

Dell EMC with Oracle® Database 12c R1 on RHEL 7.x and Oracle Linux 7.x with Compatible Kernel Tested and Validated Matrix



Oracle Database 12c R1 on RHEL 7.x and OL 7.x with Compatible Kernel



Tested and Validated Matrix — Overview

Tested and Validated Matrix Overview (Updated 04/18/2017)	
Validated Hardware Components	
Dell EMC PowerEdge Servers	13g: R630, R730, R730xd, R930, FC630, FC830
Memory Configuration	At least one DIMM per memory-channel
Local Disk Drives for OS	At least two disk drives in RAID 1 (Separate hot spare highly recommended)
Local Disk RAID Controllers	PERC H330, H730, H730p
LAN Interfaces	QLogic: 57800S, 57810, 57810S, 57840S Broadcom: 57406 Intel: X520, X540, X550, X710
SAN HBAs	QLogic: QLE 256x, QLE 266x; Emulex: LPe1200x, LPe1600x
LAN Switches	Dell EMC Networking: S3048-ON, S4820T, S60, S4048T-ON, S4048-ON; FX2 IOM: FN410, 10GbEPass-through
SAN Switches	Brocade: 300, 6505, 6510, 6520
Dell EMC SAN Storage (Fibre Channel only)	Compellent (SC Series): SC4020, SC7020, SC9000 EMC: XtremIO
Validated Software Components	
Oracle Database Software	Oracle Database 12c R1 Standalone or Real Application Clusters (RAC)
Oracle Database Patch Set	Oracle Database 12c R1 Patch Set 12.1.0.2
Oracle Grid Patch Set	Oracle Grid 12c R1 Patch Set 12.1.0.2.170117 (2017 Jan PSU)
Operating System	RHEL 7.2 with kernel 3.10.0-327.el7.x86_64 Oracle Linux 7.2 with Red Hat Compatible Kernel 3.10.0-327.el7.x86_64
Miscellaneous	
Recommended Support	Dell Pro-Support and Oracle Premier Support

Notes

The listed firmware and drivers in this document are the minimum versions supported. It is recommended to use the latest software versions supported by the hardware components, as and when available on Dell EMC's Support Site.

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Tested and Validated Matrix — Details



Dell EMC PowerEdge (Database) Servers				
Model	CPU Series	BIOS	iDRAC/LC	Notes/Other
Rack Servers				
R630 ¹ , R730, R730xd	Xeon E5-2600 v4	2.4.3	2.41.40.40	
R930	Xeon E7-4800/8800 v4	2.3.1	2.41.40.40	
Converged or Modular Platforms				
FX2				
FX2s Chassis	CMC FW v1.41.200.201611250025			
FC630 Blade	Xeon E5-2600 v4	2.4.2	2.41.40.40	Only SAS Backplane chassis config. supported
FC830 Blade	Xeon E5-4600 v4	2.4.2	2.41.40.40	Only SAS Backplane chassis config. supported

Database Server Components		
Model	Firmware	Driver
Internal Disk RAID Controllers		
PERC H330 ² Mini/Adapter (DPN:V9W58)	25.5.2.0001	6.904.09.00 (megaraid_sas)
PERC H730/H730p Mini/Adapter (DPN: D3DC9,7H4CN,X4TTX,7G4YN)	25.5.2.0001	6.904.09.00 (megaraid_sas)
LAN Adapters		
QLogic		
QLogic 57840S QP 10GbE DA/SFP+ rNDC (DPN: XGRFF)	08.07.26	1.713.06 (bnx2x)
QLogic 57840S QP 10GbE KR bNDC (DPN:JNK9N)	08.07.26	1.713.06 (bnx2x)
QLogic 57810S DP 10GbE KR bNDC (DPN:JVFVR)	08.07.26	1.713.06 (bnx2x)
Intel		
Intel X520 10GbE DP DA/SFP+ Server Adapter (DPN: 942V6)	17.5.10	4.3.13 (ixgbe)
Intel X540 10GbE DP BT + i350 1Gb DP BT rNDC (DPN: 99GTM)	17.5.10	4.3.13 (ixgbe) + 5.3.3.5 (igb)
Intel X550 10GbE DP BT Network Card (DPN:FKHKC)	17.5.10	4.3.13 (ixgbe)
Intel X710 10GbE QP KR bNDC (DPN: Y348Y)	17.5.12	1.4.25 (i40e)
Intel X710 10GbE DP KR bNDC (DPN: DX69G)	17.5.12	1.4.25 (i40e)
Intel X710 10GbE DP SFP+ Network Card ,V3 (DPN: Y5M7N)	17.5.12	1.4.25 (i40e)
Broadcom		
Broadcom NXE 57406 DP 10GbE BT Network Adapter (DPN: 81V1W)	20.02.05.04	1.2.1(bnxt_en)

Notes

1 - 3 PCIe slot chassis recommended; 2 slots for SAN HBAs and 1 slot for Private Interconnect NIC; Recommend to use one onboard rNDC port along with PCIe NIC port for Oracle Private Interconnect HA.

2 - Though H330 is supported H730/H730p is highly recommended and should be the first choice due to the battery backup available in them

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Database Server Components		
Model	Firmware	Driver
SAN HBAs		
QLogic		
QLogic QLE 256x 8Gbps FC HBA Adapter (DPN: G444C)	03.22.08	8.07.00.35.07.0-k (qla2xxx)
QLogic QLE 266x 16Gbps FC HBA Adapter V2 (DPN: 3PCN3(LP),9J1RG(FH))	08.00.15	8.07.00.35.07.0-k (qla2xxx)
Emulex		
Emulex LPe12000/LPe12002 8Gbps FC HBA Adapter (DPN: C856M)	02.00.04	11.0.240.0 (lpfc)
Emulex LPe16000/LPe16002 16Gbps FC HBA Adapter V3 (DPN:6VK2R(LP),F3VJ6 (FH))	02.00.04	11.0.240.0 (lpfc)

Network Switches		
Model	OS/Firmware	Notes/Other
LAN Switches		
Dell Networking (DN)		
DN S3048-ON 1Gb Ethernet Switch	9.11(0.0P4)	
DN S60 1Gb Ethernet Switch	8.3.3.10	
DN S4820T 10Gb Ethernet BT Switch	9.11(0.0P4)	
DN S4048-ON 10Gb Ethernet Switch	9.11(0.0P2)	
DN S4048T-ON 10Gb Ethernet Switch	9.11(0.0P2)	
DN FN410(s/t) 10Gb Ethernet FX2 IOM	9.11(0.0)	FX2 pass-through IOMs are also supported
SAN Switches		
Brocade		
300 8Gbps Fibre Channel Switch	7.4.1e	
6505/6510/6520 16Gbps Fibre Channel Switches	7.4.1e	

SAN Storage		
Model	OS/Firmware	Notes/Other
Dell EMC SAN Storage (Fibre Channel only)		
Compellent (SC Series)		
SC4020, SC7020, SC9000	SCOS 7.1.4.4	Dell Storage Manager 2016R3 (16.3.1.301)
EMC		
XtremIO	4.0.15-15	XtremIO Cluster SW
XtremIO XMS	4.2.1 Build 6	XtremIO Management SW

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