

DELL EMC VMAX3
400K/200K/100K
Simple Support Matrix
November 13, 2017

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Host Servers/ Adapters: All Fibre Channel HBAs from Emulex, QLogic (2 Gb/s or greater), and Brocade (8 Gb/s or greater), including vendor rebranded versions. Solaris requires an RPQ when using any Brocade HBA. All 10 Gb/s Emulex, QLogic, Brocade, Cisco, Broadcom, and Intel CNAs (10GbE NICs that support FCoE). All 1 Gb/s or 10 Gb/s NICs for iSCSI connectivity, as supported by Server/OS vendor. Any EMC or vendor-supplied OS-approved driver/firmware/BIOS is allowed. EMC recommends using the driver/firmware/BIOS versions listed E-Lab Navigator only if they are newer than the existing supplied driver/firmware/BIOS versions. Adapters must support link speed compatible with switch (fabric) or array (direct connect). All host systems are supported where the host vendor allows the host/OS/adaptor combination. If systems meet the criteria in this ESSM, no further ELN connectivity validation and no RPQ is required.

- Switches:**
- All FC SAN switches (2 Gb/s or greater) from EMC Connectrix, Brocade, Cisco, and QLogic for host and storage connectivity are supported. Refer to the Switched Fabric Topology Parameters table located on the E-Lab Navigator (ELN) at <http://elabnavigator.emc.com> for supported switch fabric interoperability firmware and settings.
 - All EMC-approved 10 GbE FCoE switches from Brocade and Cisco for host connectivity.

Operating Environment: HYPERMAX OS 5977.1125.1125, 5977.952.892, 5977.945.890, 5977.814.786, 5977.813.785, 5977.811.784, 5977.691.684, 5977.596.583, 5977.498.472, 5977.497.471 & 5977.250.109.

Note: 5977.811.784 has been replaced with the Q2`16 SR release 5977.813.785. Version 5977.811.784 can still be used for new installs only, and can be downloaded from <https://support.emc.com/>. For complete details please refer to Salesforce KB: [482212](#).

Director Bit Setting: https://elabnavigator.emc.com/vault/pdf/VMAX_400_200_100_Dir_Bit_ESSM.pdf

Note: [Table 2](#) contains VMAX3 for eNAS Operating Environment 8.1.4 Configuration Guidelines.

Note: The information in this ESSM is a configuration summary. The versions listed in the columns represent versions that work with the listed Platform/Operating Systems and Storage Array. Versions listed in the columns for each specific Platform/Operation System may not be interoperable.

Table 1 EMC® E-Lab™ qualified versions for EMC VMAX3™ 400K/200K/100K

No.	Platform Support	EMC PowerPath®	Native MPIO & DMP	Symante c/ Veritas/ Infosc ale / VxVM	Native Cluster	Symantec/ Veritas/ Infosc ale/VCS/ SFRAC/VxCFS/ SFHA	Oracle RAC & 3rd Party Clusters	Solutions Enabler (5977)
1	Asianux AX [32-Bit] 4.0 SP4	6.0 - 6.2						
2	Canonical Ubuntu 16.04 LTS		Ubuntu DM-MPIO					
3	Citrix Systems, Inc. XenServer [x86_64] 6.0.2, Citrix Systems, Inc. XenServer [x86_64] 6.1, Citrix Systems, Inc. XenServer [x86_64] 6.2, Citrix Systems, Inc. XenServer [x86_64] 6.5, Citrix Systems, Inc. XenServer [x86_64] 7.0, Citrix Systems, Inc. XenServer [x86_64] 7.1, Citrix Systems, Inc. XenServer [x86_64] 7.2		DM-MPIO		XenServer HA			
4	Hewlett Packard HP-UX 11i v1.0 (HP-UX 11.11)		HP PV Links		MC/Service Guard 11.16			
5	Hewlett Packard HP-UX 11i v2 (HP-UX 11.23)	5.2 P06 - 5.2 P07	DMP , HP PV Links		MC/Service Guard 11.16, MC/Service Guard 11.17, MC/Service Guard 11.18, MC/Service Guard 11.19		10g RAC Release 2, 11g RAC Release 1	
6	Hewlett Packard HP-UX 11i v3 (HP-UX 11.31)	5.2 P06 - 5.2 P07	DMP , HP PV Links , HP-UX Native MPIO	5.1 SP1 - 6.1	MC/Service Guard 11.17, MC/Service Guard 11.18, MC/Service Guard 11.19, MC/Service Guard 11.20	Cluster Server (VCS) 5.1 SP1, Cluster Server (VCS) 6.0, Cluster Server (VCS) 6.0.1, Cluster Server (VCS) 6.0.3, Cluster Server (VCS) 6.0.5, Storage Foundation 5.1 SP1 for Oracle RAC, Storage Foundation 6.0 for Oracle RAC, Storage Foundation 6.0.1 for Oracle RAC, Storage Foundation 6.0.3 for Oracle RAC, Storage Foundation 6.0.5 for Oracle RAC	10g RAC Release 2, 11g RAC Release 1, 11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2	8.1.2, 8.2.0, 8.3.0, 8.4.0
7	Hewlett Packard Open VMS V8.4		VMS Native Multipathin g		VMS Cluster License only			8.1.2, 8.2.0, 8.3.0, 8.4.0
8	IBM AIX 6.1	5.7 SP2 - 6.2	AIX-MPIO , DMP	5.1 SP1 - 7.2	PowerHA 7.1.3, PowerHA 7.2, PowerHA 7.2.1	Cluster Server (VCS) 5.1, Cluster Server (VCS) 5.1 SP1, Cluster Server (VCS) 6.0, Cluster Server (VCS) 6.0.1, Cluster Server (VCS) 6.0.3, Cluster Server (VCS) 6.0.5, Cluster Server (VCS) 6.1, Cluster Server (VCS) 6.1.1, Cluster Server (VCS) 6.2, Cluster Server (VCS) 6.2.1, Storage Foundation 5.1 SP1 for Oracle RAC, Storage Foundation 6.0 for Oracle RAC, Storage Foundation 6.0.1 for Oracle RAC, Storage Foundation 6.0.3 for Oracle RAC, Storage Foundation 6.0.5 for Oracle RAC, Storage Foundation 6.1.1 for Oracle RAC, Storage Foundation 6.2 for Oracle RAC, Storage Foundation for Oracle RAC 7.0, Storage Foundation for Oracle RAC 7.0.1, Storage Foundation for Oracle RAC 7.1, Storage Foundation for Oracle RAC 7.2, Veritas Cluster Server (VCS) 7.0, Veritas Cluster Server (VCS) 7.0.1, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2	10g RAC Release 2, 11g RAC Release 1, 11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2	8.1.2, 8.2.0, 8.3.0, 8.4.0
9	IBM AIX 7.1	5.7 SP2 - 6.2	AIX-MPIO , DMP	5.1 SP1 - 7.3	PowerHA 7.1.3, PowerHA 7.2, PowerHA 7.2.1	Cluster Server (VCS) 5.1 SP1, Cluster Server (VCS) 6.0, Cluster Server (VCS) 6.0.1, Cluster Server (VCS) 6.0.3, Cluster Server (VCS) 6.0.5, Cluster Server (VCS) 6.1, Cluster Server (VCS) 6.1.1, Cluster Server (VCS) 6.2, Cluster Server (VCS) 6.2.1, Storage Foundation 5.1 SP1 for Oracle RAC, Storage Foundation 6.0 for Oracle RAC, Storage Foundation 6.0.1 for Oracle RAC, Storage Foundation 6.0.3 for Oracle RAC, Storage Foundation 6.0.5 for Oracle RAC, Storage Foundation 6.1.1 for Oracle RAC, Storage Foundation 6.2 for Oracle RAC, Storage Foundation for Oracle RAC 7.0, Storage Foundation for Oracle RAC 7.0.1, Storage Foundation for Oracle RAC 7.1, Storage Foundation for Oracle RAC 7.2, Veritas Cluster Server (VCS) 7.0, Veritas Cluster Server (VCS) 7.0.1, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2, Veritas Cluster Server (VCS) 7.3	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2	8.1.2, 8.2.0, 8.3.0, 8.4.0
10	IBM AIX 7.2	5.7 SP2 - 6.2	AIX-MPIO	7.1 - 7.3	PowerHA 7.1.3, PowerHA 7.2, PowerHA 7.2.1	Storage Foundation for Oracle RAC 7.1, Storage Foundation for Oracle RAC 7.2, Storage Foundation for Oracle RAC 7.3, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2, Veritas Cluster Server (VCS) 7.3	12c RAC Release 2	8.2.0, 8.3.0, 8.4.0
11	IBM VIOS 2.1, IBM VIOS 2.1.0.10, IBM VIOS 2.1.1.10-FP21		AIX-MPIO					

No.	Platform Support	EMC PowerPath®	Native MPIO & DMP	Symante c/ Veritas/ Infoscalt / VxVM	Native Cluster	Symantec/ Veritas/ Infoscalt/VCS/ SFRAC/VxCFS/ SFHA	Oracle RAC & 3rd Party Clusters	Solutions Enabler (5977)
12	IBM VIOS 2.1.2.10-FP22,IBM VIOS 2.1.2.12-FP22.1,IBM VIOS 2.1.2.13-FP22.1 SP-02,IBM VIOS 2.1.3.10-FP23,IBM VIOS 2.2.0.10-FP24,IBM VIOS 2.2.0.11-FP24-SP01,IBM VIOS 2.2.0.12-FP24-SP02,IBM VIOS 2.2.0.13-FP24-SP03		AIX-MPIO					8.1.2, 8.2.0, 8.3.0, 8.4.0
13	IBM VIOS 2.2.1.1-FP25,IBM VIOS 2.2.1.3-FP25-SP01,IBM VIOS 2.2.1.4-FP25-SP02,IBM VIOS 2.2.1.5-FP25-SP03,IBM VIOS 2.2.2.1-FP26,IBM VIOS 2.2.2.2,IBM VIOS 2.2.2.2-FP26-SP01,IBM VIOS 2.2.2.3,IBM VIOS 2.2.2.3-FP26-SP02,IBM VIOS 2.2.3.1-FP27,IBM VIOS 2.2.3.2,IBM VIOS 2.2.3.2-FP27 _SP02,IBM VIOS 2.2.3.3-FP27 _SP03,IBM VIOS 2.2.3.4-FP27-SP04	5.7 SP2 - 6.2	AIX-MPIO					8.1.2, 8.2.0, 8.3.0, 8.4.0
14	IBM VIOS 2.2.2.4-FP26 _SP04	5.7 SP2 - 6.2	AIX-MPIO					
15	IBM VIOS 2.2.3.50,IBM VIOS 2.2.3.51,IBM VIOS 2.2.3.52	5.7 SP2 - 6.2	AIX-MPIO					
16	IBM VIOS 2.2.4.0	5.7 SP2 - 6.2	AIX-MPIO					8.2.0
17	IBM VIOS 2.2.4.10,IBM VIOS 2.2.4.20,IBM VIOS 2.2.4.21,IBM VIOS 2.2.4.23,IBM VIOS 2.2.5.0,IBM VIOS 2.2.5.10,IBM VIOS 2.2.5.20	5.7 SP2 - 6.2	AIX-MPIO					
18	IBM z/OS 2.1,IBM z/OS 2.2							8.0, 8.0.1, 8.1
19	Microsoft Windows 2008 R2 SP1 [x64] DataCenter,Microsoft Windows 2008 R2 SP1 [x64] Enterprise Edition,Microsoft Windows 2008 R2 SP1 [x64] Standard Edition	5.7 - 6.2	DMP , MPIO Framework [default DSM]	5.1 SP1 - 7.1	Failover Clustering	Cluster Server (VCS) 6.0.1, Cluster Server (VCS) 6.1, Storage Foundation HA 6.0 for Windows, Storage Foundation HA 6.0.1 for Windows, Storage Foundation HA 6.1, Veritas Cluster Server (VCS) 7.0, Veritas Cluster Server (VCS) 7.0.1, Veritas Cluster Server (VCS) 7.1	10g RAC Release 2, 11g RAC Release 2, 12c RAC Release 1, SteelEye LifeKeeper for Windows v8.1.0, SteelEye LifeKeeper for Windows v8.2.0	8.1.2, 8.2.0, 8.3.0, 8.4.0
20	Microsoft Windows 2008 R2 SP1 [x64] Storage Server	5.7 - 6.2	DMP , MPIO Framework [default DSM]	5.1 SP1 - 7.1	Failover Clustering	Cluster Server (VCS) 6.1, Storage Foundation HA 6.0 for Windows, Storage Foundation HA 6.1, Veritas Cluster Server (VCS) 7.0, Veritas Cluster Server (VCS) 7.0.1, Veritas Cluster Server (VCS) 7.1	11g RAC Release 2, 12c RAC Release 1	
21	Microsoft Windows 2008 [x64] DataCenter,Microsoft Windows 2008 [x64] DataCenter SP2,Microsoft Windows 2008 [x64] Enterprise Edition,Microsoft Windows 2008 [x64] Enterprise Edition SP2,Microsoft Windows 2008 [x64] Standard Edition,Microsoft Windows 2008 [x64] Standard Edition SP2	5.7 - 6.0 SP2	DMP , MPIO Framework [default DSM]	5.1 SP1 - 6.0.1	Failover Clustering	Storage Foundation HA 5.1 SP1 for Windows, Storage Foundation HA 5.1 for Windows, Storage Foundation HA 6.0 for Windows, Storage Foundation HA 6.0.1 for Windows	10g RAC Release 2, 11g RAC Release 1, 11g RAC Release 2, 12c RAC Release 1	8.1.2, 8.2.0, 8.3.0, 8.4.0
22	Microsoft Windows 2008 [x64] Storage Server,Microsoft Windows 2008 [x64] Storage Server SP2	5.7 - 6.0 SP2	DMP , MPIO Framework [default DSM]	5.1 SP1 - 6.0.1	Failover Clustering	Storage Foundation HA 6.0 for Windows	10g RAC Release 2, 11g RAC Release 1, 11g RAC Release 2, 12c RAC Release 1	
23	Microsoft Windows 2008 [x64] Web Server	5.7 - 6.0 SP2	DMP , MPIO Framework [default DSM]	5.1 SP1 - 6.0.1	Failover Clustering	Storage Foundation HA 6.0 for Windows, Storage Foundation HA 6.0.1 for Windows	10g RAC Release 2, 11g RAC Release 1, 11g RAC Release 2	
24	Microsoft Windows 2008 [x86] DataCenter,Microsoft Windows 2008 [x86] DataCenter SP2,Microsoft Windows 2008 [x86] Enterprise Edition,Microsoft Windows 2008 [x86] Enterprise Edition SP2,Microsoft Windows 2008 [x86] Standard Edition,Microsoft Windows 2008 [x86] Standard Edition SP2	5.7 - 6.0 SP2	DMP , MPIO Framework [default DSM]	5.1 SP1	Failover Clustering	Storage Foundation HA 5.1 SP1 for Windows, Storage Foundation HA 5.1 for Windows	11g RAC Release 1	
25	Microsoft Windows 2008 [x86] Web Server	5.7 - 6.0 SP2	DMP , MPIO Framework [default DSM]	5.1 SP1	Failover Clustering		11g RAC Release 1	
26	Microsoft Windows Server 2012	5.7 - 6.2	DMP , MPIO Framework [default DSM]	6.1.0 - 7.3	Failover Clustering	Cluster Server (VCS) 6.1, Storage Foundation HA 6.0.2 for Windows, Storage Foundation HA 6.1, Veritas Cluster Server (VCS) 7.0, Veritas Cluster Server (VCS) 7.0.1, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2, Veritas Cluster Server (VCS) 7.3	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2, SteelEye LifeKeeper for Windows v8.1.0, SteelEye LifeKeeper for Windows v8.2.0	8.1.2, 8.2.0, 8.3.0, 8.4.0
27	Microsoft Windows Server 2012 R2	5.7 - 6.2	DMP , MPIO Framework [default DSM]	6.1.0 - 7.3	Failover Clustering	Cluster Server (VCS) 6.1, Storage Foundation HA 6.1, Veritas Cluster Server (VCS) 7.0, Veritas Cluster Server (VCS) 7.0.1, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2, Veritas Cluster Server (VCS) 7.3	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2, ClusterPro X 3.3, SteelEye LifeKeeper for Windows v8.1.0, SteelEye LifeKeeper for Windows v8.2.0	8.1.2, 8.2.0, 8.3.0, 8.4.0
28	Microsoft Windows Server 2016	6.1 - 6.2	MPIO Framework [default DSM]	7.2 - 7.3	Failover Clustering	Storage Foundation for Oracle RAC 7.3, Veritas Cluster Server (VCS) 7.3	12c RAC Release 2	8.4.0
29	Oracle Linux OL 6.x [x86_64] UEK UEK R1 U1 [2.6.32-200],Oracle Linux OL 6.x [x86_64] UEK UEK R1 U2 [2.6.32-300],Oracle Linux OL 6.x [x86_64] UEK UEK R1 [2.6.32-100],Oracle Linux OL 6.x [x86_64] UEK UEK R2 [2.6.39-100],Oracle Linux OL 6.x [x86_64] UEK UEK R2 U1 [2.6.39-200],Oracle Linux OL 6.x [x86_64] UEK UEK R2 U2 [2.6.39-300]		DM-MPIO				11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2	8.1.2, 8.2.0, 8.3.0, 8.4.0
30	Oracle Linux OL 6.x [x86_64] UEK UEK R1 U3 [2.6.32-400],Oracle Linux OL 6.x [x86_64] UEK UEK R2 U3 [2.6.39-400],Oracle Linux OL 6.x [x86_64] UEK UEK R3 [3.8.13-16]	6.0 - 6.1	DM-MPIO				11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2	8.1.2, 8.2.0, 8.3.0, 8.4.0
31	Oracle Linux OL 6.x [x86_64] UEK UEK R2 U4 [2.6.39-400.109],Oracle Linux OL 6.x [x86_64] UEK UEK R2 U5 [2.6.39-400.209],Oracle Linux OL 6.x [x86_64] UEK UEK R3 U1 [3.8.13-26],Oracle Linux OL 6.x [x86_64] UEK UEK R3 U2 [3.8.13-35],Oracle Linux OL 6.x [x86_64] UEK UEK R3 U3 [3.8.13-44],Oracle Linux OL 6.x [x86_64] UEK UEK R3 U4 [3.8.13-55],Oracle Linux OL 6.x [x86_64] UEK UEK R3 U5 [3.8.13-68],Oracle Linux OL 7.x [x86_64] UEK UEK R3 U2 [3.8.13-35],Oracle Linux OL 7.x [x86_64] UEK UEK R3 U3 [3.8.13-44],Oracle Linux OL 7.x [x86_64] UEK UEK R3 U4 [3.8.13-55],Oracle Linux OL 7.x [x86_64] UEK UEK R3 U5 [3.8.13-68]	6.0 - 6.1 P01	DM-MPIO				11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2	8.1.2, 8.2.0, 8.3.0, 8.4.0
32	Oracle Linux OL 6.x [x86_64] UEK UEK R3 U6 [3.8.13-98],Oracle Linux OL 6.x [x86_64] UEK UEK R3 U7 [3.8.13-118],Oracle Linux OL 7.x [x86_64] UEK UEK R3 U6 [3.8.13-98]	6.0 - 6.2	DM-MPIO				11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2	8.1.2, 8.2.0, 8.3.0, 8.4.0
33	Oracle Linux OL 6.x [x86_64] UEK UEK R4 U1[4.1.12-37],Oracle Linux OL 7.x [x86_64] UEK UEK R4 U1[4.1.12-37]		DM-MPIO				11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2	8.4.0

No.	Platform Support	EMC PowerPath®	Native MPIO & DMP	Symante c/ Veritas/ Infoscalt / VxVM	Native Cluster	Symantec/ Veritas/ Infoscalt/VCS/ SFRAC/VxCFS/ SFHA	Oracle RAC & 3rd Party Clusters	Solutions Enabler (5977)
34	Oracle Linux OL 6.x [x86_64] UEK UEK R4 U2 [4.1.12-61],Oracle Linux OL 6.x [x86_64] UEK UEK R4 U4 [4.1.12-94],Oracle Linux OL 7.x [x86_64] UEK UEK R4 U2 [4.1.12-61],Oracle Linux OL 7.x [x86_64] UEK UEK R4 U4 [4.1.12-94]	6.2	DM-MPIO				11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2	8.4.0
35	Oracle Linux OL 6.x [x86_64] UEK UEK R4 [4.1.12-32]		DM-MPIO				11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2	8.3.0, 8.4.0
36	Oracle Linux OL 7.x [x86_64] UEK UEK R3 U7 [3.8.13-118]	6.0 - 6.2	DM-MPIO				12c RAC Release 1, 12c RAC Release 2	8.1.2, 8.2.0, 8.3.0, 8.4.0
37	Oracle Linux OL 7.x [x86_64] UEK UEK R4 U5 [4.1.12-103]	6.2	DM-MPIO					
38	Oracle Linux OL 7.x [x86_64] UEK UEK R4 [4.1.12-32]						11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2	8.3.0, 8.4.0
39	Oracle OVM 3.3.4,Oracle OVM 3.3.5	6.0 - 6.2	DM-MPIO		OVM HA			
40	Oracle OVM 3.4.1		DM-MPIO		OVM HA			
41	Oracle Solaris 10 SPARC	5.5 P06 - 6.0 P03	DMP , MPxIO	5.1 SP1 - 7.2	Solaris Cluster 3.3, Solaris Cluster 3.3 05/11 (Update 1), Solaris Cluster 3.3 3/13 (Update 2)	Cluster Server (VCS) 5.1, Cluster Server (VCS) 5.1 SP1, Cluster Server (VCS) 6.0, Cluster Server (VCS) 6.0.1, Cluster Server (VCS) 6.0.3, Cluster Server (VCS) 6.0.5, Cluster Server (VCS) 6.1, Cluster Server (VCS) 6.1.1, Cluster Server (VCS) 6.2, Cluster Server (VCS) 6.2.1, Storage Foundation 5.1 SP1 for Oracle RAC, Storage Foundation 6.0 for Oracle RAC, Storage Foundation 6.0.1 for Oracle RAC, Storage Foundation 6.0.3 for Oracle RAC, Storage Foundation 6.0.5 for Oracle RAC, Storage Foundation 6.1.1 for Oracle RAC, Storage Foundation 6.2 for Oracle RAC, Storage Foundation 6.2.1 for Oracle RAC, Storage Foundation for Oracle RAC 7.0, Storage Foundation for Oracle RAC 7.0.1, Storage Foundation for Oracle RAC 7.1, Storage Foundation for Oracle RAC 7.2, Veritas Cluster Server (VCS) 7.0, Veritas Cluster Server (VCS) 7.0.1, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2	10g RAC Release 2, 11g RAC Release 1, 11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2, DNCWARE ClusterPerfect V4.8R0, DNCWARE ClusterPerfect V4.8R2, DNCWARE ClusterPerfect V4.8R3, DNCWARE ClusterPerfect V4.8R5	8.1.2, 8.2.0, 8.3.0, 8.4.0
42	Oracle Solaris 10 x86	5.5 P06 - 6.0 P03	DMP , MPxIO	5.1 SP1 - 6.0.5	Solaris Cluster 3.3, Solaris Cluster 3.3 05/11 (Update 1), Solaris Cluster 3.3 3/13 (Update 2)	Cluster Server (VCS) 5.1, Cluster Server (VCS) 5.1 SP1, Cluster Server (VCS) 6.0, Cluster Server (VCS) 6.0.1, Cluster Server (VCS) 6.0.3, Cluster Server (VCS) 6.0.5, Storage Foundation 5.1 SP1 for Oracle RAC, Storage Foundation 6.0 for Oracle RAC, Storage Foundation 6.0.1 for Oracle RAC, Storage Foundation 6.0.3 for Oracle RAC, Storage Foundation 6.0.5 for Oracle RAC, Veritas Cluster Server (VCS) 7.0.1, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2	10g RAC Release 2, 11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2, DNCWARE ClusterPerfect V4.8R0, DNCWARE ClusterPerfect V4.8R2	8.1.2, 8.2.0, 8.3.0, 8.4.0
43	Oracle Solaris 11 SPARC,Oracle Solaris 11 x86	5.5 P06 - 6.0 P03	DMP , MPxIO	6.0 - 6.0.5	Solaris Cluster 4.0	Cluster Server (VCS) 6.0, Cluster Server (VCS) 6.0.1, Storage Foundation 6.0 for Oracle RAC, Storage Foundation 6.0.1 for Oracle RAC	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2	8.1.2, 8.2.0, 8.3.0, 8.4.0
44	Oracle Solaris 11.1 SPARC	5.5 P06 - 6.0 P03	DMP , MPxIO	6.0.3 - 7.3	Solaris Cluster 4.1	Cluster Server (VCS) 6.0.3, Cluster Server (VCS) 6.0.5, Cluster Server (VCS) 6.1, Cluster Server (VCS) 6.1.1, Cluster Server (VCS) 6.2, Cluster Server (VCS) 6.2.1, Storage Foundation 6.0.3 for Oracle RAC, Storage Foundation 6.0.5 for Oracle RAC, Storage Foundation 6.1.1 for Oracle RAC, Storage Foundation 6.2 for Oracle RAC, Storage Foundation 6.2.1 for Oracle RAC, Storage Foundation for Oracle RAC 7.0, Storage Foundation for Oracle RAC 7.0.1, Storage Foundation for Oracle RAC 7.1, Storage Foundation for Oracle RAC 7.2, Storage Foundation for Oracle RAC 7.3, Veritas Cluster Server (VCS) 7.0, Veritas Cluster Server (VCS) 7.0.1, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2, Veritas Cluster Server (VCS) 7.3	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2	8.1.2, 8.2.0, 8.3.0, 8.4.0
45	Oracle Solaris 11.1 x86	5.5 P06 - 6.0 P03	DMP , MPxIO	6.0.3 - 6.0.5	Solaris Cluster 4.1	Cluster Server (VCS) 6.0.3, Cluster Server (VCS) 6.0.5, Storage Foundation 6.0.3 for Oracle RAC, Storage Foundation 6.0.5 for Oracle RAC, Veritas Cluster Server (VCS) 7.0, Veritas Cluster Server (VCS) 7.0.1, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2	8.1.2, 8.2.0, 8.3.0, 8.4.0
46	Oracle Solaris 11.2 SPARC	5.5 P06 - 6.0 P03	DMP , MPxIO	6.0.5 - 7.3	Solaris Cluster 4.2	Cluster Server (VCS) 6.0.5, Cluster Server (VCS) 6.1, Cluster Server (VCS) 6.1.1, Cluster Server (VCS) 6.2, Cluster Server (VCS) 6.2.1, Storage Foundation 6.0.5 for Oracle RAC, Storage Foundation 6.1.1 for Oracle RAC, Storage Foundation 6.2 for Oracle RAC, Storage Foundation 6.2.1 for Oracle RAC, Storage Foundation for Oracle RAC 7.0, Storage Foundation for Oracle RAC 7.0.1, Storage Foundation for Oracle RAC 7.1, Storage Foundation for Oracle RAC 7.2, Storage Foundation for Oracle RAC 7.3, Veritas Cluster Server (VCS) 7.0, Veritas Cluster Server (VCS) 7.0.1, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2, Veritas Cluster Server (VCS) 7.3	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2	8.1.2, 8.2.0, 8.3.0, 8.4.0
47	Oracle Solaris 11.2 x86	5.5 P06 - 6.0 P03	DMP , MPxIO	6.0.5	Solaris Cluster 4.2	Cluster Server (VCS) 6.0.5, Storage Foundation 6.0.5 for Oracle RAC, Veritas Cluster Server (VCS) 7.0, Veritas Cluster Server (VCS) 7.0.1, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2	8.1.2, 8.2.0, 8.3.0, 8.4.0
48	Oracle Solaris 11.3 SPARC	5.5 P06 - 6.0 P03	DMP , MPxIO	6.0.5 - 7.3	Solaris Cluster 4.3	Cluster Server (VCS) 6.0.5, Cluster Server (VCS) 6.1.1, Cluster Server (VCS) 6.2.1, Storage Foundation 6.0.5 for Oracle RAC, Storage Foundation 6.1.1 for Oracle RAC, Storage Foundation 6.2.1 for Oracle RAC, Storage Foundation for Oracle RAC 7.0.1, Storage Foundation for Oracle RAC 7.1, Storage Foundation for Oracle RAC 7.2, Storage Foundation for Oracle RAC 7.3, Veritas Cluster Server (VCS) 7.0.1, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2, Veritas Cluster Server (VCS) 7.3	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2	8.3.0, 8.4.0

No.	Platform Support	EMC PowerPath®	Native MPIO & DMP	Symantec c/ Veritas/ Infoscate / VxVM	Native Cluster	Symantec/ Veritas/ Infoscate/VCS/ SFRAC/VxVCS/ SFHA	Oracle RAC & 3rd Party Clusters	Solutions Enabler (5977)
49	Oracle Solaris 11.3 x86	5.5 P06 - 6.0 P03	DMP , MPxIO	6.0.5	Solaris Cluster 4.3	Cluster Server (VCS) 6.0.5, Storage Foundation 6.0.5 for Oracle RAC, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2	8.3.0, 8.4.0
50	Red Hat RHEL [32-Bit] 6.0,Red Hat RHEL [32-Bit] 6.1,Red Hat RHEL [32-Bit] 6.2,Red Hat RHEL [32-Bit] 6.3,Red Hat RHEL [32-Bit] 6.4		DM-MPIO		GFS (Global File System) 6.0, GFS2 (Global File System 2) GFS2, High Availability Add-on 6.0			
51	Red Hat RHEL [32-Bit] 6.5		DM-MPIO		GFS2 (Global File System 2) GFS2, High Availability Add-on 6.0			
52	Red Hat RHEL [IBM Power] 6.0		DM-MPIO		GFS (Global File System) 6.2, GFS2 (Global File System 2) GFS2			8.1.2, 8.2.0, 8.3.0, 8.4.0
53	Red Hat RHEL [s390x-64-Bit] 6.3,Red Hat RHEL [s390x-64-Bit] 6.5,Red Hat RHEL [s390x-64-Bit] 6.6,Red Hat RHEL [s390x-64-Bit] 7.0,Red Hat RHEL [s390x-64-Bit] 7.1,SUSE SLES [s390x-64-Bit] 11 SP3,SUSE SLES [s390x-64-Bit] 11 SP4,SUSE SLES [s390x-64-Bit] 12							8.1.2, 8.2.0, 8.3.0, 8.4.0
54	Red Hat RHEL [s390x-64-Bit] 6.7,SUSE SLES [s390x-64-Bit] 12 SP1							8.2.0, 8.3.0, 8.4.0
55	Red Hat RHEL [s390x-64-Bit] 7.3,SUSE SLES [s390x-64-Bit] 12 SP2							8.4.0
56	Red Hat RHEL [x86_64] 6.0	6.0 - 6.2	DM-MPIO	5.1 SP1	GFS (Global File System) 6.0, GFS2 (Global File System 2) GFS2, High Availability Add-on 6.0	Cluster Server (VCS) 5.1 SP1, Storage Foundation 5.1 SP1 for Oracle RAC	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2	8.1.2, 8.2.0, 8.3.0, 8.4.0
57	Red Hat RHEL [x86_64] 6.1,Red Hat RHEL [x86_64] 6.2	6.0 - 6.2	DM-MPIO , DMP	5.1 SP1 - 6.0.5	GFS (Global File System) 6.0, GFS2 (Global File System 2) GFS2, High Availability Add-on 6.0	Cluster Server (VCS) 5.1 SP1, Cluster Server (VCS) 6.0, Cluster Server (VCS) 6.0.1, Cluster Server (VCS) 6.0.2, Cluster Server (VCS) 6.0.3, Cluster Server (VCS) 6.0.5, Storage Foundation 5.1 SP1 for Oracle RAC, Storage Foundation 6.0 for Oracle RAC, Storage Foundation 6.0.1 for Oracle RAC, Storage Foundation 6.0.3 for Oracle RAC, Storage Foundation 6.0.5 for Oracle RAC	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2, SteelEye LifeKeeper for Linux v8.4.0, SteelEye LifeKeeper for Linux v8.4.1, SteelEye LifeKeeper for Linux v9.0, SteelEye LifeKeeper for Linux v9.0.1, SteelEye LifeKeeper for Linux v9.0.2, SteelEye LifeKeeper for Linux v9.1, SteelEye LifeKeeper for Linux v9.1.1, SteelEye LifeKeeper for Linux v9.1.2, SteelEye LifeKeeper for Linux v9.2	8.1.2, 8.2.0, 8.3.0, 8.4.0
58	Red Hat RHEL [x86_64] 6.3	6.0 - 6.2	DM-MPIO , DMP	5.1 SP1 - 6.2	GFS (Global File System) 6.0, GFS2 (Global File System 2) GFS2, High Availability Add-on 6.0	Cluster Server (VCS) 5.1 SP1, Cluster Server (VCS) 6.0.1, Cluster Server (VCS) 6.0.2, Cluster Server (VCS) 6.0.3, Cluster Server (VCS) 6.0.5, Cluster Server (VCS) 6.1, Cluster Server (VCS) 6.1.1, Cluster Server (VCS) 6.2, Storage Foundation 5.1 SP1 for Oracle RAC, Storage Foundation 6.0.1 for Oracle RAC, Storage Foundation 6.0.3 for Oracle RAC, Storage Foundation 6.0.5 for Oracle RAC, Storage Foundation 6.1.1 for Oracle RAC, Storage Foundation 6.2 for Oracle RAC	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2, SteelEye LifeKeeper for Linux v8.4.0, SteelEye LifeKeeper for Linux v8.4.1, SteelEye LifeKeeper for Linux v9.0, SteelEye LifeKeeper for Linux v9.0.1, SteelEye LifeKeeper for Linux v9.0.2, SteelEye LifeKeeper for Linux v9.1, SteelEye LifeKeeper for Linux v9.1.1, SteelEye LifeKeeper for Linux v9.1.2, SteelEye LifeKeeper for Linux v9.2	8.1.2, 8.2.0, 8.3.0, 8.4.0
59	Red Hat RHEL [x86_64] 6.4	6.0 - 6.2	DM-MPIO , DMP	5.1 SP1 - 7.2	GFS (Global File System) 6.0, GFS2 (Global File System 2) GFS2, High Availability Add-on 6.0	Cluster Server (VCS) 5.1 SP1, Cluster Server (VCS) 6.0.3, Cluster Server (VCS) 6.0.5, Cluster Server (VCS) 6.1, Cluster Server (VCS) 6.1.1, Cluster Server (VCS) 6.2, Cluster Server (VCS) 6.2.1, Storage Foundation 5.1 SP1 for Oracle RAC, Storage Foundation 6.0.3 for Oracle RAC, Storage Foundation 6.0.5 for Oracle RAC, Storage Foundation 6.1.1 for Oracle RAC, Storage Foundation 6.2 for Oracle RAC, Storage Foundation 6.2.1 for Oracle RAC, Storage Foundation for Oracle RAC 7.0, Storage Foundation for Oracle RAC 7.0.1, Storage Foundation for Oracle RAC 7.1, Storage Foundation for Oracle RAC 7.2, Veritas Cluster Server (VCS) 7.0, Veritas Cluster Server (VCS) 7.0.1, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2, SteelEye LifeKeeper for Linux v8.4.0, SteelEye LifeKeeper for Linux v8.4.1, SteelEye LifeKeeper for Linux v9.0, SteelEye LifeKeeper for Linux v9.0.1, SteelEye LifeKeeper for Linux v9.0.2, SteelEye LifeKeeper for Linux v9.1, SteelEye LifeKeeper for Linux v9.1.1, SteelEye LifeKeeper for Linux v9.1.2, SteelEye LifeKeeper for Linux v9.2	8.1.2, 8.2.0, 8.3.0, 8.4.0

No.	Platform Support	EMC PowerPath®	Native MPIO & DMP	Symante c/ Veritas/ Infoscalt / VxVM	Native Cluster	Symantec/ Veritas/ InfoscaltVCS/ SFRAC/VxCFS/ SFHA	Oracle RAC & 3rd Party Clusters	Solutions Enabler (5977)
60	Red Hat RHEL [x86_64] 6.5	6.0 - 6.2	DM-MPIO , DMP	6.0.5 - 7.2	GFS2 (Global File System 2) GFS2, High Availability Add-on 6.0	Cluster Server (VCS) 5.1 SP1, Cluster Server (VCS) 6.0.3, Cluster Server (VCS) 6.0.5, Cluster Server (VCS) 6.1, Cluster Server (VCS) 6.1.1, Cluster Server (VCS) 6.2, Cluster Server (VCS) 6.2.1, Storage Foundation 5.1 SP1 for Oracle RAC, Storage Foundation 6.0.3 for Oracle RAC, Storage Foundation 6.0.5 for Oracle RAC, Storage Foundation 6.1.1 for Oracle RAC, Storage Foundation 6.2 for Oracle RAC, Storage Foundation 6.2.1 for Oracle RAC, Storage Foundation for Oracle RAC 7.0, Storage Foundation for Oracle RAC 7.0.1, Storage Foundation for Oracle RAC 7.1, Storage Foundation for Oracle RAC 7.2, Veritas Cluster Server (VCS) 7.0, Veritas Cluster Server (VCS) 7.0.1, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2, PRIMECLUSTE R 4.3A40, SteelEye LifeKeeper for Linux v8.4.0, SteelEye LifeKeeper for Linux v8.4.1, SteelEye LifeKeeper for Linux v9.0, SteelEye LifeKeeper for Linux v9.0.1, SteelEye LifeKeeper for Linux v9.0.2, SteelEye LifeKeeper for Linux v9.1, SteelEye LifeKeeper for Linux v9.1.1, SteelEye LifeKeeper for Linux v9.1.2, SteelEye LifeKeeper for Linux v9.2	8.1.2, 8.2.0, 8.3.0, 8.4.0
61	Red Hat RHEL [x86_64] 6.6	6.0 - 6.2	DM-MPIO , DMP	6.0.5 - 7.2	GFS2 (Global File System 2) GFS2, High Availability Add-on 6.0	Cluster Server (VCS) 6.0.5, Cluster Server (VCS) 6.1, Cluster Server (VCS) 6.1.1, Cluster Server (VCS) 6.2, Cluster Server (VCS) 6.2.1, Storage Foundation 6.0.5 for Oracle RAC, Storage Foundation 6.1.1 for Oracle RAC, Storage Foundation 6.2 for Oracle RAC, Storage Foundation 6.2.1 for Oracle RAC, Storage Foundation for Oracle RAC 7.0, Storage Foundation for Oracle RAC 7.0.1, Storage Foundation for Oracle RAC 7.1, Storage Foundation for Oracle RAC 7.2, Veritas Cluster Server (VCS) 7.0, Veritas Cluster Server (VCS) 7.0.1, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2, ClusterPro X 3.3, SteelEye LifeKeeper for Linux v8.4.0, SteelEye LifeKeeper for Linux v8.4.1, SteelEye LifeKeeper for Linux v9.0, SteelEye LifeKeeper for Linux v9.0.1, SteelEye LifeKeeper for Linux v9.0.2, SteelEye LifeKeeper for Linux v9.1, SteelEye LifeKeeper for Linux v9.1.1, SteelEye LifeKeeper for Linux v9.1.2, SteelEye LifeKeeper for Linux v9.2	8.1.2, 8.2.0, 8.3.0, 8.4.0
62	Red Hat RHEL [x86_64] 6.7	6.0 - 6.2	DM-MPIO , DMP	6.0.5 - 7.3	GFS2 (Global File System 2) GFS2, High Availability Add-on 6.0	Cluster Server (VCS) 6.0.5, Cluster Server (VCS) 6.1.1, Cluster Server (VCS) 6.2.1, Storage Foundation 6.0.5 for Oracle RAC, Storage Foundation 6.1.1 for Oracle RAC, Storage Foundation 6.2.1 for Oracle RAC, Storage Foundation for Oracle RAC 7.0, Storage Foundation for Oracle RAC 7.0.1, Storage Foundation for Oracle RAC 7.1, Storage Foundation for Oracle RAC 7.2, Storage Foundation for Oracle RAC 7.3, Veritas Cluster Server (VCS) 7.0, Veritas Cluster Server (VCS) 7.0.1, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2, Veritas Cluster Server (VCS) 7.3	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2, ClusterPro X 3.3, SteelEye LifeKeeper for Linux v9.0.2, SteelEye LifeKeeper for Linux v9.1, SteelEye LifeKeeper for Linux v9.1.1, SteelEye LifeKeeper for Linux v9.1.2, SteelEye LifeKeeper for Linux v9.2	8.1.2, 8.2.0, 8.3.0, 8.4.0
63	Red Hat RHEL [x86_64] 6.8	6.1 - 6.2	DM-MPIO , DMP	7.2 - 7.3	High Availability Add-on 6.0	Cluster Server (VCS) 6.0.5, Cluster Server (VCS) 6.2.1, Storage Foundation 6.2.1 for Oracle RAC, Storage Foundation for Oracle RAC 7.1, Storage Foundation for Oracle RAC 7.2, Storage Foundation for Oracle RAC 7.3, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2, Veritas Cluster Server (VCS) 7.3	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2, SteelEye LifeKeeper for Linux v9.1.2, SteelEye LifeKeeper for Linux v9.2	8.2.0, 8.3.0, 8.4.0
64	Red Hat RHEL [x86_64] 6.9	6.1 - 6.2	DM-MPIO , DMP	7.2 - 7.3	High Availability Add-on 6.0	Cluster Server (VCS) 6.0.5, Cluster Server (VCS) 6.2.1, Storage Foundation 6.2.1 for Oracle RAC, Storage Foundation for Oracle RAC 7.1, Storage Foundation for Oracle RAC 7.2, Storage Foundation for Oracle RAC 7.3, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2, Veritas Cluster Server (VCS) 7.3	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2, SteelEye LifeKeeper for Linux v9.1.2, SteelEye LifeKeeper for Linux v9.2	8.4.0

No.	Platform Support	EMC PowerPath®	Native MPIO & DMP	Symante c/ Veritas/ Infoscalt / VxVM	Native Cluster	Symantec/ Veritas/ InfoscaltVCS/ SFRAC/VxCFS/ SFHA	Oracle RAC & 3rd Party Clusters	Solutions Enabler (5977)
65	Red Hat RHEL [x86_64] 7.0	6.0 - 6.2	DM-MPIO , DMP	6.2.1 - 7.2	GFS2 (Global File System 2) GFS2, High Availability Add-on 7.0	Cluster Server (VCS) 6.2, Cluster Server (VCS) 6.2.1, Storage Foundation 6.2 for Oracle RAC, Storage Foundation 6.2.1 for Oracle RAC, Storage Foundation for Oracle RAC 7.0, Storage Foundation for Oracle RAC 7.0.1, Storage Foundation for Oracle RAC 7.1, Storage Foundation for Oracle RAC 7.2, Storage Foundation for Oracle RAC 7.3, Veritas Cluster Server (VCS) 7.0, Veritas Cluster Server (VCS) 7.0.1, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2, Veritas Cluster Server (VCS) 7.3	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2, ClusterPro X 3.3, SteelEye LifeKeeper for Linux v8.4.0, SteelEye LifeKeeper for Linux v8.4.1, SteelEye LifeKeeper for Linux v9.0, SteelEye LifeKeeper for Linux v9.0.1, SteelEye LifeKeeper for Linux v9.0.2, SteelEye LifeKeeper for Linux v9.1, SteelEye LifeKeeper for Linux v9.1.1, SteelEye LifeKeeper for Linux v9.1.2, SteelEye LifeKeeper for Linux v9.2	8.1.2, 8.2.0, 8.3.0, 8.4.0
66	Red Hat RHEL [x86_64] 7.1	6.0 SP1 - 6.2	DM-MPIO , DMP	6.2.1 - 7.3	GFS2 (Global File System 2) GFS2, High Availability Add-on 7.0	Cluster Server (VCS) 6.2.1, Storage Foundation 6.2.1 for Oracle RAC, Storage Foundation for Oracle RAC 7.0, Storage Foundation for Oracle RAC 7.0.1, Storage Foundation for Oracle RAC 7.1, Storage Foundation for Oracle RAC 7.2, Storage Foundation for Oracle RAC 7.3, Veritas Cluster Server (VCS) 7.0, Veritas Cluster Server (VCS) 7.0.1, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2, Veritas Cluster Server (VCS) 7.3	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2, ClusterPro X 3.3, SteelEye LifeKeeper for Linux v8.4.1, SteelEye LifeKeeper for Linux v9.0, SteelEye LifeKeeper for Linux v9.0.1, SteelEye LifeKeeper for Linux v9.0.2, SteelEye LifeKeeper for Linux v9.1, SteelEye LifeKeeper for Linux v9.1.1, SteelEye LifeKeeper for Linux v9.1.2, SteelEye LifeKeeper for Linux v9.2	8.1.2, 8.2.0, 8.3.0, 8.4.0
67	Red Hat RHEL [x86_64] 7.2	6.0 SP1 P01 - 6.2	DM-MPIO , DMP	6.2.1 - 7.3	GFS2 (Global File System 2) GFS2, High Availability Add-on 7.0	Cluster Server (VCS) 6.2.1, Storage Foundation 6.2.1 for Oracle RAC, Storage Foundation for Oracle RAC 7.0.1, Storage Foundation for Oracle RAC 7.1, Storage Foundation for Oracle RAC 7.2, Storage Foundation for Oracle RAC 7.3, Veritas Cluster Server (VCS) 7.0.1, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2, Veritas Cluster Server (VCS) 7.3	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2, PRIMECLUSTE R 4.4A00, SteelEye LifeKeeper for Linux v9.1, SteelEye LifeKeeper for Linux v9.1.1, SteelEye LifeKeeper for Linux v9.1.2, SteelEye LifeKeeper for Linux v9.2	8.2.0, 8.3.0, 8.4.0
68	Red Hat RHEL [x86_64] 7.3	6.1 - 6.2	DM-MPIO , DMP	6.2.1 - 7.3	High Availability Add-on 7.0	Cluster Server (VCS) 6.2.1, Storage Foundation 6.2.1 for Oracle RAC, Storage Foundation for Oracle RAC 7.1, Storage Foundation for Oracle RAC 7.2, Storage Foundation for Oracle RAC 7.3, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2, Veritas Cluster Server (VCS) 7.3	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2, SteelEye LifeKeeper for Linux v9.1.2, SteelEye LifeKeeper for Linux v9.2	8.4.0
69	Red Hat RHEL [x86_64] 7.4		DM-MPIO					8.4.0
70	SUSE SLES [32-Bit] 11,SUSE SLES [32-Bit] 11 SP1,SUSE SLES [32-Bit] 11 SP2,SUSE SLES [32-Bit] 11 SP3		DM-MPIO					
71	SUSE SLES [IA64] 11,SUSE SLES [IA64] 11 SP1,SUSE SLES [IBM Power] 11 SP1,SUSE SLES [s390x-64-Bit] 11 SP2		DM-MPIO					8.1.2, 8.2.0, 8.3.0, 8.4.0
72	SUSE SLES [IBM Power] 11		DM-MPIO		High Availability Extension			8.1.2, 8.2.0, 8.3.0, 8.4.0

No.	Platform Support	EMC PowerPath®	Native MPIO & DMP	Symante c/ Veritas/ Infoscalt / VxVM	Native Cluster	Symantec/ Veritas/ InfoscaltVCS/ SFRAC/VxCFS/ SFHA	Oracle RAC & 3rd Party Clusters	Solutions Enabler (5977)
73	SUSE SLES [x86_64] 11		DM-MPIO , DMP	5.1 SP1	High Availability Extension	Cluster Server (VCS) 5.1, Cluster Server (VCS) 5.1 SP1, Storage Foundation 5.1 SP1 for Oracle RAC	10g RAC Release 2, 11g RAC Release 1, 11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2, SteelEye LifeKeeper for Linux v8.4.0, SteelEye LifeKeeper for Linux v8.4.1, SteelEye LifeKeeper for Linux v9.0, SteelEye LifeKeeper for Linux v9.0.1, SteelEye LifeKeeper for Linux v9.0.2, SteelEye LifeKeeper for Linux v9.1, SteelEye LifeKeeper for Linux v9.1.1, SteelEye LifeKeeper for Linux v9.1.2, SteelEye LifeKeeper for Linux v9.2	8.1.2, 8.2.0, 8.3.0, 8.4.0
74	SUSE SLES [x86_64] 11 SP1		DM-MPIO , DMP	5.1 SP1 - 6.0.5	High Availability Extension	Cluster Server (VCS) 5.1 SP1, Cluster Server (VCS) 6.0, Cluster Server (VCS) 6.0.1, Cluster Server (VCS) 6.0.2, Cluster Server (VCS) 6.0.3, Cluster Server (VCS) 6.0.5, Storage Foundation 5.1 SP1 for Oracle RAC, Storage Foundation 6.0 for Oracle RAC, Storage Foundation 6.0.1 for Oracle RAC, Storage Foundation 6.0.3 for Oracle RAC, Storage Foundation 6.0.5 for Oracle RAC	10g RAC Release 2, 11g RAC Release 1, 11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2, SteelEye LifeKeeper for Linux v8.4.0, SteelEye LifeKeeper for Linux v8.4.1, SteelEye LifeKeeper for Linux v9.0, SteelEye LifeKeeper for Linux v9.0.1, SteelEye LifeKeeper for Linux v9.0.2, SteelEye LifeKeeper for Linux v9.1, SteelEye LifeKeeper for Linux v9.1.1, SteelEye LifeKeeper for Linux v9.1.2, SteelEye LifeKeeper for Linux v9.2	8.1.2, 8.2.0, 8.3.0, 8.4.0
75	SUSE SLES [x86_64] 11 SP2		DM-MPIO , DMP	6.0.1 - 6.2.1	High Availability Extension	Cluster Server (VCS) 6.0.1, Cluster Server (VCS) 6.0.2, Cluster Server (VCS) 6.0.3, Cluster Server (VCS) 6.0.4, Cluster Server (VCS) 6.0.5, Cluster Server (VCS) 6.1, Cluster Server (VCS) 6.1.1, Cluster Server (VCS) 6.2, Cluster Server (VCS) 6.2.1, Storage Foundation 6.0.1 for Oracle RAC, Storage Foundation 6.0.3 for Oracle RAC, Storage Foundation 6.0.4 for Oracle RAC, Storage Foundation 6.0.5 for Oracle RAC, Storage Foundation 6.1.1 for Oracle RAC, Storage Foundation 6.2 for Oracle RAC, Storage Foundation 6.2.1 for Oracle RAC	10g RAC Release 2, 11g RAC Release 1, 11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2, SteelEye LifeKeeper for Linux v8.4.0, SteelEye LifeKeeper for Linux v8.4.1, SteelEye LifeKeeper for Linux v9.0, SteelEye LifeKeeper for Linux v9.0.1, SteelEye LifeKeeper for Linux v9.0.2, SteelEye LifeKeeper for Linux v9.1, SteelEye LifeKeeper for Linux v9.1.1, SteelEye LifeKeeper for Linux v9.1.2, SteelEye LifeKeeper for Linux v9.2	8.1.2, 8.2.0, 8.3.0, 8.4.0

No.	Platform Support	EMC PowerPath®	Native MPIO & DMP	Symante c/ Veritas/ Infoscail / VxVM	Native Cluster	Symantec/ Veritas/ Infoscail/ SFRAC/VxCFS/ SFHA	Oracle RAC & 3rd Party Clusters	Solutions Enabler (5977)
76	SUSE SLES [x86_64] 11 SP3	6.0 - 6.0 P01	DM-MPIO , DMP	6.0.5 - 7.3	High Availability Extension	Cluster Server (VCS) 6.0.4, Cluster Server (VCS) 6.0.5, Cluster Server (VCS) 6.1, Cluster Server (VCS) 6.1.1, Cluster Server (VCS) 6.2, Cluster Server (VCS) 6.2.1, Storage Foundation 6.0.4 for Oracle RAC, Storage Foundation 6.0.5 for Oracle RAC, Storage Foundation 6.1.1 for Oracle RAC, Storage Foundation 6.2 for Oracle RAC, Storage Foundation 6.2.1 for Oracle RAC, Storage Foundation for Oracle RAC 7.0, Storage Foundation for Oracle RAC 7.0.1, Storage Foundation for Oracle RAC 7.1, Storage Foundation for Oracle RAC 7.2, Storage Foundation for Oracle RAC 7.3, Veritas Cluster Server (VCS) 7.0, Veritas Cluster Server (VCS) 7.0.1, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2, Veritas Cluster Server (VCS) 7.3	10g RAC Release 2, 11g RAC Release 1, 11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2, SteelEye LifeKeeper for Linux v8.4.0, SteelEye LifeKeeper for Linux v8.4.1, SteelEye LifeKeeper for Linux v9.0, SteelEye LifeKeeper for Linux v9.0.1, SteelEye LifeKeeper for Linux v9.0.2, SteelEye LifeKeeper for Linux v9.1, SteelEye LifeKeeper for Linux v9.1.1, SteelEye LifeKeeper for Linux v9.1.2, SteelEye LifeKeeper for Linux v9.2	8.1.2, 8.2.0, 8.3.0, 8.4.0
77	SUSE SLES [x86_64] 11 SP4	6.0 SP1 - 6.2	DM-MPIO , DMP	5.1 SP1 - 7.3	High Availability Extension	Cluster Server (VCS) 6.0.5, Cluster Server (VCS) 6.1.1, Cluster Server (VCS) 6.2.1, Storage Foundation 6.0.5 for Oracle RAC, Storage Foundation 6.2.1 for Oracle RAC, Storage Foundation for Oracle RAC 7.0.1, Storage Foundation for Oracle RAC 7.1, Storage Foundation for Oracle RAC 7.2, Storage Foundation for Oracle RAC 7.3, Veritas Cluster Server (VCS) 7.0.1, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2, Veritas Cluster Server (VCS) 7.3	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2, SteelEye LifeKeeper for Linux v9.0, SteelEye LifeKeeper for Linux v9.0.1, SteelEye LifeKeeper for Linux v9.0.2, SteelEye LifeKeeper for Linux v9.1, SteelEye LifeKeeper for Linux v9.1.1, SteelEye LifeKeeper for Linux v9.1.2, SteelEye LifeKeeper for Linux v9.2	8.1.2, 8.2.0, 8.3.0, 8.4.0
78	SUSE SLES [x86_64] 12	6.0 - 6.0 SP1 P02	DM-MPIO , DMP	6.2.1 - 7.2	High Availability Extension	Cluster Server (VCS) 6.2.1, Storage Foundation 6.2.1 for Oracle RAC, Storage Foundation for Oracle RAC 7.0, Storage Foundation for Oracle RAC 7.0.1, Storage Foundation for Oracle RAC 7.1, Storage Foundation for Oracle RAC 7.2, Storage Foundation for Oracle RAC 7.3, Veritas Cluster Server (VCS) 7.0, Veritas Cluster Server (VCS) 7.0.1, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2, Veritas Cluster Server (VCS) 7.3	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2, SteelEye LifeKeeper for Linux v9.1.2, SteelEye LifeKeeper for Linux v9.2	8.1.2, 8.2.0, 8.3.0, 8.4.0
79	SUSE SLES [x86_64] 12 SP1	6.1	DM-MPIO , DMP	6.2.1 - 7.3	High Availability Extension	Cluster Server (VCS) 6.2.1, Storage Foundation 6.2.1 for Oracle RAC, Storage Foundation for Oracle RAC 7.0.1, Storage Foundation for Oracle RAC 7.1, Storage Foundation for Oracle RAC 7.2, Storage Foundation for Oracle RAC 7.3, Veritas Cluster Server (VCS) 7.0.1, Veritas Cluster Server (VCS) 7.1, Veritas Cluster Server (VCS) 7.2, Veritas Cluster Server (VCS) 7.3	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2, SteelEye LifeKeeper for Linux v9.1.2, SteelEye LifeKeeper for Linux v9.2	8.2.0, 8.3.0, 8.4.0
80	SUSE SLES [x86_64] 12 SP2	6.2	DM-MPIO	7.3	High Availability Extension	Storage Foundation for Oracle RAC 7.3, Veritas Cluster Server (VCS) 7.3	11g RAC Release 2, 12c RAC Release 1, 12c RAC Release 2, SteelEye LifeKeeper for Linux v9.1.2, SteelEye LifeKeeper for Linux v9.2	8.4.0
81	SUSE SLES [x86_64] 12 SP3		DM-MPIO		High Availability Extension			8.4.0
82	VMware ESXi 5.5 (vSphere 5.5)	5.8 - 5.9 SP1 P03	NMP , VxDMP 7.0, VxDMP 7.0.1, VxDMP 7.1		VMware HA			
83	VMware ESXi 6.0 (vSphere 6.0)	6.0 - 6.2	NMP , VxDMP 7.0, VxDMP 7.0.1, VxDMP 7.1		VMware HA			
84	VMware ESXi 6.5 (vSphere6.5)	6.0 - 6.2	NMP		VMware HA			

Note: The information in this ESSM is a configuration summary. The versions listed in the columns represent versions that work with the listed Platform/Operating Systems and Storage Array. Versions listed in the columns for each specific Platform/Operation System may not be interoperable. For more detailed information, refer to the Advanced Query section on the ELN home page at <https://elabnavigator.emc.com>.

Table 2 VMAX3 and VMAX All Flash for Embedded NAS Operating Environment 8.1.4 Connectivity Guidelines (page 1 of 3)

Guidelines /Specifications	Maximum Tested Value	Comments
CIFS Guidelines		
CIFS TCP Connection	64K (default and theoretical max.), 40K (max. tested)	- Param tcp.maxStreams sets the maximum number of TCP connections a Data Mover can have. Maximum value is 64K, or 65535. TCP connections (streams) are shared by other components and should be changed in monitored small increments. - With SMB1/SMB2 a TCP connection means single client (machine) connection. - With SMB3 and multi channel, a single client could use several network connections for the same session. It will depend on the number of available interfaces on the client machine, or for high speed interface like 10Gb link, it can go up to 4 TCP connections per link.
Share name length	80 characters (Unicode)	Unicode : The maximum length for a share name with Unicode enabled is 80 characters.
Number of CIFS shares	40,000 per Data Mover (Max. tested limit)	Larger number of shares can be created. Maximum tested value is 40K per Data Mover.
Number of NetBIOS names/ compnames per Virtual Data Mover (VDM)	509 (max)	Limited by the number of network interfaces available on the Virtual Data Mover. From a local group perspective, the number is limited to 509. NetBIOS and compnames must be associated with at least one unique network interface.
NetBIOS name length	15	NetBIOS names are limited to 15 characters (Microsoft limit) and cannot begin with an @ (at sign) or a - (dash) character. The name also cannot include white space, tab characters, or the following g symbols: \ \ : ; , = * + [] ? < > . If using compnames, the NetBIOS form of the name is assigned automatically and is derived from the first 15 characters of the ,comp_name>.
Comment (ASCII chars) for NetBIOS name for server	256	Limited to 256 ASCII characters. Restricted Characters: You cannot use double quotation ("), semicolon (;), accent ('), and comma (,) characters within the body of a comment. Attempting to use these special characters results in an error message. You can only use an exclamation point (!) if it is preceded by a single quotation mark ('). Default Comments: If you do not explicitly add a comment, the system adds a default comment of the form EMC-SNAS:T<x.x.x.x> where <x.x.x.x> is the version of the e NAS software.
Compname length	63 bytes	For integration with Windows environment releases later than Windows 2000, the CIFS server computer name length can be up to 21 characters when UTF-8 (3 bytes/char) is used.
Number of domains	10 tested	509 (theoretical max.) The maximum number of Windows domains a Data Mover can be a member of. To increase the max default value from 32, change parameter cifs.lsarpc.maxDomain. The <i>Parameters Guide for VNX for File</i> contains more detailed information about this parameter.
Block size negotiated	64 KB 128 KB with SMB2	Maximum buffer size that can be negotiated with Microsoft Windows clients. To increase the default value, change param cifs.W95BufSz, cifs.NTBufSz or cifs.W2KBufSz. The <i>Parameters Guide for VNX for File</i> contains more detailed information about these parameters. Note: With SMB2.1, read and write operation supports 1MB buffer (this feature is named "large MTU").
Number of simultaneous requests per CIFS session (maxMpxCount)	127 (SMB1) 512 (SMB2)	- For SMB1, value is fixed and defines the number of requests a client is able to send to the Data Mover at the same time (for example, a change notification request). To increase this value, change the maxMpxCount parameter. - For SMB2 and newer protocol dialect, this notion has been replaced by 'credit number', which has a max of 512 credit per client but could be adjusted dynamically by the server depending on the load. The <i>Parameters Guide for VNX for File</i> contains more detailed information about this parameter.
Total number files/directories opened per Data Mover	500,000	A large number of open files could require high memory usage on the Data Mover and potentially lead to out-of-memory issues.
Number of Home Directories supported	20,000 (Maximum possible limit; not recommended)	A configuration file containing Home Directories info is read completely at each user connection, recommendation is to not exceed a few thousands for easy management.
Number of Windows/UNIX users connected at the same time	40,000 (Limited by the number of TCP connections)	Earlier versions of the NAS Software relied on a basic database, nameDB, to maintain Usermapper and secmap mapping information. DBMS now replaces the basic database. This solves the inode consumption issue and provides better consistency and recoverability with the support of database transactions. It also provides better atomicity, isolation, and durability in database management.
Number of users per TCP connection	64k	To decrease the default value, change param cifs.listBlocks (default 255; max 255). The value of this parameter times 256 = max number of users. Note: TID/FID/UID shares this parameter and cannot be changed individually for each ID. Use caution when increasing this value as it could lead to an out-of-memory condition. Refer to the <i>Parameters Guide for VNX for File</i> for parameter information.
Number of files/directories opened per CIFS connection in SMB1	64k	To decrease the default value, change param cifs.listBlocks (default 255; max 255). The value of this parameter times 256 = max number of files/directories opened per CIFS connection. Note: TID/FID/UID shares this parameter and cannot be changed individually for each ID. Use caution when increasing this value as it could lead to an out-of-memory condition. Be sure to follow the recommendation for total number of files/directories opened per Data Mover. Refer to the <i>System Parameters Guide for VNX for File</i> for parameter information.

Table 2 VMAX3 and VMAX All Flash for Embedded NAS Operating Environment 8.1.4 Connectivity Guidelines (page 2 of 3)

Guidelines /Specifications	Maximum Tested Value	Comments
CIFS Guidelines (Continued)		
Number of files/directories opened per CIFS connection in SMB2	127 k	To decrease the default value, change parameter cifs.smb2.listBlocks (default 511; max 511). The value of this parameter times 256 = max number of files/directories opened per CIFS connection.
Number of VDMs per Data Mover	128	Total number of VDMs, file systems, and checkpoints across the entire system cannot exceed 2048.
FileMover		
Max connections to secondary storage per primary (VNX for File) file system	1024	
Number of HTTP threads for servicing FileMover API requests per Data Mover	64	Number of threads available for recalling data from secondary storage is half the number of whichever is the lower of CIFS or NFS threads. 16 (default), can be increased using server_http command, max (tested) is 64.
File System Guidelines		
Mount point name length	255 bytes (ASCII)	The "/" is used when creating the mount point and is equal to one character. If exceeded, Error 4105: Server_x:path_name: invalid path specified is returned.
File system name length	240 bytes (ASCII) 19 chars display for list option	For nas_fs list, the name of a file system will be truncated if it is more than 19 characters. To display the full file system name, use the -info option with a file system ID (nas_fs -i id=<fsid>).
Filename length	255 bytes (NFS) 255 characters (CIFS)	- With Unicode enabled in an NFS environment, the number of characters that can be stored depends on the client encoding type such as latin-1. For example: With Unicode enabled, a Japanese UTF-8 character may require three bytes. - With Unicode enabled in a CIFS environment, the maximum number of characters is 255. For filenames shared between NFS and CIFS, CIFS allows 255 characters. NFS truncates these names when they are more than 255 bytes in UTF-8, and manages the file successfully.
Pathname length	1,024 bytes	Note: Make sure the final path length of restored files is less than 1024 bytes. For example, if a file is backed up which originally had path name of 900 bytes, and it is restoring to a path with 400 bytes, the final path length would be 1300 bytes and would not be restored.
Directory name length	255 bytes	This is a hard limit and is rejected on creation if over the 255 limit. The limit is bytes for UNIX names, Unicode characters for CIFS.
Subdirectories (per parent directory)	64,000	This is a hard limit, code will prevent you from creating more than 64,000 directories.
Number of file systems per eNAS system	4096	This max number includes VDM and checkpoint file systems.
Number of file systems per Data Mover	2048	The mount operation will fail when the number of file systems reaches 2048 with an error indicating maximum number of file systems reached. This maximum number includes VDM and checkpoint file systems.
Maximum disk volume size	Dependent on RAID group (see comments)	eNAS systems — For eNAS systems, users might configure LUNs greater than 2 TB up to 16 TB or max size of the RAID group, whichever is less. This is supported for eNAS systems when attached to VMAX3 arrays.
Total storage for a Data Mover	256 TB (raw)	- On a per-Data-Mover basis, the total size of all file systems, and the size of all SavVols used by SnapSure, must be less than the total supported capacity. Exceeding these limit can cause out of memory panic. - Refer to the eNAS file capacity limits table for more information.
File Size	16 TB	This hard limit is enforced and cannot be exceeded.
Number of directories supported per file system		Same as the number of inodes in a file system. Each 8 KB of space = 1 inode.
Number of files per directory	500,000	Exceeding this number will cause performance problems.
Maximum number of files and directories per VNX file system	256 million (default)	This is the total number of files and directories that can be in a single eNAS file system. This number can be increased to 4 billion at file system creation time, but should only be done after considering recovery and restore time and the total storage utilized per file. The actual maximum number in a given file system is dependent on a number of factors including the size of the file system.
Maximum amount of deduplicated data supported	256 TB	When quotas are enabled with file size policy, the maximum amount of deduplicated data supported is 256 TB. This amount includes other files owned by UID 0 or GID.
All other industry-standard caveats, restrictions, policies, and best practices prevail. This includes, but is not limited to, fsck times (now made faster through multi-threading), backup and restore times, number of objects per file system, snapshots, file system replication, VDM replication, performance, availability, extend times, and layout policies. Proper planning and preparation should occur prior to implementing these guidelines.		
Naming Service Guidelines		
Number of DNS domains	3 - WebUI unlimited – CLI	Three DNS servers per Data Mover is the limit if using WebUI. There is no limit when using the command line interface (CLI).
Number of NIS Servers per Data Mover	10	You can configure up to 10 NIS servers in a single NIS domain on a Data Mover.
NIS record capacity	1004 bytes	A Data Mover can read 1004 bytes of data from a NIS record.
Number of DNS servers per DNS 3 domain	3	

Table 2 VMAX3 and VMAX All Flash for Embedded NAS Operating Environment 8.1.4 Connectivity Guidelines (page 3 of 3)

Guidelines /Specifications	Maximum Tested Value	Comments
NFS Guidelines		
Number of NFS exports	2,048 per Data Mover tested Unlimited theoretical max	You might notice a performance impact when managing a large number of exports using Unisphere.
Number of concurrent NFS clients	64K with TCP (theoretical) Unlimited with UDP (theoretical)	Limited by TCP connections.
Netgroup line size	16383	The maximum line length that the Data Mover will accept in the local netgroup file on the Data Mover or the netgroup map in the NIS domain that the Data Mover is bound to.
Number of UNIX groups supported	64k	2 billion max value of any GID. The maximum number of GIDs is 64K, but an individual GID can have an ID in the range of 0- 2147483648.
Networking Guidelines		
Link aggregation/ether channel	8 ports (ether channel) 12 ports (link aggregation LACP)	Ether channel: the number of ports used must be a power of 2 (2, 4, or 8). Link aggregation: any number of ports can be used. All ports must be the same speed. Mixing different NIC types (that is copper and fibre) is not recommended.
Number of VLANs supported	4094	IEEE Standard
Number of interfaces per Data Mover	45 tested	Theoretically 509.
Number of FTP connections	Theoretical value 64K	By default the value is (in theory) 0xFFFF, but it is also limited by the number of TCP streams that can be opened. To increase the default value, change param tcp.maxStreams (set to 0x00000800 by default). If you increase it to 64K before you start TCP, you will not be able to increase the number of FTP connections. Refer to the <i>Parameters Guide for VNX for File</i> for parameter information.
Quotas Guidelines		
Number of tree quotas	8191	Per file system
Max size of tree quotas	256 TB	Includes file size and quota tree size
Max number of unique groups	64k	Per File system
Quota path length	1024	
eNAS Replication for File		
Number of replication sessions per eNAS	682 (eNAS)	
Max number of replication sessions per Data Mover	1024	This enforced limit includes all configured file system, VDM, and copy sessions.
Max number of local and remote file system and VDM replication sessions per Data Mover	682	
Max number of loopback file system and VDM replication sessions per Data Mover	341	
Snapshare Guidelines		
Number of checkpoints per file system	96 read-only 16 writeable	Up to 96 read-only checkpoints per file system are supported as well as 16 writeable checkpoints.
On systems with Unicode enabled, a character might require between 1 and 3 bytes, depending on encoding type or character used. For example, a Japanese character typically uses 3 bytes in UTF-8. ASCII characters require 1 byte.		

NAS for VMAX All Flash and VMAX3					
	eNAS VMAX 100K	eNAS VMAX 200K	eNAS VMAX 400K	eNAS VMAX 450F/ 450 FX	eNAS VMAX 850F/ 850 FX
Usable IP Storage capacity per Data Mover (all disk types/uses)	256 TB	512 TB	512 TB	256 TB	256 TB
Number of Data Movers	2	2 or 4	2, 4, 6, or 8	2 or 4	2 or 4
Max FS Size	16 TB	16 TB	16 TB	16 TB	16 TB
Max # of FS per Data Mover ^a	2048	2048	2048	2048	2048
Max # of FS per system	4096	4096	4096	4096	4096
Max configured replications sessions per Data Mover for Replication for File ^b	1024	1024	1024	1024	1024
Max # of checkpoints per Primary File System	96	96	96	96	96
Max # of NDMP sessions per Data Mover	4	8	8	8	8
Memory per Data Mover	6 GB	24 GB	24 GB	24 GB	24 GB

a. This count includes production file systems, user-defined file system checkpoints, and two checkpoints for each replication session

b. A maximum of 256 concurrently transferring sessions are supported per Data Mover.