System Requirements for Change Guardian 6.1

March 2021

Micro Focus recommends the tested platforms listed below. However, customers running on any platforms not provided in this list or with untested configurations will be supported until the point Micro Focus determines that the root cause is the untested platform or configuration. Issues that can be reproduced on the tested platforms will be prioritized and fixed according to standard defect-handling policies. For more information about support polices, see Support Policies.

System Requirements

Software Requirements

Tested Platforms

Component Name	Platforms
Change Guardian Server	• Red Hat Enterprise Linux Server (RHEL) 8.2 • Red Hat Enterprise Linux Server (RHEL) 7.9 • SUSE Linux Enterprise Server (SLES) 15 SP2 (64-bit) • SUSE Linux Enterprise Server (SLES) 12 SP5 (64-bit)

Component Name	Platforms
Change Guardian Server Soft Appliance (Includes Operating System)	**ISO Appliance** • VMware ESX 6.7 • VMware ESX 6.5 **VHD** • Hyper-V Server 2019 • Hyper-V Server 2016 **OVF Appliance** • VMware ESX 6.7 • VMware ESX 6.5
Change Guardian Policy Editor	• Windows 10 (64-bit) • Windows Server 2019 • Windows Server 2016 • Windows Server 2012 R2
Change Guardian Agent for Windows	• Windows 10 (32-bit and 64-bit) • Windows 8.1 (32-bit and 64-bit) • Windows 7 SP1 (64-bit) • Windows Server 2019 • Windows Server 2019 Core • Windows Server 2016 • Windows Server 2016 Core • Windows Server 2012 R2
Change Guardian Event Collector AddOn for Windows	• Microsoft Windows Server 2019 Standard 64-bit • Microsoft Windows Server 2016 64-bit • Microsoft Windows Server 2012 R2 64-bit **NOTE:** Change Guardian Event Collector Addon for Windows Agent is not supported on Windows Server 2019 Core and Windows Server 2016 Core.

Component Name	Platforms

Security Agent for UNIX	◆ IBM AIX 7.2
	
	 ◆ IBM AIX 7.1
	    ◆ IBM Power (64-bit kernel, 64-bit agent)
	
	 ◆ HP-UX 11iv3 Itanium (64-bit kernel, 64-bit agent)
	
	 ◆ Oracle Solaris
	    ◆ 11 SPARC (64-bit kernel)
	    ◆ 10 SPARC (64-bit kernel)
	
	 ◆ Red Hat Enterprise Linux
	    ◆ 8.2 (64-bit kernel, 64-bit agent)
	    ◆ 8.1 (64-bit kernel, 64-bit agent)
	    ◆ 7.9 (64-bit kernel, 64-bit agent)
	    ◆ 7.8 (64-bit kernel, 64-bit agent)
	
	 ◆ SUSE Linux Enterprise Server
	    ◆ 15 SP2 (64-bit kernel, 64-bit agent)
	    ◆ 15 SP1 (64-bit kernel, 64-bit agent)
	    ◆ 12 SP5 (64-bit kernel, 64-bit agent)
	
	 ◆ Oracle Linux
	    ◆ 8.1 (64-bit kernel, 64-bit agent)
	    ◆ 7.7 (64-bit kernel, 64-bit agent)
	
	 ◆ CentOS
	    ◆ 8.1 (64-bit kernel, 64-bit agent)
	    ◆ 7.7 (64-bit kernel, 64-bit agent)

NOTE: Change Guardian Server Soft Appliance is built on SLES 12 SP5.

IMPORTANT

◆ FIPS mode is supported only for Change Guardian. Change Guardian is not supported if the operating system is in FIPS mode.

◆ Change Guardian is not certified on Open Enterprise Server installations of SLES.

Supported Application Versions

NOTE: To view the list of Windows and UNIX versions that supports Change Guardian monitoring, see Tested Platforms.

Application Name	Versions
Microsoft Active Directory and Group Policy	◆ Windows Server 2019 ◆ Windows Server 2019 Core ◆ Windows Server 2016 ◆ Windows Server 2016 Core ◆ Windows Server 2012 R2
Microsoft Exchange	◆ Microsoft Exchange Server 2019 ◆ Microsoft Exchange Server 2016
Dell EMC	◆ Isilon 8.1.0.4 ◆ Unity 4.4
NetApp Storage System	◆ Data ONTAP 9.7 ◆ Data ONTAP 9.1
Azure AD	Not applicable
AWS (Identity)	Not applicable
Office 365	Not applicable

Integration with Other Softwares

Component Name	Versions
Secure Configuration Manager	7.2
Sentinel Enterprise	◆ 8.4 ◆ 8.3.1
ArcSight Enterprise Security Manager	7.1.0.8337.0
Splunk Enterprise Security	8.0.3
Directory Resource Administrator	10.0.1

Web Browsers for Change Guardian Web Console

Component Name	Browsers
Change Guardian Web Console	Latest version of the following: ◆ Google Chrome ◆ Mozilla Firefox ◆ Microsoft Edge – Windows 10 or later ◆ Microsoft Internet Explorer 11 or later **NOTE:** Although not officially certified, other modern browsers are known to work reasonably well with the Change Guardian web interface.

Client Software

Component Name	Softwares
Change Guardian Policy Editor	Microsoft.NET Framework 4.5 or later

Recommended Hardware Requirements

Component	Hardware
Change Guardian Server	**CPU**: 8 Cores **RAM**: 24 GB **For standard installation, required hard disk space**: 50 GB **For Appliance installation, required hard disk space**: 100 GB or more

Performance Sizing Guidelines

Category	250 Monitored Assets	1000 Monitored Assets	1000+ Monitored Assets
Total System Capacity			
Events per Second (EPS) Capability	200 EPS	500 EPS	500+ EPS
Alerts per Minute	10 APM	10 APM	10+ APM
Change Guardian Server Hardware			

Category	250 Monitored Assets	1000 Monitored Assets	1000+ Monitored Assets
CPU	Two Intel Xeon 3-GHz (4 core) E5450 CPUs (8 cores total), *without Intel HT Technology*	Two Intel Xeon 3-GHz (8 core) E5450 CPUs (16 cores total), *without Intel HT Technology*	Contact Micro Focus Services
Primary Storage: Primary indexed event data optimized for fast retrieval.	500 GB 7.2k RPM drive	4 x 300 GB SAS 15k RPM (Hardware RAID 10)	
Memory	24 GB	32 GB	

NOTE: For details about performance guidelines, contact Micro Focus support.

Data Storage

How far into the past will users search for data on a regular basis? Amount of locally cached data for higher search performance.		7 days	Contact Micro Focus Services
What percentage of searches will be over data older than the number of days above? Impacts the amount of input/output operations per second (IOPS) for local storage.		10%	
How far into the past must data be retained? Impacts how much disk space is required to retain all the data. If secondary storage is enabled, this impacts the size of secondary storage. Otherwise, it impacts the size of primary storage.		14 days	

User Activity

Category	250 Monitored Assets	1000 Monitored Assets	1000+ Monitored Assets
How many users will be active at the same time, on average? Impacts the amount of IOPS for primary and secondary storage and other items.		1	Contact Micro Focus Services
How many searches will an active user be performing at the same time, on average? Impacts the amount of IOPS for primary and secondary storage.	1 1M events per search	1 1M events per search	
How many real-time alert views will be running at the same time, on average?	3 (whenever)		
How many alert dashboards will be running at the same time, on average?	1 (7 days)		
How many Threat Response dashboards will be running at the same time, on average?	3		
How many alert widgets per dashboard will be running at the same time, on average?	2 (whenever)		

IMPORTANT: Agent Manager has the capability to install or upgrade agents with a maximum of 150 assets in a batch.

Change Monitoring Dashboard Performance

The Chart view might take about 25 seconds to load events up to 500,000, while the Grid view might load in five seconds with a similar number of event. Any operation, such as grouping and sorting, with events upto 500,000 events on the Grid view might take about 40 seconds to process and display.

If there are around 500,000 to 1,000,000 events, the Chart view loads in a minute, and the Grid view loads in half a minute. Any operation on the Grid view with around 50,00,00 and 10,00,000 events might take one and a half minute to process and display.

Similarly, if there are 1,000,000 to 1,500,000 events, the Chart view takes about a minute and a half to load, the Grid view takes about half a minute to load, and operations on the Grid view takes about two minutes to process and display.

Performance of Single Change Guardian Agent

Following are observations about the events generated per second from Change Guardian Agent for Windows and Security Agent for UNIX:

- The EPS count might vary with an increase in time interval and increase in the number of events generated in one burst.
- EPS count depends upon the number of files present in the folder if the folder is monitored for file integrity.
- EPS count might vary with the hardware configuration of the agent machine.
- EPS count might vary when the agent is monitoring a combination of assets, such as Microsoft Windows and Active Directory, or Active Directory and Group Policy, or Active Directory and file integrity.

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