Last update:
7/23/20

Oracle UCP CI Composable and XaaS Interoperability Matrix

Hardware

UCP CI (Release Version)		v5	v6	v7	v8	v9	v10	v11	v12	
Release date		November, 2017	July, 2018	October, 2018	Feb. 2019	Aug. 2019	Nov. 2019	Feb. 2020	June, 2020	
Management Nodes :		**Hitachi Advanced Server DS120**								
Components		**Versions**	**Versions**	**Versions**	**Versions**	**Versions**	**Versions**	**Versions**	**Versions**	**Notes**
BIOS		3A08.H2	3A10.H3	3A10.H3	3A10.H8	3A10.H8	3A10.H8	S5BH3B14.H01	S5BH3B16.H00	
BMC		3.16.06	3.75.06	3.75.06	4.23.06	4.23.06	4.23.06	4.62.06	4.64.06	
CPLD		Rev09	Rev10	Rev10	Rev10	Rev10	Rev10	Rev11	Rev11	
CPU Family		**Skylake**	**Skylake**	**Skylake**	**Skylake**	**Skylake**	**Skylake**	**Cascade lake**	**Cascade lake**	
Compute Nodes :		**Hitachi Advanced Server DS220**								
Components		**Versions**	**Versions**	**Versions**	**Versions**	**Versions**	**Versions**	**Versions**	**Versions**	**Notes**
BIOS		3A08.H2	3A10.H3	3A10.H3	3A10.H3	S5BH3B14.H01	S5BH3B14.H01	S5BH3B14.H01	S5BH3B16.H00	
BMC		3.16.06	3.75.06	3.75.06	4.23.06	4.62.06	4.62.06	4.62.06	4.64.06	
CPLD		Rev09	Rev10	Rev10	Rev10	Rev11	Rev11	Rev11	Rev11	
CPU Family		**Skylake**	**Skylake**	**Skylake**	**Skylake**	**Cascade lake**	**Cascade lake**	**Cascade lake**	**Cascade lake**	
Compute Nodes :		**Hitachi Advanced Server DS240**								
Components		**Versions**	**Versions**	**Versions**	**Versions**	**Versions**	**Versions**	**Versions**	**Versions**	**Notes**
BIOS		N/A	3A01.H3	3A02.H1	N/A	N/A	N/A	N/A	N/A	
BMC		N/A	3.88.06	4.23.06	N/A	N/A	N/A	N/A	N/A	
CPLD		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
CPU Family		**N/A**	**Skylake**	**Skylake**						
I/O Card Support for DS120/220/240										
Components		**Versions**	**Versions**	**Versions**	**Versions**	**Versions**	**Versions**	**Versions**	**Versions**	**Notes**
Network Cards (Options)										
Management Nodes DS120 Intel XXV710-DA2, 25GbE dual-port, PCIe	Firmware	5.51	5.51	5.51	6.0.1	6.0.1	6.0.1	6.8	6.8	
	i40en Driver (ESXi)	1.3.1 (inbox driver)	1.3.1 (inbox driver)	1.3.1 (inbox driver)	1.5.6 (inbox driver)	1.5.6 (inbox driver)	1.5.6 (inbox driver)	1.5.6 (inbox driver)	1.7.17 (inbox driver)	
Compute Nodes DS220 Intel XXV710-DA2, 25GbE dual-port, PCIe	Firmware	5.51	5.51	5.51	6.0.2	6.0.2	6.0.2	6.0.2	6.8	
	i40e Driver (OVS)	1.6.21-k	1.6.21-k	no Oct 2018 release	2.1.14-k (inbox driver)	2.1.14-k (inbox driver)	N/A (Using OLVM Instead of OVM)	2.1.14-k (inbox driver)	2.7.6-k (inbox driver) (OL 7.6 on OLVM)	
	i40e Driver (OL)	N/A	2.1.26	2.1.26	2.1.14-k	N/A	2.7.6-k (inbox driver)	N/A	2.7.6-k (inbox driver)	
	i40e Driver (RHEL)	1.6.21-k	2.1.26	2.1.26	2.1.14-k	2.3.2-k	N/A	N/A	N/A	
Compute Nodes DS220 Intel X722 Dual Port 10 GbE SFP+,OCP	Firmware								4	
	i40e Driver (OVS)								2.7.6-k (inbox driver) (OL 7.6 on OLVM)	
	i40e Driver (OL)								2.7.6-k (inbox driver)	
	i40e Driver (RHEL)								N/A	
Compute Nodes DS240 Intel XXV710-DA2, 25GbE dual-port, PCIe	Firmware	N/A	5.51	5.51	N/A	N/A	N/A	N/A	N/A	
	i40e Driver (OVS)	N/A	N/A	no Oct 2018 release	N/A	N/A	N/A	N/A	N/A	
	i40e Driver (RHEL)	N/A	2.1.14-k	2.1.14-k	N/A	N/A	N/A	N/A	N/A	
HBA Controller										
Emulex LPe31002 FC HBA - DS120 Management Nodes	Firmware	11.2.156.27	11.2.156.27	11.2.156.27	11.4.204.27	11.4.204.27	11.4.204.27	12.0.193.13	12.0.193.13	
	lpfc Driver (ESXi)	11.1.0.6	11.1.0.6	11.1.0.6	11.4.341.0	11.4.341.0	11.4.341.0	12.0.193.14	12.0.193.14	
Emulex LPe31002 or LPe 32002 FC HBA - DS220 Compute Nodes	Firmware	11.2.156.27	11.2.156.27	11.2.156.27	11.4.204.25	12.0.193.13(OVM tested, composable supported), 12.2.299.14(composable tested)	12.4.243.17 (OLVM), 12.0.261.9 or 12.2.299.23 (OL/RHEL 7.6 for Composable)	12.4.243.17 (OVM), 12.0.261.9 or 12.2.299.23 (OL/RHEL 7.6 for Composable)	12.0.93.13 (OL 7.6 for Composable) 12.4.243.17 (OL 7.6 on OLVM)	
	lpfc Driver (OVS)	11.2.0.5	11.2.0.5	no Oct 2018 release	11.4.0.7	11.4.0.7	N/A (Using OLVM Instead of OVM)	12.0.0.10 (OVM)	N/A (Using OLVM Instead of OVM)	
	lpfc Driver (OL)	N/A	11.2.0.5	11.2.0.5	11.4.0.7	N/A	12.0.0.10 (inbox drive)	12.0.0.10 (inbox drive)	12.0.0.10 (inbox drive)	
	lpfc Driver (RHEL)	11.2.0.6	11.2.0.6	11.2.0.6	11.4.204.26	12.0.0.5	N/A	N/A	N/A	
Emulex Lpe 31002 or LPe32002 FC HBA - DS240 Compute Nodes	Firmware	N/A	11.4.204.25	11.4.204.25	N/A	N/A	N/A	N/A	N/A	
	lpfc Driver (OVS)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	lpfc Driver (RHEL)	N/A	11.4.204.26	11.4.204.26	N/A	N/A	N/A	N/A	N/A	
RAID Controller										
Broadcom SAS3516 2GB RAID Mezzanine	Firmware	5.020.00-0910	5.020.00-0910	5.020.00-0910	5.020.00-0910	5.020.00-0910	N/A	N/A	N/A	QS3516 supported but not tested
	Driver	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

FC Switches

Vendor	Models	Firmware Versions	Firmware Versions	Firmware Versions	Firmware Versions	Firmware Versions	Firmware Versions	Firmware Versions	Firmware Versions	Notes
Brocade	G620	v8.0.1	v8.0.1	v8.2.0b	v8.2.0b	v8.2.0b	v8.2.0b	v8.2.0b	v8.2.0b	

Ethernet Switches

Vendor	Models	Firmware Versions	Firmware Versions	Firmware Versions	Firmware Versions	Firmware Versions	Firmware Versions	Firmware Versions	Firmware Versions	Notes
Cisco	Nexus 3048	7.0(3)I4(7)	7.0(3)I4(7)	7.0(3)I4(7)	7.0(3)I4(7)	7.0(3)I4(7)	7.0(3)I4(7)	7.0(3)I4(7)	7.0(3)I4(7)	
	Nexus 93180YC-EX	7.0(3)I4(7)	7.0(3)I4(7)	7.0(3)I4(7)	7.0(3)I4(7)	7.0(3)I4(7)	7.0(3)I4(7)	7.0(3)I7(6)	7.0(3)I7(6)	

Storage Models

	Models	Minimum Microcode Versions	Minimum Microcode Versions	Minimum Microcode Versions	Minimum Microcode Versions	Minimum Microcode Versions				Notes
VSP	G200	83-04-47	83-04-47							
	G400	83-04-47	83-04-47							
	G600	83-04-47	83-04-47							
	G800	83-04-47	83-04-47							
	F400	83-04-47	83-04-47							
	F600	83-04-47	83-04-47							
	F800	83-04-47	83-04-47							
	G350	N/A	88-01-03	88-02-03-20/00						
	G370	N/A	88-01-03							
	G700	N/A	88-01-03							
	G900	N/A	88-01-03	88-02-03-60/00	88-02-03-60/00	88-02-03-60/00				
	F350	N/A	88-01-03	88-02-03-20/00						
	F370	N/A	88-01-03							
	F700	N/A	88-01-03							
	F900	N/A	88-01-03	88-02-03-60/00	88-02-03-60/00	88-02-03-60/00				
	G1500	N/A	TBD	80-06-41-00/00	N/A	N/A				
	F1500	N/A	TBD	80-06-41-00/00	N/A	N/A				
	5500 (SAS)						90-01-41-00/00	90-01-52-00/00		
	5500 (NVMe)						90-01-61-00/00	90-01-61-00/00		
	E990								93_01_01_60/01	

Software

Vendor	Component	Versions	Versions	Versions	Versions	Versions				Notes
VMware	ESXi	6.5.0 Build 4887370	6.5.0 Build 6765664	Version 6.5.0 Build 6765664	6.7.0 Build 10302608	6.7.0 Build 10302608			6.7.0 Build 10302608	
	vCenter (VCSA)	6.5.0 Build 4887370	6.5.0 Build 7515524	6.5.0 Build 7515524	6.7.0 Build 10302608	6.7.0 Build 10302608			6.7.0 Build 10244857	
Red Hat	RHEL	7.4	7.4	7.5	7.5	7.6	7.6	7.6	N/A	Oracle RAC 19c support is BRE (with Oracle ASMlib related packages 1) kmod-oracleasm-2.0.8-26.el7.x86_64 2) oracleasmlib-2.0.12-1.el7.x86_64 3) oracleasm-support-2.1.11-2.el7.x86_64)
Oracle	OL (Oracle Linux)				7.5	N/A	7.6 with UEK kernel update 4.14.35-1933.el7uek.x86_64	7.6 with UEK kernel update 4.14.35-1933.el7uek.x86_64	7.6 with UEK kernel update 4.14.35-1902.301.1.el7uek.x86_64	
Oracle for XaaS	Oracle VM Server	3.4.4	3.4.4	no Oct 2018 release	3.4.5	3.4.6	OL 7.6 with KVM (OLVM release)	3.4.6.1	OL 7.6 with KVM (OLVM release)	
	Oracle VM Manager	3.4.4	3.4.4	no Oct 2018 release	3.4.5	3.4.6	OLVM 4.2.8	3.4.6.1	OLVM 4.2.8	
	OS on VMs	Any supported by Oracle	Any supported by Oracle	Any supported by Oracle	Any supported by Oracle	Any supported by Oracle	OL 7.6	OL 7.7	OL 7.6	
Oracle Database	Oracle	12c Release 1 (12.1.0.2.0)	12c Release 1 (12.1.0.2.0)	12c Release 2 (12.2.1.0)	12c Release 2 (12.2.1.0)	12c Release 2 (12.2.1.0), 18.4.0.0(Oracle for XaaS)	19.3.0.0(XaaS)	19.5.0.0(XaaS)	Oracle 19c EE Release 19.0.0.0.0 Version 19.3.0.0.0 (for Composable and XaaS)	
	Oracle Real Application	12c Release 1 (12.1.0.2.0)	12c Release 1 (12.1.0.2.0)	12c Release 2 (12.2.1.0)	12c Release 2 (12.2.1.0)	12c Release 2 (12.2.1.0), 18.4.0.0(Oracle for XaaS)	19.3.0.0(XaaS)	19.5.0.0(XaaS)	Oracle 19c EE Release 19.0.0.0.0 Version 19.3.0.0.0 (for Composable and XaaS)	
	Oracle Grid Infrastructure	12c Release 1 (12.1.0.2.0)	12c Release 1 (12.1.0.2.0)	12c Release 2 (12.2.1.0)	12c Release 2 (12.2.1.0)	12c Release 2 (12.2.1.0), 18.4.0.0(Oracle for XaaS)	19.3.0.0(XaaS)	19.5.0.0(XaaS)	Oracle 19c EE Release 19.0.0.0.0 Version 19.3.0.0.0 (for Composable and XaaS)	
Hitachi Command Suite		8.5.2	8.5.2				N/A	N/A	N/A	Replaced by Hitachi Ops Center v10.0.0. Not applicable for UCP CI release v10 or later.
Hitachi Automation Director (HAD)		8.5.2-03	8.5.2-03	8.6.3-00	8.6.3-00	8.6.5-01	N/A	N/A	N/A	
Hitachi Storage Advisor (HSA)		2.1.0	2.3	2.3	2.3	3.4.1	N/A	N/A	N/A	
Hitachi Infrastructure Analytics Advisor (HIAA)		2.1	3.3	4.0.0-00	4.2.0-01	4.4.0-00	N/A	N/A	N/A	
Hitachi Data Center Analytics (HDCA) Server		8.1	8.1	9.1.0-01	9.2.0-01	9.4.0-00	N/A	N/A	N/A	
Hitachi Data Center Analytics Probe Server		8.1	8.1	9.1.0-01	9.2.0-01	9.4.0-00	N/A	N/A	N/A	
Hitachi Ops Center							10.0.0	10.0.0		Only applicable to UCP CI v10
Manager for Hitachi adapters for Oracle Database		2.0.0	2.2.0	2.2.3	2.2.3	Not supported				due to issues with current quanta FW release
Hitachi Storage Adapter for Oracle Enterprise Manager		2.0.0	2.2.0	2.2.3	2.2.3	Not supported				due to issues with current quanta FW release
Hitachi Server Adapter for Oracle Enterprise Manager		2.0.0	2.2.0	2.2.3	2.2.3	Not supported				due to issues with current quanta FW release
Oracle Enterprise Manager Cloud Control 13c		13c Release 2 (13.2.0.0)	13c Release 2 (13.2.0.0)	13c Release 2 (13.2.0.0)	13c Release 2 (13.2.0.0)	13c Release 2 (13.2.0.0)	N/A	13c Release 2 (13.2.0.0)		
Oracle Enterprise Manager Cloud Control 13c plug-ins		13c Release 2	13c Release 2	13c Release 2	13c Release 2	13c Release 2	N/A	13c Release 2		

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