

CHARON-AXP/SMA, /SMA PLUS and /Station for Windows

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DESCRIPTION

CHARON-AXP/SMA, /SMA PLUS, and /Station (where SMA stands for Small and Medium Alpha) represent a family of the CHARON cross-platform hardware virtualization products by Stromasys. It will run the Alpha operating systems OpenVMS and Tru64 UNIX including the layered products and application software in their existing, binary form. It allows you to quickly move your Alpha software and data to a general purpose computer.

CHARON-AXP/SMA, /SMA PLUS, and /Station for Windows family is designed to replace a wide range of small and medium sized Alpha systems with up to 1 (/Station), 2 (/SMA), or 4 (/SMA PLUS) emulated AXP CPUs. Please refer to the second page for the details.

Most of the original Alpha hardware is virtualized, allowing the OpenVMS or Tru64 operating system and all software that is running in that environment to remain working as always. No or minimal changes to the original software (operating system, layered products or applications), its procedures or handling have to be applied.

NETWORK

CHARON-AXP virtualizes the Ethernet controllers as included in the original AlphaServer hardware that is replaced (DE435, DE450 and DE500BA). Any protocol that ran on these controllers (DECnet, TCP/IP, LAT) will run over this virtualized link.

STORAGE

CHARON-AXP provides support for Alpha storage devices: disk, tape and generic SCSI via virtual KZPBA SCSI adapters. CHARON-AXP allows connecting Alpha SCSI devices to logical disks or tapes that appear as container files in the host operating system, connections to Windows physical devices and direct SCSI addressing. In the latter case the nature of the connected device is not important; the Alpha Operating system already included the drivers for these devices.

The storage support is based on SCSI, however CHARON-AXP includes a special OpenVMS driver that allows to present OpenVMS with other device types: IDE (DQ), FibreChannel (DG), DSSI (DI), RAIDarray (DR) and MSCP (DU), next to SCSI (DK/MK/GK devices).

The nature of the storage technology on the host computer is hidden the Alpha Operating system, allowing to store emulated SCSI or IDE disk on a FibreChannel SAN.

HOSTING SERVER HARDWARE RECOMMENDATIONS

CHARON-AXP/SMA is designed to run on Microsoft Windows 7, Windows Server 2008 R2, Windows 8 & 8.1, Windows Server 2012 and Server 2012 R2 which is supported by AMD and Intel processor systems, or on a VMware ESXi 4.1 Update 1 and ESXi 5.x virtual appliance.

CHARON-AXP virtualizes a single or multiple (up to 4) CPUs Alpha system and therefore claims one of the CPU's on the host system for every virtual Alpha CPU. Additional host CPU capacity is required for I/O handling and other virtualization support tasks. CHARON-AXP licensing allows combining multiple licenses on one multi-core host system, when the rule of reserving 1 additional hosting CPU core for every virtual Alpha CPU.

PERFORMANCES

CHARON-AXP performance scales almost linearly with the host physical CPU (per core) performance. When run on a HP Proliant with latest multi-core 3.6 GHz processor CHARON-AXP provides approximately similar performance than the Alpha hardware it replaces. Please refer to the Performance Measurements provided with the product kit for details.

PRODUCT LICENSE KEY

The CHARON USB Sentinel HASP license key must be permanently connected to the host system. It preserves the customer specific license parameters, allows remote electronic updates and enables rapid change of host systems as the CHARON executable itself can be installed on multiple systems.

LICENSING

The CHARON-AXP/SMA, /SMA PLUS, and /Station base license includes 1 virtual Alpha CPU. An additional CPU option can be purchased separately. Amount of emulated RAM is set to maximum supported by model.

CHARON-AXP licensing allows combining multiple instances of CHARON-VAX and CHARON-AXP on a single multi-core host system.

DISTRIBUTION KITS

CHARON Installation kits, Release notes, User manuals, Software Product Descriptions, Patches.

USER ENVIRONMENT

After installation the system will behave like the AXP it replaces and should be treated like that AXP. Operating procedures will be the same and we advise not to treat it as a Windows system, despite the fact it runs on a Windows kernel. The product documentation includes an advisory for switching off unused Windows services and the Windows kernel can be disconnected from the network after installation.



VIRTUALIZED HARDWARE

CHARON-AXP Products	CHARON-AXP/Station	CHARON-AXP/SMA	CHARON-AXP/SMA PLUS
Emulated hardware models. Base license includes single CPU (in brackets: maximum possible amount of CPUs)	AlphaStation 200, 250 (1 CPU)	DEC3000 (1 CPU) AlphaServer 300, 400, 1000 (1 CPU) AlphaServer 2000, 4000 (2 CPUs)	DMCC, Flexor OEM systems (1 CPU) AlphaStation 500, 600, DPW, XP900, XP1000 AlphaServer 800, 1200, DS10 (1 CPU) AlphaServer DS20, DS25 (2 CPUs) AlphaServer 2100, 4100, ES40 (4 CPUs)
Emulated RAM / available virtual PCI slots	Up to 4 GB / up to 10 emulated PCI controllers	Up to 8 GB (up to 1GB for DEC3000) / up to 20 emulated PCI controllers	Up to 8 GB (Up to 16 GB for ES40) / up to 20 emulated PCI controllers
Storage adapter support	Emulated SCSI adapter KZPBA; up to 120 storage units (disks, tapes, and CD/DVD) supported simultaneously For VMS only: VMS Bypass driver enabling emulated FC (DG), MSCP (DU), IDE (DQ), DSSI (DI), and RAID (DR) disks		
Disk storage support	Virtual disk images on a local and remote Windows file system (.vdisk container files); physical SCSI disks and partitions; iSCSI disks; SAN attached storage volumes (\\.\PhysicalDriveX or \\.\SCSI devices)		
Tape storage support	Virtual tape images on a local and remote Windows file system (.vtape container files); physical SCSI tape drives (\\.\TapeX or \\.\SCSI devices)		
CDROM/Floppy disk support	Virtual CD/DVDs images (.iso container files); physical CD/DVD drives (\\.\CdRomX devices) / Physical floppy drive 1.44 MB (\\.\A: device)		
Ethernet Network support	Emulated PCI DEC 21x4x adapter family: DE435, DE450, DE500BA		
Fiber Channel/RAID support	Emulated DG and DR devices		
Console / Serial lines / on-board Parallel port	OPA0 console attached to a Windows terminal emulator, a physical serial port (COMxx: device), or a TCP/IP socket / emulated 8 serial lines PBXDA controller / pass through to the hosting server parallel port		
Supported operating systems	For single AXP CPU configurations: OpenVMS 6.2-1H3 – OpenVMS 8.4 (For DEC3000 the earliest VMS version is 6.1), Tru64 UNIX 3.2C – 5.1B (For DEC3000 the earliest Tru64 version is 3.2) For multiple AXP CPU configurations: OpenVMS 7.1-2 – OpenVMS 8.4, Tru64 UNIX 4.0F – 5.1B (also known as: Compaq or HP Tru64 UNIX)		
Additional CHARON utilities	CHARON-AXP taskbar menu; IDLE (supported for single AXP CPU configurations only); HASP_VIEW; HASPRUS; mkdisk; SCSIcheck; CHARON Network Control Center		
Host system requirements			
Host operating system	Microsoft Windows 7, Windows Server 2008 R2, Windows 8 & 8.1, Windows Server 2012 and Server 2012 R2 on top of a physical host or on VMware ESXi 4.1 update 1 or ESXi 5.x		
Host CPU/RAM	Amount of host system CPU cores ≥ 2 *(amount of emulated AXP CPU cores); Host RAM ≥ 2 GB + (amount of emulated AXP RAM)		
Recommended Hardware	HP Proliant servers; Intel Xeon E7, E5, 5600 CPU family, or Intel Core i7 G2 and G3 CPU family, frequency at least 3 GHz		
Ordering information			
Unlimited license	CHAXP-805IP-WI	CHAXP-800IP-WI	CHAXP-807IP-WI
Annual license	CHAXP-805IY-WI	CHAXP-800IY-WI	CHAXP-807IY-WI
Annual GOLD Support	CHAXP-805IU-WI	CHAXP-800IU-WI	CHAXP-807IU-WI
Annual PLATINUM Support	CHAXP-805IT-WI	CHAXP-800IT-WI	CHAXP-807IT-WI
Backup license	CHAXP-805IK-WI	CHAXP-800IK-WI	CHAXP-807IK-WI
Additional CPU	N.A.	CHAXP-CPUIP-WI	CHAXP-CPUIP-WI

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