

## CHARON-VAX/66x0 PLUS for Windows

Product version 4.8

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### DESCRIPTION

Stromasys **CHARON-VAX/6610 PLUS, CHARON-VAX/6620 PLUS, CHARON-VAX/6630 PLUS, and CHARON-VAX/6660 PLUS** are members of CHARON-VAX cross-platform hardware virtualization product family. They are designed to replace **XMI based VAX 6000, 7000, 8000, and 10000 series** systems by its virtual equivalent running on an x86-64 compatible standard computer system. CHARON-VAX creates the virtual replica of the original DEC VAX hardware, allowing the VAX/VMS operating system and all software that is running in that environment to remain working as always in their existing, binary form. No or minimal configuration changes to the original software (operating system, layered products, and applications), operational procedures, and management are required.

VAX hardware	Virtual VAX 66x0 product
VAX 6610, VAX 7610 →	CHARON-VAX/6610 PLUS
VAX 6620, VAX 7620 →	CHARON-VAX/6620 PLUS
VAX 6630, VAX 7630 →	CHARON-VAX/6630 PLUS
VAX 6660, VAX 7660 →	CHARON-VAX/6660 PLUS

### NETWORK

CHARON-VAX virtualizes the Ethernet controllers present in the original VAX hardware. Any protocol that ran on these controllers (DECnet, TCP/IP, LAT) will run over virtualized link.

### STORAGE

CHARON-VAX/66x0 PLUS provides support for the following VAX storage device types: XMI, BI, (T)MSCP, CI, and DSSI. CHARON translates VAX storage to any modern technology (SCSI, SATA, SAS) by means of virtual disk images on a Windows filesystem or physical LUNs attached locally or remotely by iSCSI, SAN, or NAS.

### HOST SYSTEM REQUIREMENTS

A physical system or virtual appliance with a multi core CPU (Intel Xeon v4 E3, E5, and E7 CPUs with a clock frequency of 3GHz and above are recommended; the amount of available CPU cores should be greater or equal to amount of emulated VAX CPUs plus 2), dedicated Ethernet adapters, an optional USB port for the license key and enough disk space to keep the VAX/VMS data. CHARON-VAX/66x0 requires a up to 6 GB host RAM (refer to page 2 for details).

### OPERATING SYSTEM REQUIREMENTS

Microsoft Windows Server 2008 R2 and 2012 R2 Standard and Enterprise (SP1) Editions 64 bit, Microsoft Windows 7, 8.1, and 10 Professional and Enterprise Editions 32 bit and 64 bit on top of a physical host, VMware ESXi 5.5 or 6.x, and Microsoft Hyper-V.

### LICENSE PROTECTION

A valid license should be permanently available to CHARON. It can be represented by a local or network attached USB HASP license dongle, or a Software License. The license preserves customer specific parameters and allows remote electronic updates. USB dongle enables rapid change of host systems as the CHARON executable itself can be installed on multiple systems for disaster recovery purposes. License flexibility allows combining multiple instances of different CHARON products on a single host system

### SYSTEM MAINTENANCE

Once installed and configured, CHARON system will behave like the original VAX system, and can be treated like VAX. Guest OS and applications operating procedures will remain the same, and it's advised not to treat the system as a Windows box, despite the fact it runs on a Windows kernel. Hosting OS does not require maintenance or patching; it can be cut off the network completely.

### PERFORMANCE

	Hardware VAX	CHARON-VAX*
VAX 6610	32 VUPS	150 VUPS
VAX 6620	50 VUPS	275 VUPS
VAX 6630	75 VUPS	400 VUPS
VAX 6660	150 VUPS	800 VUPS

\* On an Intel Core 7<sup>th</sup> generation 3.2 GHz based system

### DISTRIBUTION

CHARON Release notes, User manuals and Software Product Descriptions are available for download from the Stromasys Product Documentation and Knowledge Base web pages. Downloading installation kits and patches requires a partner account or credentials provided by Stromasys on an individual basis.

### CHARON UTILITIES

CHARON-VAX on Windows is delivered with the **CHARON Virtual Machines Manager**, a single window application which consolidates all CHARON management tasks: creating and configuring CHARON instances, managing CHARON license, configuring hosting hardware resources for CHARON needs, etc. The following functional applications are invoked from CHARON VM manager:

- **HASP License Details** for viewing CHARON license(s)
- **License Update Tool** for updating CHARON license
- **Sentinel Admin Control Center** for license management
- **Network Control Center** for managing CHARON network drivers and settings
- **Device Check** for providing configuration assistance for directly connected host devices
- **Virtual Disk Tool** for creating empty disk image files (.vdisk)

The following command line utilities are also available:

- **Virtual Disk Tool** for creating empty disk image files (.vdisk)
- **MTD** for transferring data between physical tapes and CHARON tape container files
- **HOSTprint** for redirecting an emulated QBUS LPV11 device (parallel port) output to a Windows local or network printer

Stromasys **CHARON Guest Utilities for OpenVMS** version 6.1 and above are supplied on a disk image to provide the following functionality:

- **Tape Utilities Package** for manipulating virtual tape images and managing a virtual SCSI tape changer
- **Power consumption optimization (IDLE) VMS utility** for implementing energy save mode when virtual VAX CPU is idle
- **Slowdown VMS utility**: for slowing down CHARON virtual CPU to match hardware VAX performance level
- **Shutdown VMS utility** for orderly shutdown CHARON after VMS



## VIRTUALIZED HARDWARE

	CHARON-VAX/6610 PLUS	CHARON-VAX/6620 PLUS	CHARON-VAX/6630 PLUS	CHARON-VAX/6660 PLUS
<b>Virtualized VAX model</b>	VAX6000-610	VAX6000-620	VAX6000-630	VAX6000-660
<b>Virtualized VAX CPU</b>	KA66-A 1 VAX CPU	KA66-A 2 VAX CPUs	KA66-A 3 VAX CPUs	KA66-A 4, 5, or 6 VAX CPU's
<b>Earliest VMS version</b>	5.5-2			
<b>Max. virtual VAX memory</b>	1 GB	2 GB	2 GB on 32 bit Windows 3 GB on 64 bit Windows	2 GB on 32 bit Windows 3 GB on 64 bit Windows
<b>Internal bus</b>	XMI; BI through virtual XMI to BI controller			
<b>SCSI and QBUS buses</b>	N/A			
<b>Emulated VAX disks</b>	Virtual disk images (container files) and physical SCSI disks and partitions on KDM70 XMI disk/tape controllers; CIXCD CI disk controllers; HSJ50 storage controllers			
<b>Emulated VAX tapes</b>	KDM70 XMI disk/tape controller with container files (boot from tape is not supported)			
<b>Ethernet</b>	Multiple emulated DEMNA Ethernet adapters up to the available maximum slots on the emulated XMI bus. Connection speed on the emulated VAX level is 10, 100 Mbps, and 1Gbps <sup>1)</sup>			
<b>VAX/VMS clustering</b>	NI clusters; Shared Disk Clusters with emulated CIXCD and HSJ50 controllers			
<b>Host memory requirement</b>	3 GB	4 GB	6 GB	6 GB

<sup>1)</sup> The effective aggregate throughput depends on the host system performance

**Each virtual VAX model follows the characteristics of its VAX hardware equivalent, requiring the corresponding level of license units and supports the peripherals particular to that VAX model. The virtual VAX does not include diagnostic and maintenance modes or delays to simulate mechanical device behavior**

Ordering information	CHARON-VAX/6610 PLUS	CHARON-VAX/6620 PLUS	CHARON-VAX/6630 PLUS	CHARON-VAX/6660 PLUS
Perpetual runtime license	CHVX-261-PG	CHVX-262-PH	CHVX-263-PH	CHVX-260-PH
One year license	CHVX-261-YG	CHVX-262-YH	CHVX-263-YH	CHVX-260-YH
Backup license (720 hours)	CHVX-261-KG	CHVX-262-KH	CHVX-263-KH	CHVX-260-KH
Annual GOLD support (9*5)	CHVX-261-UG	CHVX-262-UH	CHVX-263-UH	CHVX-260-UH
Annual PLATINUM support (24*7)	CHVX-261-TG	CHVX-262-TH	CHVX-263-TH	CHVX-260-TH

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