitor to monitor the performance of the VMs. Be aware that the CPU counters may not reflect the physical CPU usage since the Windows Operating System has no direct access to the physical CPU.
- ◇ You can use Unified CCE Serviceability Tools and Unified CCE reports to monitor the operation and performance of the Unified CCE system.
- ◇ The ESXi Server and the virtual machines must operate within the limit of the following ESXi performance counters.

For more information, please see [Troubleshooting and Performance Monitoring Virtualized Environments vCenter Settings](#).

System Performance Monitoring Using Windows Perfmon Counters

You must comply with the requirements described in the System Performance Monitoring section of the [Unified Contact Center Enterprise Design Guide](#) and in the Performance Counters section in the [Serviceability Best Practices Guide for Unified ICM/Contact Center Enterprise](#).

Information for Partners About Unified CCE on UCS Deployment Certification and Ordering

It is important that partners who are planning to sell UCS products on Unified Contact Center Enterprise read the following Doc Wiki page: [UCCE on UCS Deployment Certification Requirements and Ordering Information](#).

This page contains essential information for partners about the following:

- ◇ Partner Certification Requirements
- ◇ UCS Server Ordering Information
- ◇ Important Notes on Cisco UCS Service and Support

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