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Version 10.5

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<u>Component & Capacity Point</u>	<u>Preloaded with Business Edition?</u>	<u>VM Configuration Requirements</u> click to download OVA file for this version				<u>Supported Hardware (Latest)</u>						<u>Supported</u> (C)			
		<u>vCPU</u>	<u>vRAM</u>	<u>vDisk</u>	<u>vNIC</u>	<u>UCS Tested Reference Configurations</u> S is same as BE6000 MD S+ is same as BE6000 HD M includes BE7000							<u>UCS or 3rd-party Specs-based on Intel Xeon</u>	<u>UCS Tested Reference Configurations</u>	
					<u>S</u>	<u>S+</u>	<u>M</u>	<u>L</u>	<u>XL</u>	<u>2XL</u>	<u>Full UC Perf. CPU</u>	<u>Restricted UC Perf. CPU</u>	<u>S</u>	<u>M</u>	
Router See notes	No	4	8 GB	1x 80 GB	2	No	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes

- **Co-residency support** = Limited (see notes)
- **Supported Versions of VMware vSphere ESXi** = 5.1, 5.5
- [Click for "IOPS"](#)

Virtualization_for_Unified_CCE

Logger See notes	No	4	8 GB	1x 80 GB (OS) 1x 500 GB (DB)	2	No	No	Yes	Yes	Yes	Yes	Yes	No	No	All except: C210 M1 TRC#1
Rogger See notes	No	4	6 GB	1x 80 GB (OS) 150 GB (DB)	2	No	No	Yes	Yes	Yes	Yes	Yes	No	No	All except: C210 M1 TRC#1
Progger See notes	No	4	6 GB	1x 150 GB	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
UCM Agent PG See notes	No	2	6 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Large Generic PG See notes	No	4	6 GB	1 x 80GB	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Small Generic PG See notes	No	2	6 GB	1 x 80GB	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Large CAD Agent PG See notes	No	4	6 GB	1x 80 GB (OS) 1x 80 GB (DB)	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	All except: C210 M1 TRC#1
Small CAD Agent PG See notes	No	2	6 GB	1x 80 GB (OS) 1x 80 GB (DB)	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Large MR PG See notes	No	2	6 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Small MR PG See notes	No	1	4 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Large VRU PG See notes	No	2	2 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Small VRU PG See notes	No	1	2 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Avaya ACD PG See notes	No	2	6 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Large TDM ACD PG See notes	No	2	6 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes

Virtualization_for_Unified_CCE

Small TDM ACD PG <u>See notes</u>	No	1	4 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
UCC Gateway PG <u>See notes</u>	No	2	6 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Administration Client <u>See notes</u>	No	1	2 GB	1x 40 GB	1	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Administration Server - AW <u>See notes</u>	No	1	2 GB	1x 40 GB	1	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
AW-HDS <u>See notes</u>	No	4	8 GB	1x 80 GB (OS) 500 GB (DB)	1	No	No	Yes	Yes	Yes	Yes	Yes	No	No	All except: C210 M1 TRC#1
AW-HDS-DDS <u>See notes</u>	No	4	8 GB	1x 80 GB (OS) 500 GB (DB)	1	No	No	Yes	Yes	Yes	Yes	Yes	No	No	All except: C210 M1 TRC#1
HDS-DDS <u>See notes</u>	No	4	8 GB	1x 80 GB (OS) 500 GB (DB)	1	No	No	Yes	Yes	Yes	Yes	Yes	No	No	All except: C210 M1 TRC#1
Sigtran Gateway <u>See notes</u>	No	2	4 GB	1x 100 GB	1	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Remote Silent Monitor <u>See notes</u>	No	2	4 GB	1x 100 GB	1	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Cisco Unified Contact Center Management Portal <u>See notes</u>															

Version 10.0(x)

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VM Configuration Requirements
click to download OVA file for this version

Supported Hardware (Latest)

Supported (O

<u>Component & Capacity Point</u>	<u>Preloaded with Business Edition?</u>	<u>vCPU vRAM vDisk vNIC</u>				<u>UCS Tested Reference Configurations</u>						<u>UCS or 3rd-party Specs-based on Intel Xeon</u>		<u>UCS Tested Reference Configurations</u>	
		<u>S</u>	<u>S+</u>	<u>M</u>	<u>L</u>	<u>XL</u>	<u>2XL</u>	<u>Full UC Perf. CPU</u>	<u>Restricted UC Perf. CPU</u>	<u>S</u>	<u>M</u>				
Router See notes	No	4	8 GB	1x 80 GB	2	No	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Logger See notes	No	4	8 GB	1x 80 GB (OS)	2	No	No	Yes	Yes	Yes	Yes	Yes	No	No	All except: C210 M1 TRC#1
Rogger See notes	No	4	6 GB	1x 150 GB (DB)	2	No	No	Yes	Yes	Yes	Yes	Yes	No	No	All except: C210 M1 TRC#1
Progger See notes	No	4	6 GB	1x 150 GB	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Large Agent PG See notes	No	2	6 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Large CAD Agent PG See notes	No	4	6 GB	1x 80 GB (OS) (DB)	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	All except: C210 M1 TRC#1
Small Agent PG See notes	No	1	4 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Small CAD Agent PG See notes	No	2	6 GB	1x 80 GB (OS)	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes

- **Co-residency support = Limited (see notes)**
- **Supported Versions of VMware vSphere ESXi = 5.0, 5.1**
- **Click for "IOPS"**

Virtualization_for_Unified_CCE

Large MR PG See notes	No	2	6 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Small MR PG See notes	No	1	4 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Large VRU PG See notes	No	2	2 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Small VRU PG See notes	No	1	2 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Avaya ACD PG See notes	No	2	6 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Large TDM ACD PG See notes	No	2	6 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Small TDM ACD PG See notes	No	1	4 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Large UCC Gateway PG See notes	No	2	6 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Small UCC Gateway PG See notes	No	1	4 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Administration Client See notes	No	1	2 GB	1x 40 GB	1	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Administration Server - AW See notes	No	1	2 GB	1x 40 GB	1	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
AW-HDS See notes	No	4	8 GB	1x 80 GB (OS) 500 GB (DB)	1	No	No	Yes	Yes	Yes	Yes	Yes	No	No	All except: C210 M1 TRC#1
AW-HDS-DDS See notes	No	4	8 GB	1x 80 GB (OS) 500 GB (DB)	1	No	No	Yes	Yes	Yes	Yes	Yes	No	No	All except: C210 M1 TRC#1
HDS-DDS See notes	No	4	8 GB	1x 80 GB (OS) 1x 500 GB	1	No	No	Yes	Yes	Yes	Yes	Yes	No	No	All except: C210 M1 TRC#1

Virtualization_for_Unified_CCE

				(DB)											
Sigtran Gateway See notes	No	2	4 GB	100 GB	1	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Remote Silent Monitor See notes	No	2	4 GB	100 GB	1	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes

Version 8.5(2+) through 9.0(x)

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<u>Component & Capacity Point</u>	<u>Preloaded with Business Edition?</u>	<u>VM Configuration Requirements</u> click to download OVA file for this version				<u>Supported Hardware (Latest)</u>							<u>Supported</u>		
		<u>vCPU</u>	<u>vRAM</u>	<u>vDisk</u>	<u>vNIC</u>	<u>UCS Tested Reference Configurations</u> S is same as BE6000 MD S+ is same as BE6000 HD M includes BE7000							<u>UCS or 3rd-party Specs-based on Intel Xeon</u>	<u>UCS Tested Reference Configuration</u>	
						<u>S</u>	<u>S+</u>	<u>M</u>	<u>L</u>	<u>XL</u>	<u>2XL</u>	<u>Full UC Perf. CPU</u>	<u>Restricted UC Perf. CPU</u>	<u>S</u>	<u>M</u>

- **Co-residency support** = Limited (see notes)
- **Supported Versions of VMware vSphere ESXi** = 5.0, 5.1
- [Click for "IOPS"](#)

Router See notes	No	4	8 GB	1x 80 GB	2	No	No	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	Yes
Logger See notes	No	4	8 GB	1x 80 GB (OS) 500 GB (DB)	2	No	No	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	All except: C210 M1 TRC#1
Rogger See notes	No	4	6 GB	1x 80 GB (OS) 150 GB (DB)	2	No	No	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	All except: C210 M1 TRC#1
Agent PG w/ CTI OS - 2,000	No	2	6 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	Yes

Virtualization_for_Unified_CCE

agents <u>See notes</u>																		details			
Agent PG w/ CTI OS - 450 agents <u>See notes</u>	No	1	4 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	Yes						
Agent PG w/ CAD - 1,000 agents <u>See notes</u>	No	2	6 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	All except: C210 M1 TRC#1						
Agent PG w/ CAD - 297 agents <u>See notes</u>	No	1	4 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	Yes						
MR PG - 2,000 agents - 10 PIMs <u>See notes</u>	No	2	6 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	Yes						
MR PG - 1,000 agents - 5 PIMs <u>See notes</u>	No	1	4 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	Yes						
VRU PG - 9,600 ports - 10 PIMs <u>See notes</u>	No	2	2 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	Yes						
VRU PG - 1,200 ports - 4 PIMs <u>See notes</u>	No	1	2 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	Yes						
Avaya (Definity) ACD PG <u>See notes</u>	No	2	6 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	Yes						
TDM ACD PG - 2,000 agents <u>See notes</u>	No	2	6 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	Yes						
TDM ACD PG - 250 agents <u>See notes</u>	No	1	4 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	Yes						
UCC Gateway PG - 2,000 agents <u>See notes</u>	No	2	6 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	Yes						
UCC Gateway PG - 450 agents <u>See notes</u>	No	1	4 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	Yes						
Administration Client <u>See notes</u>	No	1	2 GB	1x 40 GB	1	No	Yes	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	Yes						

Virtualization_for_Unified_CGE

Administration Server - AW <u>See notes</u>	No	1	2 GB	1x 40 GB	1	No	Yes	Yes	Yes	Yes	Yes	Yes	Most -- <u>(see details)</u>	No	No	Yes
AW-HDS <u>See notes</u>	No	4	8 GB	1x 80 GB (OS) 500 GB (DB)	1	No	No	Yes	Yes	Yes	Yes	Yes	Most -- <u>(see details)</u>	No	No	All except: C210 M1 TRC#1
AW-HDS-DDS <u>See notes</u>	No	4	8 GB	1x 80 GB (OS) 500 GB (DB)	1	No	No	Yes	Yes	Yes	Yes	Yes	Most -- <u>(see details)</u>	No	No	All except: C210 M1 TRC#1
HDS-DDS <u>See notes</u>	No	4	8 GB	1x 80 GB (OS) 500 GB (DB)	1	No	No	Yes	Yes	Yes	Yes	Yes	Most -- <u>(see details)</u>	No	No	All except: C210 M1 TRC#1

Version 8.0(2+) through 8.5(1)

[Click here for a Legend](#)

<u>Component & Capacity Point</u>	<u>VM Configuration Requirements</u> click to download OVA file for this version				<u>Supported Hardware (Latest)</u>						<u>Supported</u>				
	<u>Preloaded with Business Edition?</u>	<u>vCPU</u>	<u>vRAM</u>	<u>vDisk</u>	<u>vNIC</u>	<u>UCS Tested Reference Configurations</u> S is same as BE6000 MD S+ is same as BE6000 HD M includes BE7000						<u>UCS or 3rd-party Specs-based on Intel Xeon</u>	<u>UCS Tested Reference Configuration</u>		
						<u>S</u>	<u>S+</u>	<u>M</u>	<u>L</u>	<u>XL</u>	<u>2XL</u>	<u>Full UC Perf. CPU</u>	<u>Restricted UC Perf. CPU</u>	<u>S</u>	<u>M</u>

- **Co-residency support** = [See the Unified CCE Co-residency Support Policy](#)
- **Supported Versions of VMware vSphere ESXi** = 4.0, 4.1
- [Click for "IOPS"](#)

Router 8000 agents	No	2	4 GB	1x 80 GB	2	No	No	Yes	Yes	Yes	Yes	Yes	Most -- <u>(see details)</u>	No	No	Yes
--------------------	----	---	------	----------	---	----	----	-----	-----	-----	-----	-----	---------------------------------	----	----	-----

Virtualization_for_Unified_CCE

See notes

Logger 8000 agents
See notes

See notes

Rogger 4000 agents
See notes

See notes

Agent PG - CTIOS 2000 agents
See notes

See notes

Agent PG - CTIOS 450 agents
See notes

See notes

Agent PG - CAD 1000 agents
See notes

See notes

Agent PG - CAD 297 agents
See notes

See notes

MR PG 2000 agents 10 pims
See notes

See notes

MR PG 1000 agents 5 pims
See notes

See notes

VRU PG 9600 ports 10 pims
See notes

See notes

VRU PG 1200 ports 4 pims
See notes

See notes

Avaya ACD PG
See notes

See notes

TDM ACD PG 2000 agents
See notes

See notes

	No	4	4 GB	1x 80 GB (OS)	2	No	No	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	All except: C210 M1 TRC#1
	No	4	4 GB	1x 80 GB (OS)	2	No	No	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	All except: C210 M1 TRC#1
	No	2	4 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	Yes
	No	1	2 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	Yes
	No	2	4 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	All except: C210 M1 TRC#1
	No	1	2 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	Yes
	No	2	4 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	Yes
	No	1	2 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	Yes
	No	2	2 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	Yes
	No	1	2 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	Yes
	No	2	4 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	Yes
	No	2	4 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes	Most -- (see details)	No	No	Yes
	No	1	2 GB		2	No	Yes	Yes	Yes	Yes	Yes		No	No	Yes

Virtualization_for_Unified_CCE

TDM ACD PG 250 agents <u>See notes</u>				1x 80 GB									Most -- (see details)			
UCC Gateway 2000 agents <u>See notes</u>	No	2	4 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes		Most -- (see details)	No	No	Yes
UCC Gateway 450 agents <u>See notes</u>	No	1	2 GB	1x 80 GB	2	No	Yes	Yes	Yes	Yes	Yes		Most -- (see details)	No	No	Yes
Administration Client <u>See notes</u>	No	1	2 GB	1x 40 GB	1	No	Yes	Yes	Yes	Yes	Yes		Most -- (see details)	No	No	Yes
Administration Server - AW <u>See notes</u>	No	1	2 GB	1x 40 GB	1	No	Yes	Yes	Yes	Yes	Yes		Most -- (see details)	No	No	Yes
AW-HDS <u>See notes</u>	No	4	4 GB	1x 80 GB (OS) 500 GB (DB)	1	No	No	Yes	Yes	Yes	Yes		Most -- (see details)	No	No	All except: C210 M1 TRC#1
AW-HDS-DDS <u>See notes</u>	No	4	4 GB	1x 80 GB (OS) 500 GB (DB)	1	No	No	Yes	Yes	Yes	Yes		Most -- (see details)	No	No	All except: C210 M1 TRC#1
HDS-DDS <u>See notes</u>	No	4	4 GB	1x 80 GB (OS) 500 GB (DB)	1	No	No	Yes	Yes	Yes	Yes		Most -- (see details)	No	No	All except: C210 M1 TRC#1

Notes on Specs-based Support Policy for Unified CCE

Unified CCE versions prior to 10.0(1) have limited support for the Specs-based Support Policy. The following technologies are not supported for those deployments indicating less than full support, by version.

Version	Technology
9.0(x)	SAN Transport
	-- iSCSI
	-- NFS
8.0(2) through 8.5(x)	SAN Transport
	-- InfiniBand
	-- FCoE

- iSCSI
- NFS
- InfiniBand

IOPS and Storage System Performance Requirements

Unified CCE follows UC storage system design requirements. For more information, refer to [UC Virtualization Storage System Design Requirements](#).

For information about TRC versus specs-based support for storage systems, refer to [UC Virtualization Supported Hardware](#).

All Unified CCE VM vDisks must be deployed Thick Provisioned, Lazy, or Eager Zeroed. Thin Provisioned vDisks are not supported.

Storage Area Networks and Specs-based policy storage solutions must be able to handle the following Unified CCE application disk I/O characteristics. Tested Reference Configurations (TRC) for Cisco UCS C-Series servers do not need to apply these requirements against their Direct Attached Storage Arrays (DAS).

Unified CCE 10.0(1)

Unified CCE Component	IOPS			Disk Read KBytes / sec			Disk Write KBytes / sec			Operating Conditions
	Peak	Avg.	95th Percentile	Peak	Avg.	95th Percentile	Peak	Avg.	95th Percentile	
Router	9	4	6	1	0	0	134	95	111	12,000 agent;100 CPS, ECC: 5 scalars @ 40 bytes each; 200
Logger	2365	1582	2076	19603	10846	16169	56969	31443	47395	
HDS	1622	806	1239	81429	13386	35178	29406	8101	22747	
DDS	2440	1460	2052	19201	9281	14654	59932	30624	49995	Reporting users at max query load.
HDS	1561	365	957	61240	963	5374	12792	1068	5593	4,000 agents; 30 cps; ECC: 5 scalars @ 40 bytes each; 200
Rogger	1400	64	116	14226	204	203	24469	1339	3918	Reporting Users at max query load.
Agent PG	106	75	90	256	9	54	5548	3464	4384	2,000 agents, 15 cps. (Also applicable to the Avaya PG.)

Unified CCE 8.5(3)+ and 9.0(1)+

Unified CCE Component	IOPS			Disk Read KBytes / sec			Disk Write KBytes / sec			Operating Conditions
	Peak	Avg.	95th Percentile	Peak	Avg.	95th Percentile	Peak	Avg.	95th Percentile	
Router	27	14	19	619	11	12	436	246	313	12,000 agent;100 CPS, ECC: 5 scalars @ 40 bytes each; 200 Reporting users at max query load
Logger	3662	917	1793	12821	735	11571	38043	2777	11832	
HDS	1017	321	693	2748	250	2368	19351	1441	3879	8,000 agents;60 CPS; ECC:5 scalars @ 40 bytes each; 200 Reporting users at max query load
Router	118	11	13	1681	14	5	971	66	172	
Logger	1614	502	1065	6137	341	4993	30379	558	5911	
HDS	1395	165	541	1995	186	1776	12525	1299	2965	4,000 agents; 30 cps; ECC: 5 scalars @ 40 bytes each
Rogger	1598	250	292	2227	1837	1984	13243	867	2308	

Unified CCE 8.0(2)

Unified CCE Component	IOPS			Disk Read KBytes / sec			Disk Write KBytes / sec			Operating Conditions
	Peak	Avg.	95th Percentile	Peak	Avg.	95th Percentile	Peak	Avg.	95th Percentile	
Router	20	8	10	520	30	180	400	60	150	8,000 agents; 60 cps; ECC: 5 scalars @ 35 bytes each; No reporting.
Logger	1,000	600	700	4,000	600	2,500	12,000	3,000	7,000	
HDS	1,600	1,000	1,100	600	70	400	6,000	2,000	3,800	2,000 agents, 15 cps
Agent PG	125	40	70	300	5	20	2,000	1,200	1,500	

8,000
agents; 60
cps; 200
reporting
users at max
query load;
ECC: 5
scalars @
35 bytes
each.
4,000
agents; 30
cps; ECC: 5
scalars @
35 bytes
each

HDS 3,900 2,500 3,800 75,000 30,000 50,000 9,500 2,200 5,800

ROGGER 610 360 425 2,700 400 1,600 7,500 2,150 4,300

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](#).

QoS must be enabled for Unified CCE Private network communications Web Setup for the Router and PG Setup. For additional details, refer to the appropriate section in the [Cisco Unified Contact Center Enterprise Installation and Upgrade Guide](#).

VMware vSphere ESXi NIC Teaming is required for Unified CCE Visible and Private network communications. Please see [Unified CCE Network Configuration in a Virtualized Environment](#).

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](#).

Unified CCE Co-residency Support Policy

Unified CCE Co-residency policy is stated as Limited, though it may actually align to one of the other policies. This is due to IO limitations for Direct Attached Storage (DAS) arrays used with Unified CCE database applications.

Note: For any single DAS array, you can deploy only one of the following on any single array: Logger, Rogger, Progger, HDS, or CVP Reporting Server.

Unified CCE otherwise adheres to the following Co-residency policies by version:

Version	Co-residency Policy
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10.x	<u>Full</u>
8.0(2+) - 9.0(x)	<u>UC on UC only</u>

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 . Deprecated in Version 10.5.
GKTMP	Deprecated in Version 9.0.
ICRP	Deprecated in Version 9.0.
Nortel	Supported.
NTL	Supported.
Sprint	Deprecated in Version 10.0.
SS7InNic	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). The SS7 Gateways (for example, ATGate, ITUGate, and INAPGate) require SS7 interface hardware cards. Due to a device driver dependency, those cards are not supported in Windows Server 2008 R2. You can either deploy the Sigtran version of the NGW or retain back-level NGW support on Windows Server 2003; either is a viable option.

Hybrid Unified CCE Deployment Options

Unified CCE 10.0(x) and later supports only virtualized deployment on VMware vSphere ESXi. This is inclusive of Unified ICME, CCH, and ICMH.

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)

Hybrid deployment does, however, allow Router A/B to be bare metal on MCS with Logger A/B virtualized.

Some examples of common hybrid deployments are as follows:

- Parent Unified ICME as bare metal on MCS with Child Unified CCE virtualized.
- Unified ICMH NAM as bare metal on MCS with Unified ICMH CICM virtualized (single instance).
- Unified CCE virtualized with ICM to ICM Gateway to Unified CCE bare metal on MCS.

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

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 2008 R2 guest operating system remains unchecked; this check box is checked by default.

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

Back to: [Unified Communications in a Virtualized Environment](#)