



# EMC<sup>®</sup> ViPR SRM

Version 3.6.2

## Support Matrix

P/N 302-001-885

REV 07

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Published August 7, 2015

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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 SRM3.6.2.

**Table 5** ViPR SRM and SolutionPack compatibility

Product	Version
EMC M&R	6.5u2
SolutionPack for Brocade FC Switch	3.6.2
SolutionPack for Cisco MDS/Nexus	3.6.2
SolutionPack for Cisco UCS	1.2
SolutionPack for Converged Infrastructure	1.1
SolutionPack for EMC Atmos	2.1.2
SolutionPack for EMC Centera	1.5.2
SolutionPack for EMC Data Domain	1.0.2
SolutionPack for EMC Data Protection Advisor	1.2.2
SolutionPack for EMC Host Interface	1.2.2
SolutionPack for EMC Isilon	3.6.2
SolutionPack for EMC RecoverPoint	1.1
SolutionPack for EMC ScaleIO	1.1.2
SolutionPack for EMC VMAX	3.6.2
SolutionPack for EMC VNX	3.6.2
SolutionPack for EMC ViPR	2.1.1
SolutionPack for EMC VPLEX	3.6.2
SolutionPack for EMC M&R Health	2.0.2
SolutionPack for XtremIO	3.6.2
SolutionPack for Hitachi Device Manager	3.6.2
SolutionPack for HP 3PAR StoreServ	3.6.2
SolutionPack for HP EVA	1.1
SolutionPack for HP StorageWorks P9000	3.6.2
SolutionPack for IBM DS	1.1
SolutionPack for IBM LPAR	1.2.2
SolutionPack for IBM SAN Volume Controller/Storwize	3.6.2
SolutionPack for IBM XIV	3.6.2
SolutionPack for Microsoft Hyper-V	1.3
SolutionPack for Microsoft SQL Server	1.1

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

Product	Version
SolutionPack for NetApp Filer	3.6.2
SolutionPack for Oracle Database	1.4
SolutionPack for Physical Hosts	1.2.2
SolutionPack for Storage Compliance	3.6.2
SolutionPack for VI VirtualWisdom	1.0
SolutionPack for VMware vCenter	3.6.2

**SolutionPack for Storage Compliance**

Policy Administration and EMC Support Matrix Administration reports are not supported in the minimal browse mode.

**SolutionPack for EMC ViPR**

The ViPR documentation is available at [support.emc.com](http://support.emc.com).

The ViPR 2.1 articles are located on [ECN](#).

The ViPR 2.2 articles are located on [ECN](#).

## SolutionPack for Brocade FC Switch

This is a list of prerequisites and communication port information for the supported Brocade Fabric models.

**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 Collection Interfaces	Collector	Prerequisites
For the supported models, refer to the User Guide of EMC Connectrix Manager Converged Network Edition or Data Center Edition	XML	CMCNE/BNA 11.1.x, 11.2.1, 12.0.x,12.1.x and 12.3.1 CMDCE/DCFM 10.4.x 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

#### 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 Collection Interfaces	Collector	Prerequisites	Port
All Brocade switches that are running FOSv4.x or higher.	XML Collector SNMP Collector	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 and 12.3.1 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.	The SNMP default port is 161.

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

This is a list of prerequisites and communication port information for the supported Cisco fabrics.

**Table 8** Support for Cisco fabric

Supported Collection Interfaces	Collector	Prerequisites	Port/ Protocol
Cisco MDS <ul style="list-style-type: none"> <li>• For 5.2.x code, switches must be running NX-OS 5.2(8d) or later</li> <li>• For 6.x code, switches must be running NX-OS 6.2(9) or later</li> </ul> Cisco ONS Cisco Nexus	Generic-SNMP	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> <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> Some switch models might not have all of the listed MIBs and in that case those capabilities will not be discovered.	SNMP (default port is 161)

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.

## SolutionPack for Cisco UCS

This is a list of prerequisites and communication port information for the supported Cisco UCS models.

**Table 9** Support for Cisco UCS

Supported Collection Interfaces	Collector	Prerequisites	Port
<ul style="list-style-type: none"> <li>Cisco UCS Manager 2.0 and higher</li> <li>Cisco UCS C-Series (CIMC) 1.4 and higher</li> </ul>	XML-Collector		80 or 443

## SolutionPack for Converged Infrastructure

This is a list of the supported versions of Converged Infrastructure.

**Table 10** Support for Converged Infrastructure

Supported Collection Interfaces	Collector	Prerequisites	Port
<ul style="list-style-type: none"> <li>UIM/Provisioning - 4.0 and up</li> <li>UIM/Operations - 4.0 and up</li> </ul>	XML-Collector		443 (HTTPS)

## SolutionPack for EMC Atmos

**Table 11** Support for Atmos arrays

Supported Collection Interfaces	Collector	Prerequisites	Port
<ul style="list-style-type: none"> <li>Atmos 2.1.5.0</li> </ul>	XML Collector using REST APIs	Atmos System Management Interface	8080 443/8443

## SolutionPack for EMC Centera

This is a list of prerequisites for the supported Centera versions.

**Table 12** Support for EMC Centera

Supported Collection Interfaces	Collector	Prerequisites	Port
EMC Centera	Stream-Collector	Centera Viewer CLI (v4.3)	3682

## SolutionPack for EMC Data Domain

This is a list of prerequisites and communication port information for the supported versions of Data Domain.

**Table 13** Support for Data Domain

Supported Collection Interfaces	Collector	Prerequisites	Port
EMC Data Domain OS 5.4, EMC Data Domain OS 5.5 (ViPR SRM 3.6.2)	Generic-SNMP	<ul style="list-style-type: none"> <li>If you are updating from an older version, ensure that the SolutionPack block Generic-SNMP is updated to version 1.2 or newer.</li> <li>SNMP must be enabled.</li> </ul>	SNMP (default port is 161)

## SolutionPack for EMC Data Protection Advisor

This is a list of supported versions of DPA.

**Table 14** Support for DPA

Supported Collection Interfaces	Collector	Prerequisites	Port
DPA 6.1.x DPA 6.2 DA (ViPR SRM 3.6.2)	XML Collector for Data Domain and RecoverPoint, and Stream Collector using REST APIs for Netbackup and Avamar	None	9004 (http) or 9002 (https) or other custom ports

## 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** Supported hosts in SolutionPack for EMC Host Interface

Supported Operating Systems	Collector	Prerequisites	Port/Protocol
<ul style="list-style-type: none"> <li>• Windows Server 2003</li> <li>• Windows 2008 SP2</li> <li>• Windows 2008 R2</li> <li>• Windows 2008 R2 core</li> <li>• Windows 2012</li> <li>• Windows 2012 core</li> </ul> 32 bit support: <ul style="list-style-type: none"> <li>• Windows 2003</li> <li>• Windows 2008</li> </ul>	XML Collector	Supported Windows OS	Default ports are 5988/TCP and 5989/TCP (secure)

## SolutionPack for EMC Isilon

This is a list of prerequisites and communication port information for the supported Isilon versions.

**Table 17** Support for Isilon

Supported Collection Interfaces	Collector	Prerequisites	Port/Protocol
Any EMC Isilon array running Isilon 7.0 or higher	REST API	None	HTTPS (default is 8080/TCP)

## SolutionPack for EMC RecoverPoint

This is a list of supported versions of RecoverPoint.

**Table 18** Support for RecoverPoint

Supported Collection Interfaces	Collector	Port
RecoverPoint 4.0 and higher	XML-Collector	7225 48443



## SolutionPack for EMC ScaleIO

This is a list of prerequisites and communication port information for the SolutionPack for EMC ScaleIO.

**Table 19** Support for ScaleIO

Supported Collection Interfaces	Collector	Prerequisites	Port
ScaleIO 1.30, ScaleIO 1.31	Stream Collector using REST APIs	ScaleIO REST gateway should be installed on the host and should be configured with ScaleIO MDM (Meta Data Manager).	Default HTTPS port (443)

## SolutionPack for EMC ViPR

This is a list of prerequisites for the supported EMC ViPR versions.

**Table 20** Support for EMC ViPR

Supported Collection Interfaces	Collector	Prerequisites	Port
ViPR REST API	XML Collector, Stream Collector Data returned in XML	ViPR 2.1.0.1.437 or later	4443

As of ViPR SRM 3.6.2, ViPR Controller 2.2 is supported.

## SolutionPack for EMC VMAX

This is a list of prerequisites for the support of EMC VMAX.

**Table 21** Support for EMC VMAX

Supported Collection Interfaces	Collector	Prerequisites
<ul style="list-style-type: none"> <li>• DMX-3 series and higher</li> <li>• VMAX series</li> <li>• VMAX SE series</li> </ul>	Topology and Capacity Collector	Solutions Enabler 7.6.2.8 and later.
	Performance Collector using Unisphere for VMAX	Unisphere for VMAX 1.6.2 and later provides more overall performance metrics than SMI-S Provider but does not include LUN performance metrics.
	Performance Collector using SMI-S	SMI-S Provider 4.6.2 and later provides fewer overall performance metrics than Unisphere but includes LUN performance metrics.

**Table 21** Support for EMC VMAX (continued)

Supported Collection Interfaces	Collector	Prerequisites
VMAX3 family	Topology and Capacity Collector	SMI-S Provider 8.0.1 and later.
	Performance Collector using Unisphere for VMAX3	Unisphere for VMAX 8.0.1.14 and later provides more overall performance metrics than SMI-S Provider but does not include LUN performance metrics.
	Performance Collector using SMI-S	SMI-S Provider 8.0.1 and later provides fewer overall performance metrics than Unisphere but includes LUN performance metrics.

**Comments**

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.

The Workload Distribution Report and Disk Failure Impact Analysis are not supported for VMAX3.

iSCSI Gatekeepers are supported.

If performance metrics are desired, then you must install Unisphere for VMAX or the SMI-S Provider, or both.

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.

**Table 22** Guidelines for Gatekeepers

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

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	3.6.2	Yes	
8.0.1 and later	7.6.2.56	Remote	3.6.2	Yes	SE patch 7.6.2.56 is required to communicate to SE 8.0.1 server.
8.0.1 and later	8.0.1 and later	Remote	3.6.2	No	

## SolutionPack for EMC VNX

This is a list of prerequisites and communication port information for the EMC VNX support.

**Table 24** Support for EMC VNX

Supported Collection Interfaces	Collector/Method	Port
Operating Environment for Block ("FLARE"): 04.30* 05.31 or higher* Used with CLARiiON, VNX1, and VNX2 models.	Navisphere CLI at the same or newer version to the OE for Block version (see Comments below). Data returned as XML/clear text	443
VNX Operating Environment for File 7.0 or later Celerra DART 5.6 and 6.0 Used with Celerra, VNX1, VNX2, and Gateway models	XML API available CLI (SSH)	22, 80 & 443

### Comments

\* 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 higher 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.

**Table 25** Support for EMC VNXe

Supported Collection Interfaces	Collector/Method	Port
OE 3.0, 3.0.1.x (Block and File) Used with second generation VNXe modules as of VNXe3200 First generation VNXe models such as VNXe3100, VNXe3150, and VNXe3300 are not supported.	REST API	443

## SolutionPack for EMC VPLEX

This is a list of prerequisites and communication port information supported for the VPLEX versions.

**Table 26** Support for VPLEX

Supported Collection Interfaces	Collector	Prerequisites	Port
5.2.x or newer of Standalone (single cluster) and Metro/Geo	Stream Collector	REST API access, CLI access, and Virtual Volume Perpetual monitor logs (for VPLEX 5.3.x or newer only).	HTTPS (TCP/443) SSH (TCP/22)
	Text Collector	CLI access and Director Perpetual monitor logs	SSH (TCP/22)

### Note

Do not run VPLEX 5.2sp1 patch 2 with any version of SRM as the VPLEX management server could become unresponsive.

## SolutionPack for Hitachi Device Manager

This is a list of the supported HDS models.

**Table 27** Support for HDS devices

Supported Collection Interfaces	Collector	Prerequisites	Port
<ul style="list-style-type: none"> <li>• AMS200</li> <li>• AMS2100</li> <li>• USP and USP_V</li> <li>• HUS and VSP</li> </ul>	Stream Collector	Hitachi Command Suite 7.4.1 or higher (full license; core license is not adequate)	2001 (XML API) 5988/5989 (SMI-S)

## SolutionPack for HP 3PAR StoreServ

This is a list of prerequisites and communication port information for the supported HP 3PAR models.

**Table 28** Support for HP 3PAR

Supported Collection Interfaces	Collector	Prerequisites	Port
F200	Text-Collector		22 (SSH)

**Table 28** Support for HP 3PAR (continued)

Supported Collection Interfaces	Collector	Prerequisites	Port
F400 S400X V400 T400 T800  Supported versions of the firmware are: 2.3.1, 3.1.1, 3.1.2, 3.1.3 and 3.2.1 (ViPR SRM 3.6.2).  Versions at 2.2 and lower are not supported.	Stream Collector	CIM server has been started. Use <code>startcim</code> command on the CLI to start the CIM server	5988/5989 (SMI-S)

## SolutionPack for HP EVA

This is a list of the supported HP EVA models.

**Table 29** Support for HP EVA

Supported Collection Interfaces	Collector	Prerequisites	Port
HP EVA 3000, 4x00, 5000, 6000, 6x00, 8000, 8x00	XML-Collector	SMI-S Command View EVA 9.02 full version	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 Collection Interfaces	Collector	Prerequisites	Port
<ul style="list-style-type: none"> <li>• P9500</li> <li>• XP24K/20K</li> <li>• XP12K/10K/SVS200</li> </ul>	Stream Collector	HP Command View Advanced Edition Suite 7.4.1 or later installed on the host	2001 (XML/API) 5988/5989 (SMI-S)

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

Supported Collection Interfaces	Collector	Prerequisites	Port
<ul style="list-style-type: none"> <li>XP1024/128</li> </ul>			

## SolutionPack for IBM DS

This is a list of prerequisites and communication port information for the supported IBM DS models.

**Table 31** Supported for IBM DS

Supported Collection Interfaces	Collector	Prerequisites	Port
<ul style="list-style-type: none"> <li>DS 3000 Series</li> <li>DS 4000 Series</li> <li>DS 5000 Series</li> </ul>	Stream-Collector	Storage Manager IBM SMI-S Provider running	5988 (HTTP) 5989 (HTTPS)
<ul style="list-style-type: none"> <li>DS 6000 Series</li> <li>DS 8000 Series</li> </ul>			6989 (HTTPS)

## SolutionPack for IBM LPAR

Support information for IBM LPAR.

**Table 32** HMC Data Collection: P Server details

Supported Collection Interfaces	Collector	Prerequisites	Port
All P Series servers HMC version = 6,7	Text Collector	Installation of the SolutionPack for IBM LPAR, providing credentials of the Hardware management Console (HMC)	Port 22

**Table 33** LPAR (VIOS/VIOC) Data Collection

Supported Collection Interfaces	Collector	Prerequisites	Port
IBM AIX 6.1, 7.1 Linux: Redhat 5.x, 6.x SuSE 10.x, 11.x	Remote Shell Collector	Installation of the SolutionPack for Physical Hosts Physical Host SolutionPack Script needs to be installed on any Generic RSC collector that will be used for physical host discovery	Port 22

**Table 33** LPAR (VIOS/VIOC) Data Collection

Supported Collection Interfaces	Collector	Prerequisites	Port
		<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>. Contact Customer Support if you have problems accessing this FTP site.</p> <p>perl interpreter 5.6.1 or higher</p>	

**Additional information**

- 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

This is a list of the supported IBM SAN Volume Controller/Storwize models.

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

Supported Collection Interfaces	Collector	Prerequisites	Port
<ul style="list-style-type: none"> <li>• IBM SVC V7.0 and above</li> <li>• IBM Storwize V7000 V7.0 and above</li> </ul>	XML-Collector	IBM SMI-S Provider running	5989 (https) and SSH (default is 22/TCP).

## SolutionPack for IBM XIV

This is a list of the supported IBM XIV models.

**Table 35** Support for IBM XIV devices

Supported Collection Interfaces	Collector	Prerequisites	Port
IBM XIV	Stream-Collector	CIM Agent running	5989 (for SSL)



## SolutionPack for Microsoft Hyper-V

This is a list of the supported Microsoft Hyper-V models.

### Note

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

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

Supported Collection Interfaces	Collector	Prerequisites	Port
<ul style="list-style-type: none"> <li>Hyper-V on Windows Server 2008 R2 Service Pack 1 or newer</li> <li>Hyper-V Server 2008 Hyper-V Server 2008 or newer</li> <li>Hyper-V on Windows 2012 R2</li> </ul>	XML-Collector	Requires PowerShell	

## SolutionPack for NetApp Filer

This is a list of prerequisites and communication port information for the supported NetApp Filer models.

**Table 37** Support for NetApp Filer

Supported Collection Interfaces	Collector	Prerequisites	Port/Protocol
<ul style="list-style-type: none"> <li>NetApp Filer 7-mode on Ontap 7.0.x, 7.1.x, 7.2.x, and 7.3.x</li> <li>NetApp Filer on Ontap 8.0.x, 8.1.x, 8.2, 8.2.1, 8.2.2, and 8.2.3</li> </ul>	Text-Collector		SSH (default is 22/TCP)

### Note

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

## SolutionPack for Oracle MySQL Database

This is a list of prerequisites and communication port information for the SolutionPack for Oracle MySQL Database.

**Table 38** Support for Oracle MySQL databases

Supported Collection Interfaces	Collector	Prerequisites	Port
MySQL 5.1 MySQL 5.5 MySQL 5.6	The SQL-Collector queries the information_schema.GLOBAL_STATUS table and the information_schema.SESSION_VARIABLES table.	This SolutionPack requires MySQL database user login privileges to collect information from MySQL database servers running remotely.	1521 (TCP)

## SolutionPack for Oracle Database

This is a list of prerequisites and communication port information for the SolutionPack for Oracle Database

**Table 39** Support for Oracle databases

Supported Collection Interfaces	Collector	Prerequisites	Port
Oracle 10 and greater	SQL-Collector	The appropriate JDBC driver jar file needs to be in the folder .../APG/Databases/JDBC-Drivers/Default/lib  Work with your DBA to determine the appropriate JDBC driver based on the installed version of Oracle. Download the JDBC driver from <a href="http://www.oracle.com/technetwork/database/features/jdbc">www.oracle.com/technetwork/database/features/jdbc</a>  ORACLE database user credentials are required	1521 (TCP)

## SolutionPack for Physical Hosts

This is a list of hosts supported by ViPR SRM.

### Supported hosts

**Table 40** HPUX hosts

Supported Collection Interfaces	Collector	Prerequisites	Port
<ul style="list-style-type: none"> <li>HPUX 11iv1 11.11</li> <li>HPUX 11iv2 11.23</li> <li>HPUX 11iv3 11.31</li> </ul>	SSH	PowerPath 5.2 or higher 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> . Contact Customer Support if you have problems accessing this FTP site.  perl interpreter 5.6.1 or higher	Port 22

**Table 41** IBM AIX hosts

Supported Collection Interfaces	Collector	Prerequisites	Port
IBM AIX 5.1, 5.2, 5.3, 6.1, 7.1	SSH	PowerPath 5.7 b194 or higher 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.emc.com/pub/symm3000/inquiry/</a> . Contact Customer Support if you have problems accessing this FTP site.  perl interpreter 5.6.1 or higher	Port 22

**Table 42** Linux hosts

Supported Collection Interfaces	Collector	Prerequisites	Port
<ul style="list-style-type: none"> <li>LINUX RHEL AS/ES 4.x, 5.x, 6.x</li> <li>LINUX SUSE ES 9, ES 9.3, ES 10.x, ES 11.x</li> <li>CentOS 5.x, 6.x</li> <li>Oracle Linux 6.x</li> </ul> MPIO reports are supported on Windows and Linux only.	SSH	PowerPath 5.7 or higher 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.emc.com/pub/symm3000/inquiry/</a> . Contact Customer Support if you have problems accessing this FTP site.  perl interpreter 5.6.1 or higher	Port 22

**Table 43** Windows hosts

Supported Collection Interfaces	Collector	Prerequisites	Port
<ul style="list-style-type: none"> <li>• Microsoft Windows Server 2003 R2 SP2</li> <li>• Microsoft Windows Server 2003 SP2</li> <li>• Microsoft Windows Server 2008 Core</li> <li>• Microsoft Windows Server 2008 SP1</li> <li>• Microsoft Windows Server 2008 SP2</li> <li>• Microsoft Windows Server 2008 R2</li> <li>• Microsoft Windows Server 2012</li> <li>• Microsoft Windows Server 2012 R2</li> </ul> <p>Standard, Enterprise and Datacenter versions</p> <p>Multipath I/O for Windows Server 2008, Windows Server 2012</p> <p>MPIO reports are supported on Windows and Linux only.</p>	WinRM, WS-MAN	<p>PowerPath 5.7 or higher must be installed on the host to fetch PowerPath metrics.</p> <p>Requires PowerShell 2.0 or greater</p> <p>INQ 7.6.2 is required for Windows 2003 only</p> <p>Fcinfo.exe is required for Windows 2003 hosts</p>	<p>5986 (HTTPS)</p> <p>5985 (HTTP)</p> <p>Refer to the ViPR SRM Ports Usage and Worksheet for more information on port configuration.</p>

**Table 44** Solaris hosts

Supported Collection Interfaces	Collector	Prerequisites	Port
Solaris 9, 10, 11, SVM, VxVM, zfs	SSH	<p>PowerPath 5.5 P02 HF02 or higher must be installed on the host to fetch PowerPath metrics.</p> <p>INQ 7.6.2 is available from <a href="http://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 higher</p>	Port 22

**Comments**

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 Collection Interfaces	Collector	Prerequisites	Port
<ul style="list-style-type: none"> <li>SQL Server 2008R2</li> <li>SQL Server 2012</li> </ul>	SQL collector	<ul style="list-style-type: none"> <li>SQL authentication requires that the user be a member of the SYSADMIN group</li> <li>Windows user account requires the user be a member of the Guests group or the Domain Guests group</li> <li>The default database must be the master</li> <li>Windows user account must be imported into the Microsoft SQL Server with settings similar to these: <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> </li> </ul>	

## SolutionPack for Storage Compliance

**Table 46** Support for Storage Compliance

Supported Collection Interfaces	Collector	Prerequisites	Port
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.	
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

This is a list of supported versions of VI VirtualWisdom.

**Table 47** Support for VI VirtualWisdom

Supported Collection Interfaces	Collector	Prerequisites	Port
VI VirtualWisdom v3.x ( supported version greater than 3.4.3)	XML-Collector	VirtualWisdom WebServices API	webservices port number (default 8080)

## SolutionPack for VMware vCenter

This is a list of supported versions of VMware vCenter.

**Table 48** Support for VMware vCenter

Supported Collection Interfaces	Collector	Prerequisites	Port/ Protocol
VMware vCenter Server and ESX(i) must be 4.1 or later, although 5.1 or later is recommended.	VMware Collector	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

## SolutionPack for XtremIO

**Table 49** Support for EMC XtremIO arrays

Supported Collection Interfaces	Collector	Prerequisites	Port
<ul style="list-style-type: none"> <li>XtremIO 2.4 and greater</li> </ul>	JSON Collector	N/A	Default HTTPS port (443)