Hitachi Ops Center Protector v7.1 Infrastructure Requirements

Minimum Specification

Hardware	Master Node [1]	Client Node [1]	Client Node (ISM) Node [1][2]	Client Node (Repository) [1][3][4]
Memory	8GB or greater[5][6]	As Per OS recommendation[7]	8GB or greater[5][6]	16GB or greater[5][6][8]
Disk space	1 GB for Protector + 100 GB logs[9]	500MB for Protector + 16GB for cache + 16GB for filter logs[10]	500MB for Protector + 4GB logs	500MB for Protector + 16GB cache per source + repository space[11]
RAID	Not required	Not required	Not required	Performance-based RAID, 16GB cache per source node, repository disk space[11]
Network Interface	Minimum 100Mb/s	Minimum 100Mb/s	Minimum 100Mb/s	Minimum 1,000Mb/s
Processor	4 core, 2+ GHz	2 core, 1 GHz	4-core, 2+ GHz	4+ core, 2+ GHz
Display	1280 x 1024[12]	N/A	N/A	N/A
Additional Software	N/A	N/A	CCI[13]	N/A

(1) If multiple node capabilities are configured on one node then the higher specification is required

(2) An ISM node is the node which controls Hitachi Block and HNAS storage devices.

(3) If a repository node is being used as an ISM node for hardware orchestration then it must have a fibre channel connection to a command device on the storage. iSCSI command devices are not supported.

(4) If doing VMware VADP backups to Repository the VMware proxy node should be placed on the repository node.

(5) Configure the page file such that the minimum and maximum page file size are equal and at least 32 GB (https://docs.mongodb.com/manual/administration/production-notes/#production-windows-pagefile)

(6) This is in addition to the memory required by any other applications running on the machine.

(7) Minimum of 1 gigabytes (GB) or 2 gigabytes (GB) for SUSE Linux

(8) If the node is hosted on a VM the memory should be allocated to and reserved for that node rather than being a pooled resource.

(9) On heavily utilized systems more space may be required

(10) For host based backups we recommend that Linux source nodes have a Logical Volume Manager (LVM) on each volume group that is to be backed up. A minimum of 10 GB of free space is required in the 'unused' portion of the LVM, which is in addition to the required space for the allocated storage area. For example, if 100 GB of usable storage is required, then the total disk size will be 110 GB (100 GB of usable storage and 10 GB of unused storage).

(11) Repository configuration should plan for 16 GB of hard disk space for cache per Live Source Node connection. Repository may reside on internal or SAN attached storage. It cannot reside on a network share.

(12) After initial installation and configuration the UI can be accessed from any machine with access to the web server on the master, any machine accessing the web UI should have this resolution.

(13) If the ISM node is being used for Hitachi Block operations CCI needs to be installed, see the Storage Support matrix page for more details

Browser Support

The following table lists the supported browser versions for accessing the Protector user interface.

Browser	Version
Internet Explorer	11 (and newer)
Edge	HTML v16(and newer)
Chrome	63 (and newer)

Operating System Version Support

Hitachi Data Instance Director Component	Configurations	OS Version[14]
Source Node	As per individual feature support matrices	As per support matrices
Master Node	Standalone	Windows Server 2012 (64-bit) Windows Server 2012 R2 (64-bit) Windows Server 2016 (64-bit)[15] Windows Server 2019[15]
		Linux RHEL 7 x64(7.0 and newer)[16] Linux RHEL 8 x64(8.0 and 8.1 only)[16] OEL 7 x64 (7.0 and newer)[16] OEL 8 x64 (8.0 and 8.1 Only)[16] SUSE 12 x64 (12.0 and newer)[16] SUSE 15 x64(15.0 SP1 Only)[16]
	Microsoft Failover Cluster (MSFC)	Windows Server 2012 (64-bit) Windows Server 2012 R2 (64-bit) Windows Server 2016 (64-bit)[15] Windows Server 2019[15]
Repository Proxy Node[17]	Standalone	Windows Server 2012 (64-bit) Windows Server 2012 R2 (64-bit) Recommended - Windows Server 2016 (64-bit)[15] Windows Server 2019 (64-bit)[15]
		Linux RHEL 7 x64(7.0 and newer)[16][18] Linux RHEL 8 x64(8.0 and 8.1 only)[16][18] OEL 7 x64 (7.0 and newer)[16][18] OEL 8 x64 (8.0 and 8.1 Only)[16][18] SUSE 12 x64 (12.0 and newer)[16][18] SUSE 15 x64(15.0 SP1 Only)[16][18]
	Microsoft Failover Cluster (MSFC)	Windows Server 2012 (64-bit) Windows Server 2012 R2 (64-bit) Recommended - Windows Server 2016 (64-bit)[15] Windows Server 2019[2]

ISM Proxy Node **HCP Proxy Node**[19] **Amazon S3 Proxy Node**	Standalone	Windows Server 2012 (64-bit) Windows Server 2012 R2 (64-bit) Windows Server 2016 (64-bit)[15] Windows Server 2019[15]
		Linux RHEL 7 x64(7.0 and newer)[16] Linux RHEL 8 x64(8.0 and 8.1 only)[16] OEL 7 x64 (7.0 and newer)[16] OEL 8 x64 (8.0 and 8.1 Only)[16] SUSE 12 x64 (12.0 and newer)[16] SUSE 15 x64(15.0 SP1 Only)[16]
VMware Proxy Node[20]	Standalone	Windows Server 2008 (64-bit) Windows Server 2008 R2 (64-bit) Windows Server 2012 (64-bit) Windows Server 2012 R2 (64-bit) Windows Server 2016 (64-bit)[15] Windows Server 2019[15]
		Linux RHEL 7 x64(7.0 and newer)[16] Linux RHEL 8 x64(8.0 and 8.1 only)[16] OEL 7 x64 (7.0 and newer)[16] OEL 8 x64 (8.0 and 8.1 Only)[16] SUSE 12 x64 (12.0 and newer)[16] SUSE 15 x64(15.0 SP1 Only)[16]

(14) Note: Support is provided only where standard vendor support is available.

(15) Supported only with features compatible with Windows 2012.

(16) Linux support for the Intel x86 platforms only

(17) The ability to host a repository on a Windows-deduplicated volume is not supported.

(18) A Linux master must have libGL.so installed

(19) For Generation 2 HCP it requires HCP Version 8.1.0.x or higher.

(20) To support mounting of storage-based snapshots to a VMware virtual machine, the VMware Proxy Node must also be the master.

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