



# EMC<sup>®</sup> ViPR SRM

Version 3.6.4

## Support Matrix

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# CHAPTER 1

## System Requirements

This chapter includes the following topics:

- [Operating system requirements](#).....6
- [Browser requirements](#)..... 6
- [Supported mobile devices](#).....7
- [Third-party tools](#).....7

## Operating system requirements

The following operating systems are supported for production.

**Table 1** Supported operating systems

Operating system	Version
Red Hat Enterprise Linux	5 (64-bit) 6 (64-bit)
CentOS Linux	5 (64-bit) 6 (64-bit)
SUSE Linux Enterprise Server (SLES)	11 (64-bit)
Microsoft Windows	Server 2008 R2 Server 2012 Server 2012 R2

### Note

Any new vApp (4VM or 1VM) installations require VMware vSphere 5.x. This includes adding a vApp VM to an existing installation. Hyper-V, or any other virtual environment, is not supported for vApp installations.

## Browser requirements

For the following browsers, support varies.

**Table 2** Supported browsers

Browser	Version	Operating system	Notes
Google Chrome	Latest	Windows, Linux	Full support
Internet Explorer	8	Windows	Minimal Browse mode
Internet Explorer	9, 10, 11	Windows	Full support
Mozilla Firefox	Latest	Windows, Linux	Full support
Apple Safari	Latest	Mac OS X and iOS	Full support

Minimal Browse mode is for report viewing and browsing. It can display tables, including interactive tables, and graphs that are not interactive. Topology maps are not supported.

Full support includes report viewing and browsing, plus support for interactive tables and graphs, topology maps, and administration tasks (user management, enrichment GUI, alerting GUI, and so on).

## Supported mobile devices

To manage the application and view reports, you can use any of the supported mobile devices.

**Table 3** Supported mobile devices

Device	Version	Operating system	Notes
Apple iPhone	Latest	Mac iOS	Using EMC M&R iPhone client from AppStore
Apple iPad	Latest	Mac iOS	Using EMC M&R iPad client from AppStore

## Third-party tools

The following tools may be required during installation.

**Table 4** Supported browsers

Tools	Version	Notes
PuTTY	0.63	Minimum version required to support AES_CTR algorithms introduced in SP 1.





# CHAPTER 2

## Supported SolutionPacks

This chapter includes the following topics:

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## ViPR SRM and SolutionPack compatibility

This is a list of SolutionPacks compatible with ViPR SRM3.6.4.

**Table 5** ViPR SRM and SolutionPack compatibility

Product	Version
EMC M&R	6.5u4
SolutionPack for Brocade FC Switch	3.6.4
SolutionPack for Cisco MDS/Nexus	3.6.4
SolutionPack for Cisco UCS	1.2.4
SolutionPack for Converged Infrastructure	1.1
SolutionPack for EMC Atmos	2.1.4
SolutionPack for EMC Centera	1.5.4
SolutionPack for EMC Data Domain	1.0.4
SolutionPack for EMC Data Protection Advisor	1.2.4
SolutionPack for EMC ECS	3.6.4
SolutionPack for EMC Host Interface	1.2.4
SolutionPack for EMC Isilon	3.6.4
SolutionPack for EMC RecoverPoint	1.1
SolutionPack for EMC ScaleIO	1.1.4
SolutionPack for EMC VMAX	3.6.4
SolutionPack for EMC VNX	3.6.4
SolutionPack for EMC ViPR	3.6.4
SolutionPack for EMC VPLEX	3.6.4
SolutionPack for EMC M&R Health	2.0.4
SolutionPack for XtremIO	3.6.4
SolutionPack for Hitachi Device Manager	3.6.4
SolutionPack for HP 3PAR StoreServ	3.6.4
SolutionPack for HP EVA	1.1.3
SolutionPack for HP StorageWorks P9000	3.6.4
SolutionPack for IBM DS	1.1.4
SolutionPack for IBM LPAR	1.2.4
SolutionPack for IBM SAN Volume Controller/Storwize	3.6.4
SolutionPack for IBM XIV	3.6.4
SolutionPack for Microsoft Hyper-V	1.3.4

**Table 5** ViPR SRM and SolutionPack compatibility (continued)

Product	Version
SolutionPack for Microsoft SQL Server	1.1
SolutionPack for NetApp Filer	3.6.4
SolutionPack for Oracle Database	1.4.1
SolutionPack for Physical Hosts	1.2.4
SolutionPack for Storage Compliance	3.6.3
SolutionPack for VI VirtualWisdom	1.0
SolutionPack for VMware vCenter	3.6.4

## SolutionPack for Brocade FC Switch

### SMI-S only

Discovers switch topology, performance and zoning details completely through SMI-S. This is the recommended discovery approach.

**Table 6** Support for Brocade fabric

Supported Family/Models	Prerequisites	Ports
For the supported models, refer to <i>EMC Connectrix Manager Converged Network Edition Professional, Professional Plus, and Enterprise User Guide</i> .	CMCNE/BNA 11.1.x, 11.2.1, 12.0.x, 12.1.x, 12.3.x, and 12.4.0 CMDCE/DCFM 10.4.x	

### Notes

- For all versions of CMCNE/BNA, ViPR SRM does not support Single Sign On and Launch-in- Context.
- ViPR SRM does not support Administrative Domains features.
- Performance Metrics will not be collected for Brocade AG Devices and FCoE ports.
- Discovery support is limited to FC and FCoE ports; discovery of other protocols or routing is not supported.
- CPU Utilization and Memory Utilization will not be populated for Brocade switches when discovered through SMI-S.
- Name Server Database, Ethernet ports details are not discovered.
- For Alerts to be populated in ViPR SRM, configure the SNMP trap recipient on each switch. For more information, refer to *Managing Alert Consolidation in ViPR SRM 3.6* available at <https://community.emc.com/docs/DOC-41464>.

### SNMP + SMI-S (Zoning only through SMI-S)

Discover switch topology and performance metrics through SNMP. SNMP does not support zoning discovery. Restrict SMI-S discovery to zoning details only.

This discovery approach is supported for backward compatibility with previous versions.

**Table 7** Support for Brocade fabric

Supported Family/Models	Prerequisites	Port
All Brocade switches that are running FOSv4.x or higher.	Supported MIBs: SW-MIB FCMGMT-MIB FIBRE-CHANNEL-FE-MIB IANAifType-MIB IF-MIB IP-MIB RFC1213-MIB SNMPv2-SMI-MIB Providers: CMCNE/BNA 11.1.x, 11.2.1, 12.0.x,12.1.x, 12.3.x, and 12.4.0 CMDCE/DCFM 10.4.x Some switch models might not have all the MIBs listed and in that case those capabilities will not be discovered.	161 SNMP

**Notes**

- Performance Metrics will not be collected for Brocade AG Devices.
- CPU Utilization and Memory Utilization will be populated for Brocade switches running firmware version FOS 6.3 and above. A Fabric Watch license should be installed on the switches to fetch CPU and Memory utilization metrics.
- Discovery is limited to FC blades. Discovery supports only the E, F, and G ports on the blades.
- ViPR SRM does not support Administrative Domains features.
- For all versions of CMCNE/BNA, ViPR SRM does not support Single Sign On and Launch-in-Context.

## SolutionPack for Cisco MDS/Nexus

**Table 8** Support for Cisco fabric

Supported Collection Interfaces	Prerequisites	Ports
Cisco MDS Cisco ONS Cisco Nexus	Supported MIBs: <ul style="list-style-type: none"> <li>• CISCO-FLASH-MIB</li> <li>• CISCO-NS-MIB</li> <li>• CISCO-DM-MIB</li> <li>• CISCO-ENTITY-SENSOR-MIB</li> <li>• ENTITY-MIB</li> </ul>	161 SNMP

**Table 8** Support for Cisco fabric

Supported Collection Interfaces	Prerequisites	Ports
	<ul style="list-style-type: none"> <li>• CISCO-FC-FE-MIB</li> <li>• IF-MIB</li> <li>• CISCO-ENTITY-FRU-CONTROL-MIB</li> <li>• CISCO-VSAN-MIB</li> <li>• CISCO-DM-MIB</li> <li>• CISCO-ZS-MIB</li> <li>• CISCO-SYSTEM-EXT-MIB</li> <li>• SNMPv2-MIB</li> <li>• CISCO-FCS-MIB</li> <li>• CISCO-FEATURE-CONTROL-MIB</li> </ul>	

**Notes**

- Some switch models might not have all of the listed MIBs and in that case those capabilities will not be discovered.
- Discovery is limited to FC and FCoE ports only.
- ViPR SRM does not support Cisco device aliases or Cisco enhanced device aliases.
- ViPR SRM does not support discovery of VDC (virtual device context) and Fabric extenders.
- Switches running NX-OS 5.2(x) and 6.2(x) code is recommended to upgrade to 5.2(8d) or later and 6.2(11) or later accordingly.

## SolutionPack for Cisco UCS

**Table 9** Support for Cisco UCS

Supported Collection Interfaces	Prerequisites	Ports
Cisco UCS Manager 2.0 and higher		80
Cisco UCS C-Series (CIMC) 1.4 and higher		443

## SolutionPack for Converged Infrastructure

**Table 10** Support for Converged Infrastructure

Supported Family/Models	Prerequisites	Ports
UIM/Provisioning - 4.0 and later		443 HTTPS

**Table 10** Support for Converged Infrastructure

Supported Family/Models	Prerequisites	Ports
UIM/Operations - 4.0 and later		

## SolutionPack for EMC Atmos

**Table 11** Support for EMC Atmos

Supported Family/Models	Prerequisites	Ports
Atmos 2.1.x.x - 2.2.3.0	Atmos System Management Interface	8080 443 8443

## SolutionPack for EMC Centera

**Table 12** Support for EMC Centera

Supported Family/Models	Prerequisites	Ports
EMC Centera	Centera Viewer CLI (v4.3)	3682

## SolutionPack for EMC Data Domain

**Table 13** Support for EMC Data Domain

Supported Family/Models	Prerequisites	Ports
EMC Data Domain OS 5.4 EMC Data Domain OS 5.5 EMC Data Domain OS 5.6	If you are updating from an older version, ensure that the SolutionPack block Generic-SNMP is updated to version 1.2 or later.  SNMP must be enabled.	161 SNMP

## SolutionPack for EMC Data Protection Advisor

**Table 14** Support for EMC Data Protection Advisor

Supported Family/Models	Prerequisites	Ports
DPA 6.1.x DPA 6.2.x		9004 HTTP 9002 HTTPS

## SolutionPack for EMC ECS

**Table 15** Support for EMC ECS

Supported Family/Models	Prerequisites	Ports
ECS 2.0		4443 HTTPS

## SolutionPack for EMC Host Interface

**Table 16** Support for hosts

Supported Operating Systems	Prerequisites	Ports
Windows Server 2003 Windows 2008 SP2 Windows 2008 R2 Windows 2008 R2 core Windows 2012 Windows 2012 core Windows 2003 (32 bit) Windows 2008 (32 bit)	Supported Windows OS	5988 TCP 5989 TCP secure

### Notes

- This SolutionPack does not contain reports. You should install the reports from the SolutionPack for Physical Hosts.

## SolutionPack for EMC Isilon

**Table 17** Support for EMC Isilon

Supported Family/Models	Prerequisites	Ports
Isilon OneFS 6.x (via SNMP) Isilon OneFS 7.0 or later		8080 HTTPS

## SolutionPack for EMC RecoverPoint

**Table 18** Support for EMC RecoverPoint

Supported Family/Models	Prerequisites	Ports
RecoverPoint 4.0 and later		7225 48443

## SolutionPack for EMC ScaleIO

**Table 19** Support for EMC ScaleIO

Supported Family/Models	Prerequisites	Ports
ScaleIO 1.30 ScaleIO 1.31 ScaleIO 1.32	ScaleIO REST gateway should be installed on the host and should be configured with ScaleIO MDM (Meta Data Manager).	443 HTTPS

## SolutionPack for EMC ViPR Controller

**Table 20** Support for EMC ViPR Controller

Supported Family/Models	Prerequisites	Ports
ViPR 2.2 ViPR 2.3	ViPR 2.2.0.1.1084 or later	4443



# SolutionPack for EMC VMAX

**Table 21** Support for EMC VMAX

Supported Family/Models	Prerequisites	Ports
DMX-3 series and later VMAX series VMAX SE series	Solutions Enabler 7.6.2.8 and later.  Unisphere for VMAX 1.6.2 and later provides more overall performance metrics than SMI-S Provider but does not include LUN performance metrics.  SMI-S Provider 4.6.2 and later provides fewer overall performance metrics than Unisphere but includes LUN performance metrics.	
VMAX3 family	SMI-S Provider 8.0.1 and later.  Unisphere for VMAX 8.0.1.4 and later provides more overall performance metrics than SMI-S Provider but does not include LUN performance metrics.  SMI-S Provider 8.0.1 and later provides fewer overall performance metrics than Unisphere but includes LUN performance metrics.	

## Notes

- SMI-S provider 8.0.1 and later does not support DMX series arrays. Stay with SE 7.6.2.8 / SMI-S 4.6.2 / UniVMAX 1.6.2 if using DMX or VMAX2 and DMX on the same provider.
- SMI-S provider 8.0.1 is packaged as part of the Solutions Enabler package. For SMI-S installation, you have to use the Solutions Enabler package which can be downloaded from <http://support.emc.com>.
- The Workload Distribution Report and Disk Failure Impact Analysis are not supported for VMAX3.
- iSCSI Gatekeepers are supported.
- If performance metrics are needed, then it is recommended that you install both Unisphere for VMAX and the SMI-S Provider.
- Do not exceed six medium-sized (30K-40K devices) VMAX arrays for each VMAX collector.
- Any array with more than 30K devices requires 4 GB of heap size for the collector. Refer to the Performance and Scalability Guidelines for details.
- As of the 3.5 release, many statistics are available through both SMI-S and Unisphere. However if both SMI-S and Unisphere are present, ViPR SRM does not collect overlapping statistics from both sources. Rather, if both are present, overlapping statistics are always collected only through Unisphere. In this case only the LUN statistics will come from SMI-S, all other performance metrics will come from Unisphere.

- eNAS is supported by the SolutionPack for EMC VNX.

**Table 22** Guidelines for Gatekeepers

Gatekeepers used to support	Minimum Gatekeepers
UniVMAX	6
ViPR SRM	2
Customer run scripts	2

**Notes**

- 100K maximum devices from all arrays, zone to host, where the SMI-S Provider is installed.

**Table 23** SRM/SE compatibility

SE Server	SE Client	Connection Type	SRM	Supported	Comments
7.6.2.8 and later	7.6.2.8 and later	Remote	3.6.4	Yes	SE patch 7.6.2.56 is required to communicate to SE 8.0.1 server.
8.0.1 and later	7.6.2.56	Remote	3.6.4	Yes	
8.0.1 and later	8.0.1 and later	Remote	3.6.4	Yes	

**Notes**

- DMX arrays are not supported by SE 8.0.1/SMI-S 8.0.1/Unisphere 8.0.1.4 and later.
- VMAX3 arrays require SMI-S 8.0.1/Unisphere 8.0.1.4 and later.
- There is an issue with the vApp version of Unisphere 8.0.1.4. If the vApp version of Unisphere is needed, use version 8.0.2. Install Unisphere 8.0.1.4 as a binary installation.

## SolutionPack for EMC VNX

**Table 24** Support for EMC VNX

Supported Family/Models	Prerequisites	Ports
Operating Environment for Block ("FLARE"): 04.30* 05.31 or later Used with CLARiiON, VNX1, and VNX2 models.		443

**Table 24** Support for EMC VNX (continued)

Supported Family/Models	Prerequisites	Ports
VNX Operating Environment for File 7.0 or later Celerra DART 5.6 and 6.0 Used with Celerra, VNX1, VNX2, and Gateway models.		22 80 443

**Notes**

- Systems with FLARE/Operating Environment for Block 04.30 or 05.31 might incorrectly report CurrentUtilization, ResponseTime, ServiceTime, and QueueLength metrics. These metrics might not match Unisphere Analyzer because the necessary counters used to properly compute them are not available in the NaviCLI output for arrays that are running FLARE 04.30 or 05.31.
- The ResponseTime and QueueLength metrics are not available for disks dedicated to Storage Pools on systems with FLARE/Operating Environment for Block version 04.30 or 05.31. This is because the counters that are used to compute these metrics are not available via Navisphere CLI at these versions.
- To collect performance data for VNX MetaLUNs with Operating Environment for Block (“FLARE”) 05.32, version 05.32.000.5.209 or later must be used.
- CIFS Throughput (IOPS) and Top 5 CIFS users reports are supported with Operating Environment for File 7.1 or later.
- Navisphere CLI commands are used to communicate with the VNX. EMC recommends matching Navisphere CLI versions with the Block Operating Environment versions of VNX systems configured in the SolutionPack. For example, if the firmware version of the Block side is 05.32.x, Navisphere CLI 7.32.x or higher should be used. For more information on compatible Block OE and Navisphere CLI versions, see the *VNX OE for Block Release Notes* and the *Unisphere Host Agent/CLI and Utilities Release Notes* located on EMC Online Support.
- SSH access to VNX-File/Celerra with an operator user. SSH access is needed between VNX Collector host and Control Station to download files in /tmp/w4n\_data via SFTP.
- To collect Quota information correctly, arrays must be running File OE 6.0.70.0, 7.0.54-6, 7.1.70.0 or later.
- If ALUA (Failover Mode 4) is enabled for one or more hosts attached to a VNX array and I/O to the associated host LUNs is distributed across more than one Storage Processor, values for the LUN Performance Metrics AverageBusyQueueLength, QueueLength, and ResponseTime may be higher than what is displayed in Unisphere Analyzer, because the Navisphere CLI counters used to compute these metrics will accumulate for each Storage Processor.

**Table 25** Support for EMC VNXe

Supported Family/Models	Prerequisites	Ports
OE 3.0, 3.0.1, 3.1.1, 3.1.5 (Block and File) Used with second generation VNXe models as of VNXe3200		443

**Table 25** Support for EMC VNXe

Supported Family/Models	Prerequisites	Ports
First generation VNXe models such as VNXe3100, VNXe3150, and VNXe3300 are not supported.		

## SolutionPack for EMC VPLEX

**Table 26** Support for EMC VPLEX

Supported Family/Models	Prerequisites	Ports
5.2.x or later of Standalone (single cluster) and Metro/Geo	REST API access, CLI access, and Virtual Volume Perpetual monitor logs (for VPLEX 5.3.x or newer only).  CLI access and Director Perpetual monitor logs.	443 HTTPS 22 SSH

### Notes

- Do not run VPLEX 5.2sp1 patch 2 with any version of SRM as the VPLEX management server could become unresponsive.
- Backend Arrays supported by this SolutionPack: EMC VMAX, EMC VNX, NetApp, EMC XtremIO, IBM XIV, Hitachi Device Manager, HP StorageWorks P9000, and HP 3PAR.
- Backend Arrays not supported by this SolutionPack: ScaleIO, EMC Isilon, and IBM DS.

## SolutionPack for Hitachi Device Manager

**Table 27** Support for HDS devices

Supported Family/Models	Prerequisites	Ports
AMS200, AMS500, AMS1000 AMS2xxx USP and USP_V HUS and VSP VSP G Series	Hitachi Command Suite 7.4.1 or later (full license; core license is not adequate).	2001 XML API 5988 SMI-S 5989 SMI-S

### Notes

- Only block mode is supported on HUS arrays (not file or object).
- Performance statistics are provided for the HUS VM, VSP, and VSP G through the Embedded SMI-S Provider. For details about enabling Embedded Performance

Collection for these models, refer to the *SolutionPack Installation Guide*. Embedded Performance Collection is supported with ViPR SRM 3.6.0 and higher.

## SolutionPack for HP 3PAR StoreServ

**Table 28** Support for HP 3PAR

Supported Family/Models	Prerequisites	Ports
F200 F400 S400X V400 T400 T800 Supported versions of the firmware are: 2.3.1, 3.1.1, 3.1.2, 3.1.3, 3.2.1. Versions at 2.2 and earlier are not supported.	CIM server has been started. Use <code>startcim</code> command on the CLI to start the CIM server.	22 SSH 5988 SMI-S 5989 SMI-S

## SolutionPack for HP EVA

**Table 29** Support for HP EVA

Supported Family/Models	Prerequisites	Ports
HP EVA 3000, 4x00, 5000, 6000, 6x00, 8000, 8x00	SMI-S Command View EVA 9.02 full version	22 SSH 5988 CIMOM 5989 CIMOM

### Notes

- Ports 22 (SSH) and CIMOM ports 5988/5989 should be open bi-directionally between Collector host and Command View host.
- Use port 5989 while configuring this SolutionPack.

## SolutionPack for HP StorageWorks P9000

**Table 30** Support for HP StorageWorks P9000 arrays

Supported Family/Models	Prerequisites	Ports
P9500 XP24K/20K XP12K/10K/SVS200 XP1024/128	HP Command View Advanced Edition Suite 7.4.1 or later installed on the host (core license is adequate).	2001 XML API 5988 SMI-S 5989 SMI-S

### Notes

- Performance statistics are provided for the P9500 through the Embedded SMI-S Provider. For details about enabling Embedded Performance Collection for this model, refer to the *SolutionPack Installation Guide*. Embedded Performance Collection is supported with ViPR SRM 3.6.0 and higher.

## SolutionPack for IBM DS

**Table 31** Support for IBM DS

Supported Family/Models	Prerequisites	Ports
DS 3000 Series DS 4000 Series DS 5000 Series	CIM Agent running	5988 HTTP 5989 HTTPS
DS 6000 Series DS 8000 Series	CIM Agent running	6989 HTTPS

## SolutionPack for IBM LPAR

**Table 32** Support for IBM P Series

Supported Family/Models	Prerequisites	Ports
All P Series servers HMC version 6 or 7	Installation of the SolutionPack for IBM LPAR, providing credentials of the Hardware management Console (HMC).	22

**Table 33** Support for LPAR (VIOS/VIOC)

Supported Operating Systems	Prerequisites	Ports
IBM AIX 6.1, 7.1 Redhat 5.x, 6.x SuSE 10.x, 11.x	<p>Installation of the SolutionPack for Physical Hosts.</p> <p>Physical Host SolutionPack Script needs to be installed on any Generic RSC collector that will be used for physical host discovery.</p> <p>padmin user credentials are not required to discover VIO Servers.</p> <p>INQ 7.6.2 is available from <a href="ftp.emc.com/pub/symm3000/inquiry/">ftp.emc.com/pub/symm3000/inquiry/</a>.</p> <p>Perl interpreter 5.6.1 or later.</p>	22

**Notes**

- SolutionPack for IBM LPAR will collect information only from HMC.
- To discover VIO Server and LPAR information, use SolutionPack for Physical Hosts.
- INQ is pushed to both VIO Servers and Clients.
- The Live Partition Mobility (LPM) feature on IBM LPAR causes floating CPU and memory that is not captured by agentless collection scripts. For this reason, the SolutionPack for IBM LPAR does not support dynamic refresh on LPARs occurring due to the LPM capability on AIX/Linux LPAR.

## SolutionPack for IBM SAN Volume Controller/Storwize

**Table 34** Support for IBM SAN Volume Controller/Storwize

Supported Family/Models	Prerequisites	Ports
IBM SVC V7.0 and later IBM Storwize V7000 V7.0 and later	IBM SMI-S Provider running	22 SSH 5989 HTTPS

**Notes**

- Backend Arrays supported by this SolutionPack: EMC VMAX, EMC VNX, IBM XIV, NetApp, and HP 3PAR.
- Backend Arrays not supported by this SolutionPack: EMC XtremIO, Hitachi Device Manager, HP StorageWorks P9000, ScaleIO, EMC Isilon, and IBM DS.
- Internal Storage is not supported in the Raw Capacity Usage and the Configured Usable reports. Service Level and Chargeback is not supported for mdisks (Virtual Disks) based on internal storage.
- Replication is not supported.

## SolutionPack for IBM XIV

**Table 35** Support for IBM XIV

Supported Family/Models	Prerequisites	Ports
IBM XIV	CIM Agent running	5989 SSL

## SolutionPack for Microsoft Hyper-V

**Table 36** Support for Microsoft Hyper-V

Supported Family/Models	Prerequisites	Ports
Hyper-V on Windows Server 2008 R2 Service Pack 1 or later Hyper-V Server 2008 Hyper-V Server 2008 or later Hyper-V on Windows 2012 R2	Requires PowerShell	

### Notes

- This SolutionPack can only be installed on a Windows collector host.

## SolutionPack for NetApp Filer

**Table 37** Support for NetApp Filer

Supported Family/Models	Prerequisites	Ports
NetApp Filer 7-mode on Ontap 7.0.x, 7.1.x, 7.2.x, and 7.3.x NetApp Filer on Ontap 8.0.x, 8.1.x, 8.2, 8.2.1, 8.2.2, and 8.2.3 IBM N-Series Storage Arrays		22 SSH

### Notes

- The cluster management IP must be provided during C-Mode Filer discovery.



## SolutionPack for Oracle MySQL Database

**Table 38** Support for Oracle MySQL Database

Supported Family/Models	Prerequisites	Ports
MySQL 5.1 MySQL 5.5 MySQL 5.6	This SolutionPack requires MySQL database user login privileges to collect information from MySQL database servers running remotely.	3306 TCP

## SolutionPack for Oracle Database

**Table 39** Support for Oracle Database

Supported Family/Models	Prerequisites	Ports
Oracle 10 and later	The appropriate JDBC driver jar file needs to be in the .../APG/Databases/JDBC-Drivers/Default/lib folder.  ORACLE database user credentials are required.	1521 TCP

### Notes

- Work with your DBA to determine the appropriate JDBC driver based on the installed version of Oracle. Download the JDBC driver from: [www.oracle.com/technetwork/database/features/jdbc](http://www.oracle.com/technetwork/database/features/jdbc).
- The SolutionPack for Oracle Database was tested with ojdbc5.jar and ojdbc7.jar on Oracle 12g versions.

## SolutionPack for Physical Hosts

**Table 40** Support for HPUX hosts

Supported Family/Models	Prerequisites	Ports
HPUX 11i v1 11.11 HPUX 11i v2 11.23 HPUX 11i v3 11.31	PowerPath 5.2 or later must be installed on the host to fetch PowerPath metrics.  INQ 7.6.2 is available from <a href="ftp://ftp.emc.com/pub/symm3000/inquiry/">ftp://ftp.emc.com/pub/symm3000/inquiry/</a> .  Perl interpreter 5.6.1 or later.	22

**Table 41** Support for IBM AIX hosts

Supported Family/Models	Prerequisites	Ports
IBM AIX 5.1, 5.2, 5.3, 6.1, or 7.1	PowerPath 5.7 b194 or later must be installed on the host to fetch PowerPath metrics.  INQ 7.6.2 is available from <a href="ftp.emc.com/pub/symm3000/inquiry/">ftp.emc.com/pub/symm3000/inquiry/</a> .  Perl interpreter 5.6.1 or later.	22

**Table 42** Support for Linux hosts

Supported Family/Models	Prerequisites	Ports
LINUX RHEL AS/ES 4.x, 5.x, 6.x LINUX SUSE ES 9, ES 9.3, ES 10.x, ES 11.x CentOS 5.x, 6.x Oracle Linux 6.x  MPIO reports are supported on Windows and Linux only.	PowerPath 5.7 or later must be installed on the host to fetch PowerPath metrics.  INQ 7.6.2 is available from <a href="ftp.emc.com/pub/symm3000/inquiry/">ftp.emc.com/pub/symm3000/inquiry/</a> . Contact Customer Support if you have problems accessing this FTP site.  Perl interpreter 5.6.1 or later.	22

**Table 43** Support for Windows hosts

Supported Family/Models	Prerequisites	Ports
Windows Server 2003 R2 SP2 Windows Server 2003 SP2 Windows Server 2008 Core Windows Server 2008 SP1 Windows Server 2008 SP2 Windows Server 2008 R2 Windows Server 2012 Windows Server 2012 R2 Standard, Enterprise and Datacenter versions Multipath I/O for Windows Server 2008, Windows Server 2012  MPIO reports are supported on Windows and Linux only.	PowerPath 5.7 or later must be installed on the host to fetch PowerPath metrics.  Requires PowerShell 2.0 or later.  INQ 7.6.2 is required for Windows 2003 only.  Fcinfo.exe is required for Windows 2003 hosts.	5986 HTTPS 5985 HTTP

**Notes**

- Refer to the ViPR SRM Ports Usage and Worksheet for more information on port configuration.

**Table 44** Support for Solaris hosts

Supported Family/Models	Prerequisites	Ports
Solaris 9, 10, 11, SVM, VxVM, zfs	<p>PowerPath 5.5 P02 HF02 or later must be installed on the host to fetch PowerPath metrics.</p> <p>INQ 7.6.2 is available from <a href="ftp.emc.com/pub/symm3000/inquiry/">ftp.emc.com/pub/symm3000/inquiry/</a>. Contact Customer Support if you have problems accessing this FTP site.</p> <p>Perl interpreter 5.6.1 or later.</p>	22

**Notes**

- The PowerPath Support Matrix on EMC Online Support Site provides more details.
- Windows: fcinfo.exe is available from <http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=17530>. Use the latest version and default install location recommended by Windows.

## SolutionPack for Microsoft SQL Server

**Table 45** Support for Microsoft SQL Server

Supported Family/Models	Prerequisites	Ports
SQL Server 2008 R2 SQL Server 2012 SQL Server 2014	<p>SQL authentication requires that the user be a member of the SYSADMIN group.</p> <p>Windows user account requires the user be a member of the Guests group or the Domain Guests group.</p> <p>The default database must be the master.</p> <p>Windows user account must be imported into the Microsoft SQL Server with settings similar to these:</p> <ul style="list-style-type: none"> <li>• Server roles of public</li> <li>• Securable grants for Connect SQL, View any definitions, and View server state</li> </ul>	

## SolutionPack for Storage Compliance

**Table 46** Support for Storage Compliance

Supported Family/Models	Prerequisites	Ports
Compliance rules support all the supported Hosts, ESX, VMs, EMC arrays (VMAX, VNX, VPLEX, and XtremIO), third party arrays (HDS, IBM XIV, NetApp), Brocade and Cisco fabrics.	Data needs to be discovered as part of individual collection.	

### Notes

- ESM rules are not supported for third-party arrays.
- Policy Administration and EMC Support Matrix Administration reports are not supported in the minimal browse mode.

## SolutionPack for VI VirtualWisdom

**Table 47** Support for VI VirtualWisdom

Supported Family/Models	Prerequisites	Ports
VI VirtualWisdom v3.x	VirtualWisdom WebServices API	8080

### Notes

- VI Virtual Wisdom v4.x is not supported.

## SolutionPack for VMware vCenter

**Table 48** Support for VMware vCenter

Supported Family/Models	Prerequisites	Ports
VMware vCenter Server 4.1 VMware vCenter Server 5.1 VMware vCenter Server 5.5 VMware vCenter Server 6.0	VMware infrastructure. PowerPath/VE 5.8 or later must be installed on the host to fetch PowerPath metrics. Access to VCENTER user credentials, with a minimum privilege level of Browse DataStore and all StorageViews.	443 TCP

**Notes**

- VMware vCenter Server and ESX(i) must be 4.1 or later, although 5.1 or later is recommended.

## SolutionPack for XtremIO

**Table 49** Support for EMC XtremIO

Supported Family/Models	Prerequisites	Ports
XtremIO 2.4.x, 3.0.x, 4.0		443 HTTPS

**Notes**

- XtremIO 4.0 (Single cluster managed by an XMS)

