

Stratus Avance Compatibility Matrix R2.1.3

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Important Considerations

Feature	Minimum
Avance System Disk	Physical Machines must be configured with a minimum of <ul style="list-style-type: none"> One logical volume protected by RAID1, RAID 5, RAID 6, or RAID 10 OR <ul style="list-style-type: none"> Two non-RAID or RAID 0 volumes Multiple volumes per RAID set is not supported
USB Support	Direct attach USB devices are not supported . Network-attached USB devices such as these three options are recommended: <ul style="list-style-type: none"> StarTech.com 10/100/1000 Mbps Gigabit 1 Port USB over IP Device Server (USB1000IP) Silex SX-3000GB - Device server - Ethernet, Fast Ethernet, Gigabit Ethernet, Hi-Speed USB Pilotech USB Over IP (4 ports) Model No.: OIP006E This enables the USB device to be seen by both physical machines, thus access is not lost as a result of failovers.
USB CD/DVD Drive	USB CD/DVD drives are supported on all platforms for Avance install
Add-in Server Management	The Dell DRAC4 and DRAC5 add-in cards are not supported. Do not install either of these add-in management cards to your system
Direct Attach Tape Drives	Direct attach tape drives are not supported and therefore not recommended for an HA solution as there is no ability to fail-over the connection to most drives. Stratus recommends utilizing cost effective network attach tape drives.
Direct Attach VGA	Console Connectivity is not supported. The host OS/Virtualization layer is closed to ensure the highest levels of security and availability.
SSD Support	Avance supports Solid State Drives according to the storage controller vendor specifications
Blacklisted firmware	Avance only blacklists firmware that is incompatible with Avance. Older firmware versions might run with Avance but it is always recommended to run the latest tested firmware to avoid issues. A firmware matrix listing the latest tested versions of firmware is available on the Avance support portal. Versions newer than the latest tested version may also work with Avance and will typically be validated within one quarter of the firmware release.



CREATING COMPUTERS.

Supported bluechip Computer AG Configurations

Servers (bluechip Computer AG)

Model	Description	Memory (Min/Max)	Disks (Min/Max)	CPU Chip Vendor / Model
SERVERline 3010T	1 CPU Socket, P4304BTLSHCN Intel Server Board S1200BTL Pedestal Hot Swap Drives	2/32 GB	2/4	<ul style="list-style-type: none"> Intel Xeon E3 1200 Series
SERVERline 5112R	2 CPU Socket, SR1625URSASR Intel Server Board S5520UR(R) 1U Rack Mount Active Midplane 2.5 Inch Drives	2/192 GB	2/8	<ul style="list-style-type: none"> Intel Xeon 55XX Series Intel Xeon 56XX Series
SERVERline 5211R	2 CPU Socket, SR2600URLXR Intel Server Board S5520UR(R) 2U Rack Mount Active Midplane 3.5 Inch Drives	2/192 GB	2/6	<ul style="list-style-type: none"> Intel Xeon 55XX Series Intel Xeon 56XX Series
SERVERline 5512R	2 CPU Socket, SC5600BRP Intel Server Board S5520HC(T) Pedestal 3.5 Inch Drives	2/192 GB	2/6	<ul style="list-style-type: none"> Intel Xeon 55XX Series Intel Xeon 56XX Series
SERVERline 5512T	2 CPU Socket, SC5600BRP Intel Server Board S5520HC(T) Pedestal 3.5 Inch Drives	2/192 GB	2/6	<ul style="list-style-type: none"> Intel Xeon 55XX Series Intel Xeon 56XX Series

Storage Controllers, Expanders, and Enclosures (bluechip Computer AG)

Controller Vendor	Storage Controller	Restrictions/Comments
LSI	MegaRAID SAS 9260-4i	RAID 0, 1, 5, 6, 10 only
Intel	RAID Controller RS2BL080	RAID 0, 1, 5, 6, 10 only
Intel	SROMBSASMP ¹	SAS Active Midplane-2

¹ Minimum firmware revision 11.0.1-0036

Network Controllers (bluechip Computer AG)

Controller Vender	Network Controller	Speed
Intel	Intel Ethernet Server Adapter x520-SR1 (E10G41BFSR) ²	10Gb
Intel	Intel Ethernet Server Adapter x520 T2 (E10G42BT) ³	10Gb
Intel	Intel Ethernet Server Adapter x520 DA2 (E10G42BTDA) ⁴	10Gb
Intel	Intel Ethernet Server Adapter I350-T2	1Gb
Intel	Intel Ethernet Server Adapter I350-T4	1Gb
Intel	Intel PRO 1000PT Dual Port 1GbE NIC	1Gb
Intel	Intel PRO 1000PT Full Height Quad Port Server Adapter, Gigabit NIC	1Gb
Intel	Intel PRO 1000PT Low Profile Quad Port Server Adapter, Gigabit NIC	1Gb
Intel	Intel ET Dual Port NIC	1Gb
Intel	Intel ET Quad Port NIC	1Gb
Intel	Intel Gigabit ET2 Quad Port Server Adapter NIC	1Gb
Intel	Intel AXX4GBIOMOD2 Quad Port Gigabit Ethernet I/O Module	1Gb
Intel	Intel AXXGBIOMOD Dual Port Gigabit Ethernet I/O Module	1Gb

Blacklisted Firmware (bluechip Computer AG)

Model/Device	Firmware Type	Blacklisted Revision
Intel SROMBSASMP2	Storage Controller	Intel-SROMBSASMP2-11.0.1-0022

² Refer to Vendor documentation to determine supported SFP+ modules and cables

³ Refer to Vendor documentation to determine supported SFP+ modules and cables

⁴ Refer to Vendor documentation to determine supported SFP+ modules and cables

Supported Dell® Configurations

Servers (Dell)

Model	Description	Memory (Min/Max)	Disks (Min/Max)	CPU Chip Vendor / Model
PowerEdge™ 1950	2 CPU Socket 1U Rack	2/32 GB	2/2	<ul style="list-style-type: none"> ▪ Intel® Xeon 51XX Series ▪ Intel Xeon 53XX Series
PowerEdge™ 1950 (III)	2 CPU Socket 1U Rack	2/64 GB	2/6	<ul style="list-style-type: none"> ▪ Intel Xeon 51XX Series ▪ Intel Xeon 52XX Series ▪ Intel Xeon 53XX Series ▪ Intel Xeon 54XX Series
PowerEdge 2950	2 CPU Socket 2U Rack	2/32 GB	2/8	<ul style="list-style-type: none"> ▪ Intel Xeon 51XX Series ▪ Intel Xeon 53XX Series
PowerEdge 2950 (III)	2 CPU Socket 2U Rack	2/64 GB	2/8	<ul style="list-style-type: none"> ▪ Intel Xeon 51XX Series ▪ Intel Xeon 52XX Series ▪ Intel Xeon 53XX Series ▪ Intel Xeon 54XX Series
PowerEdge 2900	2 CPU Socket Tower or Rack	2/48 GB	2/10	<ul style="list-style-type: none"> ▪ Intel Xeon 51XX Series ▪ Intel Xeon 53XX Series
PowerEdge 2900 (III)	2 CPU Socket Tower or Rack	2/48 GB	2/10	<ul style="list-style-type: none"> ▪ Intel Xeon 51XX Series ▪ Intel Xeon 52XX Series ▪ Intel Xeon 53XX Series ▪ Intel Xeon 54XX Series
PowerEdge R300	1 CPU Socket 1U Rack	2/24 GB	2/2	<ul style="list-style-type: none"> ▪ Intel Xeon 54XX Series ▪ Intel Xeon 33XX Series
PowerEdge R310	1 CPU Socket 1U Rack	2/32 GB	2/2	<ul style="list-style-type: none"> ▪ Intel Xeon 34XX Series
PowerEdge R410	2 CPU Socket 1U Rack	2/128 GB	2/4	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series
PowerEdge R510	2 CPU Socket 2U Rack	2/128 GB	2/12 ⁵	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series
PowerEdge R610	2 CPU Socket 1U Rack	2/128 GB	2/6	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series
PowerEdge R710	2 CPU Socket 2U Rack	2/128 GB	2/8	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series
PowerEdge T300	1 CPU Socket Tower	2/24 GB	2/4	<ul style="list-style-type: none"> ▪ Intel Xeon 54XX Series ▪ Intel Xeon 33XX Series
PowerEdge T310	1 CPU Socket Tower	2/32 GB	2/4	<ul style="list-style-type: none"> ▪ Intel Xeon 34XX Series
PowerEdge T410	2 CPU Socket Tower	2/64 GB	2/6	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series
PowerEdge T610	2 CPU Socket Tower or 5U Rack	2/128 GB	2/8	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series
PowerEdge T710	2 CPU Socket Tower or 5U Rack	2/128 GB	2/16	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series

⁵ USB CD Drive required for Avance install and VCD creation on servers without an internal optical drive.

Storage Controllers (Dell)

Controller Vendor	Storage Controller	Restrictions/Comments
Dell	SAS5/i	
Dell	PERC 5/i	<ul style="list-style-type: none"> RAID 0, 1, 5, 6, 10 only Avance does not support global disk sparing with Dell PERC 5 controllers. If this is attempted, Avance software reconfigures the drive to a RAID 0 drive. Please upgrade to a newer Dell controller if global sparing is required.
Dell	SAS 6/i	<ul style="list-style-type: none"> Non-RAID mode only
Dell	SAS 6/iR	<ul style="list-style-type: none"> Non RAID mode only
Dell	PERC 6/i	<ul style="list-style-type: none"> RAID 0, 1, 5, 6, 10 only
Dell	H200 integrated / H200 adapter	<ul style="list-style-type: none"> Non RAID mode only Minimum Firmware rev 07.01.24.00
Dell	H700 integrated / H700 adapter (H700A)	<ul style="list-style-type: none"> RAID 0, 1, 5, 6, 10 only

Network Controllers (Dell)

Controller Vendor	Network Controller	Speed/ Comments
Intel	Intel Ethernet Server Adapter x520-SR1 (E10G41BFSR) ⁶	10Gb
Intel	Intel Ethernet Server Adapter x520 T2 (E10G42BT) ⁶	10Gb
Intel	Intel Ethernet Server Adapter x520 DA2 (E10G42BTDA) ⁶	10Gb
Broadcom	Embedded NetXtreme II 5708 Dual Port 1GbE NIC	1Gb
Broadcom	NetXtreme II 5709 Dual Port 1GbE NIC	1Gb - Min Firmware: BCM95709 5.0.12
Broadcom	NetXtreme II 5709 Quad Port 1GbE NIC	1Gb
Broadcom	NetXtreme II 5716 Dual Port 1GbE NIC	1Gb
Intel	Intel Ethernet Server Adapter I350-T2	1Gb
Intel	Intel Ethernet Server Adapter I350-T4	1Gb
Intel	Intel PRO 1000PT Dual Port 1GbE NIC	1Gb
Intel	Intel PRO 1000PT Full Height Quad Port Server Adapter, Gigabit NIC (EXPI9404PT)	1Gb
Intel	Intel® PRO 1000PT Low Profile Quad Port Server Adapter, Gigabit NIC (EXPI9404PTL)	1Gb
Intel	Intel PRO 1000 ET Dual Port NIC	1Gb
Intel	Intel PRO 1000 ET Quad Port NIC	1Gb
Intel	Intel Gigabit ET2 Quad Port Server Adapter NIC	1Gb

⁶ Refer to Vendor documentation to determine supported SFP+ modules and cables

Dell Blacklisted Firmware

Model	Firmware Type	Revision
PowerEdge 1950 PowerEdge 2950 PowerEdge 2900	BMC	Dell-BMC-1.77
		Dell-BMC-1.97
		Dell-BMC-2.05
PowerEdge T310	BMC	Dell-BMC-1.00-A00-T310
PowerEdge R310	Network	Dell-BCM95709-Network-5.0.9
PowerEdge R410	Network	Dell-BCM95709-Network-5.0.9
PowerEdge R510	Network	Dell-BCM95709-Network-5.0.9
PowerEdge R610 PowerEdge T610 PowerEdge R710 PowerEdge T710	Network	Dell-BCM95709-Network-5.0.9
H200 integrated H200 Adapter	Storage Controller	Dell-STOR-07.01.11.00-Integrated



Supported EXTRA Computer GmbH Configurations

Servers (EXTRA Computer GmbH)

Model	Description	Memory (Min/Max)	Disks (Min/Max)	CPU Chip Vendor / Model
exone® Proxima Endurance 1911G4 exone®	1 CPU Socket, Intel Server Board S1200KP Pedestal Internal Drives	2/16 GB	2/4	Intel Xeon E3 12X5 Series ⁷
exone® Proxima Endurance 1912G4 exone®	1 CPU Socket, Intel Server Board S1200KP Pedestal Hot Swap or Internal Drives	2/16 GB	2/4	Intel Xeon E3 12X5 Series ⁷
exone® Proxima Endurance 1822 G3 exone®	2 CPU Socket, Intel Server Chassis SC5600LX Intel Server Board S5520HCR Pedestal 3.5 Inch Drives	2/192 GB	2/10	Intel Xeon 55XX Series Intel Xeon 56XX Series
exone® Proxima Endurance 1222 G3 exone®	2 CPU Socket, Intel Server Chassis SR2625 Intel Server Board S5520UR 2U Rack Mount 2.5 Inch Drives	2/192 GB	2/8	Intel Xeon 55XX Series Intel Xeon 56XX Series

Storage Controllers, Expanders, and Enclosures (EXTRA Computer GmbH)

Controller Vendor	Storage Controller	Restrictions/Comments
Intel	Integrated on board RST RAID Module	S1200KP only , RAID 0 only, AHCI mode only
LSI	MegaRAID SAS 9260CV -4i	RAID 0, 1, 5, 6, 10 only
LSI	MegaRAID SAS 9260CV-8i	RAID 0, 1, 5, 6, 10 only
LSI	MegaRAID SAS 9260-4i	RAID 0, 1, 5, 6, 10 only
LSI	MegaRAID SAS 9260-8i	RAID 0, 1, 5, 6, 10 only
Intel	AXX4DRV3GEXP/ AXX4DRV3G	Storage Enclosure. Min Firmware rev 2.12
Intel	AXX6DRV3GEXP/ AXX6DRV3G	Storage Enclosure. Min Firmware rev 2.12

Network Controllers (EXTRA Computer GmbH)

Controller Vendor	Network Controller	Speed
Intel	Intel Ethernet Server Adapter x520-SR1 (E10G41BFSR) ⁸	10Gb
Intel	Intel Ethernet Server Adapter x520 T2 (E10G42BT) ⁸	10Gb
Intel	Intel Ethernet Server Adapter x520 DA2 (E10G42BTDA) ⁸	10Gb

⁷ Xeon E3-12X0 processors (without embedded video) are not supported.

⁸ Refer to Vendor documentation to determine supported SFP+ modules and cables

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Controller Vender	Network Controller	Speed
Intel	Intel Ethernet Server Adapter I350-T2 (I350T2)	1Gb
Intel	Intel Ethernet Server Adapter I350-T4 (I350T4)	1Gb
Intel	Intel PRO 1000PT Dual Port 1GbE NIC	1Gb
Intel	Intel PRO 1000PT Full Height Quad Port Server Adapter, Gigabit NIC	1Gb
Intel	Intel PRO 1000PT Low Profile Quad Port Server Adapter, Gigabit NIC	1Gb
Intel	Intel ET Dual Port NIC	1Gb
Intel	Intel ET Quad Port NIC	1Gb
Intel	Intel Gigabit ET2 Quad Port Server Adapter NIC	1Gb
Intel	Intel AXX4GBIOMOD2 Quad Port Gigabit Ethernet I/O Module	1Gb
Intel	Intel AXXGBIOMOD Dual Port Gigabit Ethernet I/O Module	1Gb

Supported HP® Configurations

Servers (HP)

Model	Description	Memory (Min/Max)	Disks (Min/Max)	CPU Chip Vendor / Model
ProLiant® DL180 G6 ⁹	2 CPU Socket 2U Rack	2/192 GB	2/25	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series
ProLiant DL360 G5 ¹⁰	2 CPU Socket 1U Rack	2/64 GB	2/4	<ul style="list-style-type: none"> ▪ Intel Xeon 51XX Series ▪ Intel Xeon 52XX Series ▪ Intel Xeon 53XX Series ▪ Intel Xeon 54XX Series
ProLiant DL380 G5 ¹⁰	2 CPU Socket 2U Rack	2/64 GB	2/8	<ul style="list-style-type: none"> ▪ Intel Xeon 51XX Series ▪ Intel Xeon 52XX Series ▪ Intel Xeon 53XX Series ▪ Intel Xeon 54XX Series
ProLiant ML370 G5 ¹⁰	2 CPU Socket Tower or 5U Rack	2/64 GB	2/16	<ul style="list-style-type: none"> ▪ Intel Xeon 51XX Series ▪ Intel Xeon 52XX Series ▪ Intel Xeon 53XX Series ▪ Intel Xeon 54XX Series
ProLiant DL360 G6 ¹⁰	2 CPU Socket 1U Rack	2/128 GB	2/8 ¹¹	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series
ProLiant DL370 G6 ¹⁰	2 CPU Socket 4U Rack	2/128 GB	2/24	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series
ProLiant DL380 G6 ¹⁰	2 CPU Socket 2U Rack	2/128 GB	2/16 ¹¹	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series
ProLiant ML350 G6 ¹⁰	2 CPU Socket Tower	2/128 GB	2/24	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series
ProLiant ML370 G6 ¹⁰	2 CPU Socket Tower	2/128 GB	2/24	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series
ProLiant DL360 G7 ¹²	2 CPU Socket 1U Rack	2/128 GB	2/8 ¹¹	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series
ProLiant DL380 G7 ¹²	2 CPU Socket 2U Rack	2/128 GB	2/16 ¹¹	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series

⁹ Low voltage DIMMs (1.35V DIMMs labeled PC3L) are not supported on this platform

¹⁰ Minimum iLO2 firmware version 1.79

¹¹ USB CD Drive required for Avance install and VCD creation on servers without an internal optical drive.

¹² Minimum iLO3 firmware version 1.15

Storage Controllers (HP)

Controller Vendor	Storage Controller ¹³	Restrictions/Comments
HP	P400 256 MB Cache w/ BBWC	
HP	P400 512 MB Cache w/ BBWC	
HP	P600 256 MB Cache w/ BBWC	
HP	P600 512 MB Cache w/ BBWC	
HP	P800 512 MB Cache w/ BBWC	
HP	P410i 256 MB Cache w/ BBWC	<ul style="list-style-type: none"> Max 1 P410i controller per node. For larger configurations use SAS expanders or additional P600/P800 controllers. Firmware version 2.72b or later
HP	P410i 512 MB Cache w/ BBWC	<ul style="list-style-type: none"> Max 1 P410i controller per node. For larger configurations use SAS expanders or additional P600/P800 controllers. Firmware version 2.72b or later
HP	P410i 1GB MB Cache w/ FBWC	<ul style="list-style-type: none"> Max 1 P410i controller per node. For larger configurations use SAS expanders or additional P600/P800 controllers. Firmware version 2.72b or later
HP	P410 512 MB Cache w/ BBWC	<ul style="list-style-type: none"> Max 1 P410i controller per node. For larger configurations use SAS expanders or additional P600/P800 controllers. Firmware version 2.72b or later
HP	P410 512 MB Cache w/ FBWC	<ul style="list-style-type: none"> Max 1 P410 controller per node. For larger configurations use SAS expanders or additional P600/P800 controllers. Firmware version 2.72b or later
HP	P410 1GB Cache w/ FBWC	<ul style="list-style-type: none"> Max 1 P410 controller per node. For larger configurations use SAS expanders or additional P600/P800 controllers. Firmware version 2.72b or later

¹³ All HP storage controllers supported in RAID 0, 1, 5, 6, and 10 only

HP Network Controllers (HP)

Controller Vendor	Network Controller	Speed
HP	NC550SFP Dual Port 10GbE Server Adapter ¹⁴	10Gb
Intel	Intel Ethernet Server Adapter x520-SR1 (E10G41BFSR) ¹⁴	10Gb
Intel	Intel Ethernet Server Adapter x520 T2 (E10G42BT) ¹⁴	10Gb
Intel	Intel Ethernet Server Adapter x520 DA2 (E10G42BTDA) ¹⁴	10Gb
Broadcom	Embedded NetXtreme II 5708 Dual Port 1GbE NIC	1Gb
Broadcom	NetXtreme II 5709 Dual Port 1GbE NIC	1Gb
Broadcom	NetXtreme II 5709 Quad Port 1GbE NIC	1Gb
HP	Integrated NC373i Dual Port Gigabit NIC	1Gb
HP	Integrated NC382i Dual Port Gigabit NIC	1Gb
HP	Integrated NC375i Quad Port Gigabit NIC	1Gb
HP	NC360T Dual Port Gigabit NIC	1Gb
HP	NC364T Quad Port Gigabit NIC	1Gb
HP	NC382T Dual Port Gigabit NIC	1Gb
Intel	Intel Ethernet Server Adapter I350-T2	1Gb
Intel	Intel Ethernet Server Adapter I350-T4	1Gb
Intel	Intel PRO 1000PT Dual Port 1GbE NIC	1Gb
Intel	Intel PRO 1000PT Full Height Quad Port Server Adapter, Gigabit NIC	1Gb
Intel	Intel PRO 1000PT Low Profile Quad Port Server Adapter, Gigabit NIC	1Gb
Intel	Intel PRO 1000 ET Dual Port NIC	1Gb
Intel	Intel PRO 1000 ET Quad Port NIC	1Gb
Intel	Intel Gigabit ET2 Quad Port Server Adapter NIC	1Gb

HP Blacklisted Firmware

Model/Device	Firmware Type	Blacklisted Revision
HP iLO2	System management	HP-iLO2-1.50
		HP-iLO2-1.70
		HP-iLO2-1.77
		HP-iLO2-1.78
HP iLO3	System management	HP-iLO3-1.05
		HP-iLO3-1.05
HP P410i	Storage Controller	HP-STOR-3.30-P410
HP P400 HP P400i	Storage Controller	HP-STOR-4.12-P400
		HP-STOR-5.20-P400
		HP-STOR-5.22-P400
		HP-STOR-5.26-P400
		HP-STOR-6.86-P400
		HP-STOR-7.08-P400

¹⁴ Refer to Vendor documentation to determine supported SFP+ modules and cables

Supported IBM® Configurations

Servers (IBM)

Model	Description	Memory (Min/Max)	Disks (Min/Max)	CPU Chip Vendor / Model
System X3650 M3	2 CPU Socket, 2U Rack	2/144 GB	2/16	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series
System X3550 M3	2 CPU Socket, 1U rack	2/144 GB	2/8	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series
System X3500 M3	2 socket tower	2/192 GB	2/24 (2.5") 2/8 (3.5")	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series
System X3200 M3 ¹⁵	1 socket tower	2/32 GB	2/8	<ul style="list-style-type: none"> ▪ Intel Xeon 34XX Series

Storage Controllers, Expanders, and Enclosures (IBM)

Controller Vendor	Storage Controller	Restrictions/Comments
IBM	IBM ServeRAID M5015	RAID 0, 1, 5, 6, 10 only
IBM	IBM ServeRAID M1015	RAID 0, 1, 5 only (RAID 10 not supported)

Network Controllers (IBM)

Controller Vendor	Network Controller	Speed
IBM	Emulex 10Gb Dual-port Ethernet Adapter for IBM System x ¹⁶ (option 49Y7950)	10Gb
IBM	Emulex 10Gb Dual-port Ethernet Adapter for IBM System x ¹⁶ (option 49Y4250)	10Gb
Intel	Intel Ethernet Server Adapter I350-T2	1Gb
Intel	Intel Ethernet Server Adapter I350-T4	1Gb
Intel	Intel PRO 1000PT Dual Port 1GbE NIC	1Gb
Intel	Intel PRO 1000PT Full Height Quad Port Server Adapter, Gigabit NIC	1Gb
Intel	Intel PRO 1000PT Low Profile Quad Port Server Adapter, Gigabit NIC	1Gb
Intel	Intel PRO 1000 ET Dual Port NIC	1Gb
Intel	Intel PRO 1000 ET Quad Port NIC	1Gb
Intel	Intel Gigabit ET2 Quad Port Server Adapter NIC	1Gb
Broadcom	NetXtreme II 5709 Dual Port 1GbE NIC	1Gb
Broadcom	NetXtreme II 5709 Quad Port 1GbE NIC	1Gb

¹⁵ The **IBM x3200 M3** is frequently shipped with the **ServeRAID BR10iL SAS/SATA Controller**. Avance does not support this card so it must be removed from each physical machine. Please refer to the IBM Redbook “ServeRAID-BR10iL SAS/SATA Controller v2 for IBM System x” for instructions on how to remove this card. Install will be blocked until this card is removed.

¹⁶ Refer to Vendor documentation to determine supported SFP+ modules and cables



Supported ICO® Configurations

Servers (ICO)

Model	Description	Memory (Min/Max)	Disks (Min/Max)	CPU Chip Vendor / Model
Xanthos HA 3501	2 CPU Socket, Intel Server Board S5520UR(R) 2U Rack Mount Passive Midplane 3.5 Inch Drives	2/96 GB	2/5	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series
Xanthos HA 2501 LXR	2 CPU Socket, Intel Server Board S5520UR(R) 2U Rack Mount Active Midplane 2.5 Inch Drives	2/96 GB	2/8	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series

Storage Controllers, Expanders, and Enclosures (ICO)

Controller Vendor	Storage Controller	Restrictions/Comments
LSI	MegaRAID SAS 9260CV -4i	RAID 0, 1, 5, 6, 10 only
LSI	MegaRAID SAS 9260CV-8i	RAID 0, 1, 5, 6, 10 only
LSI	MegaRAID SAS 9260-8i	RAID 0, 1, 5, 6, 10 only
Intel	SROMBSASMP2 ¹⁷	SAS Active Midplane-2
Intel	FALSASMP	3Gb/s Passive Midplane
Intel	FURASMP	6 Gb/s Passive Midplane

¹⁷ Minimum firmware revision 11.0.1-0036

Network Controllers (ICO)

Controller Vendor	Network Controller	Speed
Intel	Intel Ethernet Server Adapter x520-SR1 (E10G41BFSR) ¹⁸	10Gb
Intel	Intel Ethernet Server Adapter x520 T2 (E10G42BT) ¹⁸	10Gb
Intel	Intel Ethernet Server Adapter x520 DA2 (E10G42BTDA) ¹⁸	10Gb
Intel	Intel Ethernet Server Adapter I350-T2	1Gb
Intel	Intel Ethernet Server Adapter I350-T4	1Gb
Intel	Intel PRO 1000PT Dual Port 1GbE NIC	1Gb
Intel	Intel PRO 1000PT Full Height Quad Port Server Adapter, Gigabit NIC	1Gb
Intel	Intel PRO 1000PT Low Profile Quad Port Server Adapter, Gigabit NIC	1Gb
Intel	Intel PRO 1000 ET Dual Port NIC	1Gb
Intel	Intel PRO 1000 ET Quad Port NIC	1Gb
Intel	Intel Gigabit ET2 Quad Port Server Adapter NIC	1Gb
Intel	Intel AXX4GBIOMOD2 Quad Port Gigabit Ethernet I/O Module	1Gb
Intel	Intel AXXGBIOMOD Dual Port Gigabit Ethernet I/O Module	1Gb

Blacklisted Firmware (ICO)

Model/Device	Firmware Type	Blacklisted Revision
Intel SROMBSASMP2	Storage Controller	Intel-SROMBSASMP2-11.0.1-0022

¹⁸ Refer to Vendor documentation to determine supported SFP+ modules and cables

Supported Intel® Configurations

Servers (Intel)

Model	Description	Memory (Min/Max)	Disks (Min/Max)	CPU Chip Vendor / Model
S1200KP based servers	1 CPU Socket, Intel Server Board S1200KP Pedestal Hot Swap Drives	2/16 GB	2/4	<ul style="list-style-type: none"> Intel Xeon E3 12X5 Series¹⁹
R1304BTLSHBN	1 CPU Socket, Intel Server Board S1200BTL 1U Rack Mount Hot Swap Drives	2/32 GB	2/4	<ul style="list-style-type: none"> Intel Xeon E3 1200 Series
R1304BTLSFAN	1 CPU Socket, Intel Server Board S1200 BTL 1U Rack Mount Fixed Drives	2/32 GB	2/4	<ul style="list-style-type: none"> Intel Xeon E3 1200 Series
P4304BTLSHCN	1 CPU Socket Intel Server Board S1200BTL Pedestal Hot Swap Drives	2/32 GB	2/4	<ul style="list-style-type: none"> Intel Xeon E3 1200 Series
P4304BTLSFNC	1 CPU Socket Intel Server Board S1200BTL Pedestal Fixed Drives	2/32 GB	2/4	<ul style="list-style-type: none"> Intel Xeon E3 1200 Series
SR1625URSASR	2 CPU Socket, Intel Server Board S5520UR(R) 1U Rack Mount Active Midplane 2.5 Inch Drives	2/192 GB	2/8	<ul style="list-style-type: none"> Intel Xeon 55XX Series Intel Xeon 56XX Series
SR1625URR	2 CPU Socket, Intel Server Board S5520UR(R) 1U Rack Mount Passive Midplane 2.5 Inch Drives	2/192 GB	2/8	<ul style="list-style-type: none"> Intel Xeon 55XX Series Intel Xeon 56XX Series
SR2612URR	2 CPU Socket, Intel Server Board S5520UR(R) 2U Rack Mount SAS Expander Midplane 3.5 Inch Drives	2/192 GB	2/14	<ul style="list-style-type: none"> Intel Xeon 55XX Series Intel Xeon 56XX Series
SR2600URBRPR	2 CPU Socket, Intel Server Board S5520UR(R) 2U Rack Mount Passive Midplane 3.5 Inch Drives	2/192 GB	2/6	<ul style="list-style-type: none"> Intel Xeon 55XX Series Intel Xeon 56XX Series
SR2600URLXR	2 CPU Socket, Intel Server Board S5520UR(R) 2U Rack Mount Active Midplane 3.5 Inch Drives	2/192 GB	2/6	<ul style="list-style-type: none"> Intel Xeon 55XX Series Intel Xeon 56XX Series
SR2625URLXR	2 CPU Socket, Intel Server Board S5520UR(R) 2U Rack Mount Active Midplane 2.5 Inch Drives	2/192 GB	2/8	<ul style="list-style-type: none"> Intel Xeon 55XX Series Intel Xeon 56XX Series

¹⁹ Xeon E3-12X0 processors (without embedded video) are not supported.

Stratus® Avance Compatibility Matrix R2.1.3

Model	Description	Memory (Min/Max)	Disks (Min/Max)	CPU Chip Vendor / Model
SC5600BRP	2 CPU Socket Intel Server Board S5520HC(T) Pedestal 3.5 Inch Drives	2/192 GB	2/6	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series
SC5600LX	2 CPU Socket Intel Server Board S5520HC(R)(T) Pedestal 3.5 Inch Drives	2/192 GB	2/10	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series

Storage Controllers, Expanders, and Enclosures (Intel)

Controller Vendor	Storage Controller	Restrictions/Comments
LSI	MegaRAID SAS 9260CV -4i	RAID 0, 1, 5, 6, 10 only
LSI	MegaRAID SAS 9260CV-8i	RAID 0, 1, 5, 6, 10 only
LSI	MegaRAID SAS 9260-4i	RAID 0, 1, 5, 6, 10 only
LSI	MegaRAID SAS 9260-8i	RAID 0, 1, 5, 6, 10 only
LSI	MegaRAID SAS 9260DE-8i	RAID 0, 1, 5, 6, 10 only
Intel	Integrated on board RST RAID Module	S1200KP only , RAID 0 only, AHCI mode only
Intel	Integrated Server RAID Module RMS2AF040	RAID 0, 1, 5 only (RAID 10 not supported)
Intel	RAID Controller RS2BL040	RAID 0, 1, 5, 6, 10 only
Intel	RAID Controller RS2BL080	RAID 0, 1, 5, 6, 10 only
Intel	RAID Controller RS2BL080 DE	RAID 0, 1, 5, 6, 10 only
Intel	RES2SV240	SAS Expander
Intel	AXX4DRV3GEXP/ AXX4DRV3G	Storage Enclosure. Min Firmware rev 2.12
Intel	AXX6DRV3GEXP/ AXX6DRV3G	Storage Enclosure. Min Firmware rev 2.12
Intel	SROMBSASMP2 ²⁰	SAS Active Midplane-2
Intel	FALSASMP	3Gb/s Passive Midplane
Intel	FURASMP	6 Gb/s Passive Midplane

²⁰ Minimum firmware revision 11.0.1-0036

Network Controllers (Intel)

Controller Vendor	Network Controller	Speed
Intel	Intel Ethernet Server Adapter x520-SR1 (E10G41BFSR) ²¹	10Gb
Intel	Intel Ethernet Server Adapter x520 T2 (E10G42BT) ²¹	10Gb
Intel	Intel Ethernet Server Adapter x520 DA2 (E10G42BTDA) ²¹	10Gb
Intel	Intel Ethernet Server Adapter I350-T2	1Gb
Intel	Intel Ethernet Server Adapter I350-T4	1Gb
Intel	Intel PRO 1000PT Dual Port 1GbE NIC	1Gb
Intel	Intel PRO 1000PT Full Height Quad Port Server Adapter, Gigabit NIC	1Gb
Intel	Intel PRO 1000PT Low Profile Quad Port Server Adapter, Gigabit NIC	1Gb
Intel	Intel PRO 1000 ET Dual Port NIC	1Gb
Intel	Intel PRO 1000 ET Quad Port NIC	1Gb
Intel	Intel Gigabit ET2 Quad Port Server Adapter NIC	1Gb
Intel	Intel AXX4GBIOMOD2 Quad Port Gigabit Ethernet I/O Module	1Gb
Intel	Intel AXXGBIOMOD Dual Port Gigabit Ethernet I/O Module	1Gb

Blacklisted Firmware (Intel)

Model/Device	Firmware Type	Blacklisted Revision
Intel SROMBSASMP2	Storage Controller	Intel-SROMBSASMP2-11.0.1-0022

²¹ Refer to Vendor documentation to determine supported SFP+ modules and cables

Supported Lynx® Configurations

Servers (Lynx)

Model	Description	Memory (Min/Max)	Disks (Min/Max)	CPU Chip Vendor / Model
SAR248A310RH Lynx CALLEO Application Server R248 HA	2 CPU Socket, Intel Server Board S5520UR(R) 2U Rack Mount Passive Midplane 3.5 Inch Drives	2/96 GB	2/6	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series
SAR248A310RH Lynx CALLEO Application Server R248 HA	2 CPU Socket Intel Server Board S5520HC(T) Pedestal 3.5 Inch Drives	2/96 GB	2/10	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series

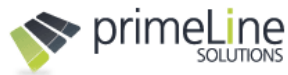
Storage Controllers, Expanders, and Enclosures (Lynx)

Controller Vendor	Storage Controller	Restrictions/Comments
Intel	RAID Controller RS2BL080	RAID 0, 1, 5, 6, 10 only
Intel	FURASMP	6 Gb/s Passive Midplane
Intel	FALSASMP	3Gb/s Passive Midplane
Intel	AXX4DRV3GEXP	Storage Enclosure. Min Firmware rev 2.12
Intel	AXX6DRV3GEXP	Storage Enclosure. Min Firmware rev 2.12

Network Controllers (Lynx)

Controller Vendor	Network Controller	Speed
Intel	Intel Ethernet Server Adapter x520-SR1 (E10G41BFSR) ²²	10Gb
Intel	Intel Ethernet Server Adapter x520 T2 (E10G42BT) ²²	10Gb
Intel	Intel Ethernet Server Adapter x520 DA2 (E10G42BTDA) ²²	10Gb
Intel	Intel Ethernet Server Adapter I350-T2	1Gb
Intel	Intel Ethernet Server Adapter I350-T4	1Gb
Intel	Intel PRO 1000PT Dual Port 1GbE NIC	1Gb
Intel	Intel PRO 1000PT Full Height Quad Port Server Adapter, Gigabit NIC	1Gb
Intel	Intel PRO 1000PT Low Profile Quad Port Server Adapter, Gigabit NIC	1Gb
Intel	Intel PRO 1000 ET Dual Port NIC	1Gb
Intel	Intel PRO 1000 ET Quad Port NIC	1Gb
Intel	Intel Gigabit ET2 Quad Port Server Adapter NIC	1Gb
Intel	Intel AXX4GBIOMOD2 Quad Port Gigabit Ethernet I/O Module	1Gb
Intel	Intel AXXGBIOMOD Dual Port Gigabit Ethernet I/O Module	1Gb

²² Refer to Vendor documentation to determine supported SFP+ modules and cables



Supported primeLine Solutions GmbH® Configurations

Servers (primeLine Solutions GmbH)

Model	Description	Memory (Min/Max)	Disks (Min/Max)	CPU Chip Vendor / Model
egino® i-Series HA-I3041I-C204	1 CPU Socket Intel Server Board S1200BTL 1U Rack mount Hot Swap Drives	2/16 GB	2/4	<ul style="list-style-type: none"> Intel Xeon E3 1200 Series
egino® i-Series HA-T3041I-C204	1 CPU Socket, P4304BTLSHCN Intel Server Board S1200BTL Pedestal Hot Swap Drives	2/16 GB	2/4	<ul style="list-style-type: none"> Intel Xeon E3 1200 Series
egino i-Series HA-2082i-5520	2 CPU Socket, Intel Server Board S5520UR(R) 2U Rack Mount Active Midplane 2.5 Inch Drives	2/96 GB	2/8	<ul style="list-style-type: none"> Intel Xeon 55XX Series Intel Xeon 56XX Series

Storage Controllers, Expanders, and Enclosures (primeLine Solutions GmbH)

Controller Vendor	Storage Controller	Restrictions/Comments
LSI	MegaRAID SAS 9260-4i	RAID 0, 1, 5, 6, 10 only
Intel	SROMBSASMP2 ²³	SAS Active Midplane-2

Network Controllers (primeLine Solutions GmbH)

Controller Vendor	Network Controller	Speed
Intel	Intel Ethernet Server Adapter x520-SR1 (E10G41BFSR) ²⁴	10Gb
Intel	Intel Ethernet Server Adapter x520 T2 (E10G42BT) ²⁴	10Gb
Intel	Intel Ethernet Server Adapter x520 DA2 (E10G42BTDA) ²⁴	10Gb
Intel	Intel Ethernet Server Adapter I350-T2	1Gb
Intel	Intel Ethernet Server Adapter I350-T4	1Gb
Intel	Intel PRO 1000PT Dual Port 1GbE NIC	1Gb
Intel	Intel PRO 1000PT Full Height Quad Port Server Adapter, Gigabit NIC	1Gb
Intel	Intel PRO 1000PT Low Profile Quad Port Server Adapter, Gigabit NIC	1Gb
Intel	Intel PRO 1000 ET Dual Port NIC	1Gb
Intel	Intel PRO 1000 ET Quad Port NIC	1Gb
Intel	Intel Gigabit ET2 Quad Port Server Adapter NIC	1Gb
Intel	Intel AXX4GBIOMOD2 Quad Port Gigabit Ethernet I/O Module	1Gb
Intel	Intel AXXGBIOMOD Dual Port Gigabit Ethernet I/O Module	1Gb

²³ Minimum firmware revision 11.0.1-0036

²⁴ Refer to Vendor documentation to determine supported SFP+ modules and cables





Blacklisted Firmware (primeLine Solutions GmbH)

Model/Device	Firmware Type	Blacklisted Revision
Intel SROMBSASMP2	Storage Controller	Intel-SROMBSASMP2-11.0.1-0022



Supported Seneca® Configurations

Servers (Seneca)

Model	Description	Memory (Min/Max)	Disks (Min/Max)	CPU Chip Vendor / Model
 Nexlink® IP-2UUR2612	2 CPU Socket, Intel Server Board S5520UR(R) 2U Rack Mount SAS Expander Midplane 3.5 Inch Drives	2/96 GB	2/14	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series
 Nexlink SR2600URBRPR	2 CPU Socket, Intel Server Board S5520UR(R) 2U Rack Mount Passive Midplane 3.5 Inch Drives	2/96 GB	2/6	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series
 Nexlink IP-2UUR2625	2 CPU Socket, Intel Server Board S5520UR(R) 2U Rack Mount Active Midplane 2.5 Inch Drives	2/96 GB	2/8	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series
 Nexlink IP-2UUR2600	2 CPU Socket, 2U Rack Mount Passive Midplane 3.5 Inch Drives	2/96 GB	2/6	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series

Storage Controllers (Seneca)

Controller Vendor	Storage Controller	Restrictions/Comments
LSI	MegaRAID SAS 9260CV -4i	RAID 0, 1, 5, 6, 10 only
LSI	MegaRAID SAS 9260CV-8i	RAID 0, 1, 5, 6, 10 only
LSI	MegaRAID SAS 9260-4i	RAID 0, 1, 5, 6, 10 only
LSI	MegaRAID SAS 9260-8i	RAID 0, 1, 5, 6, 10 only
LSI	MegaRAID SAS 9260DE-8i	RAID 0, 1, 5, 6, 10 only
Intel	RAID Controller RS2BL080	RAID 0, 1, 5, 6, 10 only
Intel	RAID Controller RS2BL080 DE	RAID 0, 1, 5, 6, 10 only
Intel	RES2SV240	SAS Expander
Intel	SROMBSASMP2 ²⁵	SAS Active Midplane-2
Intel	FALSASMP	3Gb/s Passive Midplane
Intel	FURASMP	6 Gb/s Passive Midplane

²⁵ Minimum firmware revision 11.0.1-0036

Network Controllers (Seneca)

Controller Vendor	Network Controller	Speed
Intel	Intel Ethernet Server Adapter x520-SR1 (E10G41BFSR) ²⁶	10Gb
Intel	Intel Ethernet Server Adapter x520 T2 (E10G42BT) ²⁶	10Gb
Intel	Intel Ethernet Server Adapter x520 DA2 (E10G42BTDA) ²⁶	10Gb
Intel	Intel Ethernet Server Adapter I350-T2	1Gb
Intel	Intel Ethernet Server Adapter I350-T4	1Gb
Intel	Intel PRO 1000PT Dual Port 1GbE NIC	1Gb
Intel	Intel PRO 1000PT Full Height Quad Port Server Adapter, Gigabit NIC	1Gb
Intel	Intel PRO 1000PT Low Profile Quad Port Server Adapter, Gigabit NIC	1Gb
Intel	Intel PRO 1000 ET Dual Port NIC	1Gb
Intel	Intel PRO 1000 ET Quad Port NIC	1Gb
Intel	Intel Gigabit ET2 Quad Port Server Adapter NIC	1Gb
Intel	Intel AXX4GBIOMOD2 Quad Port Gigabit Ethernet I/O Module	1Gb
Intel	Intel AXXGBIOMOD Dual Port Gigabit Ethernet I/O Module	1Gb

Blacklisted Firmware (Seneca)

Model/Device	Firmware Type	Blacklisted Revision
Intel SROMBSASMP2	Storage Controller	Intel-SROMBSASMP2-11.0.1-0022

²⁶ Refer to Vendor documentation to determine supported SFP+ modules and cables



Supported Tarox® Configurations

Servers (Tarox)

Model	Description	Memory (Min/Max)	Disks (Min/Max)	CPU Chip Vendor / Model
ParX µServer G4	1 CPU Socket, Intel Server Board S1200KP Pedestal Hot Swap Drives	2/16 GB	2/4	<ul style="list-style-type: none"> Intel Xeon E3 12X5 Series²⁷
ParX R104i g4	1 CPU Socket, Intel Server Board S1200BTL 1U Rack Mount Hot Swap Drives	2/32 GB	2/4	<ul style="list-style-type: none"> Intel Xeon E3 1200 Series
ParX T5100i G3	2 CPU Socket Intel Server Board S5520UR Pedestal or Rack Mount 3.5 Inch Drives	2/192 GB	2/10	<ul style="list-style-type: none"> Intel Xeon 55XX Series Intel Xeon 56XX Series
ParX R2080i G3	2 CPU Socket, Intel Server Board S5520UR 2U Rack Mount Active Midplane 2.5 Inch Drives	2/192 GB	2/8	<ul style="list-style-type: none"> Intel Xeon 55XX Series Intel Xeon 56XX Series
ParX R2060i G3	2 CPU Socket, Intel Server Board S5520UR 2U Rack Mount Passive Midplane 3.5 Inch Drives	2/192 GB	2/6	<ul style="list-style-type: none"> Intel Xeon 55XX Series Intel Xeon 56XX Series
ParX 5000R G3	2 CPU Socket Intel Server Board S5520HC Pedestal 3.5 Inch Drives	2/96 GB	2/10	<ul style="list-style-type: none"> Intel Xeon 55XX Series Intel Xeon 56XX Series
ParX 2500R G3	2 CPU Socket, Intel Server Board S5520UR 2U Rack Mount Passive Midplane 3.5 Inch Drives	2/96 GB	2/6	<ul style="list-style-type: none"> Intel Xeon 55XX Series Intel Xeon 56XX Series
ParX 700R	2 CPU Socket, Intel Server Board S5520UR Rack Mount Passive Midplane 3.5 Inch Drives	2/96 GB	2/6	<ul style="list-style-type: none"> Intel Xeon 55XX Series Intel Xeon 56XX Series
ParX 700	2 CPU Socket, Intel Server Board S5520HC Pedestal 3.5 Inch Drives	2/96 GB	2/6	<ul style="list-style-type: none"> Intel Xeon 55XX Series Intel Xeon 56XX Series

²⁷ Xeon E3-12X0 processors (without embedded video) are not supported.

Storage Controllers (Tarox)

Controller Vendor	Storage Controller	Restrictions/Comments
LSI	MegaRAID SAS 9260CV -4i	RAID 0, 1, 5, 6, 10 only
LSI	MegaRAID SAS 9260CV-8i	RAID 0, 1, 5, 6, 10 only
LSI	MegaRAID SAS 9260-4i	RAID 0, 1, 5, 6, 10 only
LSI	MegaRAID SAS 9260-8i	RAID 0, 1, 5, 6, 10 only
LSI	MegaRAID SAS 9260DE-8i	RAID 0, 1, 5, 6, 10 only
Intel	Integrated Server RAID Module RMS2AF040	RAID 0, 1, 5 only (RAID 10 not supported)
Intel	RAID Controller RS2BL080	RAID 0, 1, 5, 6, 10 only
Intel	RAID Controller RS2BL080 DE	RAID 0, 1, 5, 6, 10 only
Intel	RES2SV240	SAS Expander
Intel	AXX4DRV3GEXP/ AXX4DRV3G	Storage Enclosure. Min Firmware rev 2.12
Intel	AXX6DRV3GEXP/ AXX6DRV3G	Storage Enclosure. Min Firmware rev 2.12
Intel	SROMBSASMP2 ²⁸	SAS Active Midplane-2
Intel	FALSASMP	3Gb/s Passive Midplane
Intel	FURASMP	6 Gb/s Passive Midplane

Network Controllers (Tarox)

Controller Vendor	Network Controller	Speed
Intel	Intel Ethernet Server Adapter x520-SR1 (E10G41BFSR) ²⁹	10Gb
Intel	Intel Ethernet Server Adapter x520 T2 (E10G42BT) ²⁹	10Gb
Intel	Intel Ethernet Server Adapter x520 DA2 (E10G42BTDA) ²⁹	10Gb
Intel	Intel Ethernet Server Adapter I350-T2	1Gb
Intel	Intel Ethernet Server Adapter I350-T4	1Gb
Intel	Intel PRO 1000PT Dual Port 1GbE NIC	1Gb
Intel	Intel PRO 1000PT Full Height Quad Port Server Adapter, Gigabit NIC	1Gb
Intel	Intel PRO 1000PT Low Profile Quad Port Server Adapter, Gigabit NIC	1Gb
Intel	Intel PRO 1000 ET Dual Port NIC	1Gb
Intel	Intel PRO 1000 ET Quad Port NIC	1Gb
Intel	Intel Gigabit ET2 Quad Port Server Adapter NIC	1Gb
Intel	Intel AXX4GBIOMOD2 Quad Port Gigabit Ethernet I/O Module	1Gb
Intel	Intel AXXGBIOMOD Dual Port Gigabit Ethernet I/O Module	1Gb

Blacklisted Firmware (Tarox)

Model/Device	Firmware Type	Blacklisted Revision
Intel SROMBSASMP2	Storage Controller	Intel-SROMBSASMP2-11.0.1-0022

²⁸ Minimum firmware revision 11.0.1-0036

²⁹ Refer to Vendor documentation to determine supported SFP+ modules and cables



Supported Thomas-Krenn.AG® Configurations

Servers (Thomas-Krenn)

Model	Description	Memory (Min/Max)	Disks (Min/Max)	CPU Chip Vendor / Model
THOMAS-KRENN SC5600 AVANCE HA-CLUSTER	2 CPU Socket, Intel server chassis SC5600LX Intel Server Board S5520HC(T) Pedestal Active Midplane 3.5 Inch Drives	2/96 GB	2/6/10	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series
THOMAS-KRENN SR2625 AVANCE HA-CLUSTER	2 CPU Socket Intel server chassis R2625URLXR Intel Server Board S5520UR(R) 2U Rack Mount Active Midplane 2.5 Inch Drives	2/96 GB	2/8	<ul style="list-style-type: none"> ▪ Intel Xeon 55XX Series ▪ Intel Xeon 56XX Series

Storage Controllers, Expanders, and Enclosures (Thomas-Krenn)

Controller Vendor	Storage Controller	Restrictions
LSI	MegaRAID SAS 9260CV -4i	RAID 0, 1, 5, 6, 10 only
LSI	MegaRAID SAS 9260CV-8i	RAID 0, 1, 5, 6, 10 only
LSI	MegaRAID SAS 9260-4i	RAID 0, 1, 5, 6, 10 only
Intel	AXX4DRV3GEXP/ AXX4DRV3G	Storage Enclosure. Min Firmware rev 2.12
Intel	AXX6DRV3GEXP/ AXX6DRV3G	Storage Enclosure. Min Firmware rev 2.12
Intel	SROMBSASMP2 ³⁰	SAS Active Midplane-2

³⁰ Minimum firmware revision 11.0.1-0036

Network Controllers (Thomas-Krenn)

Controller Vendor	Network Controller	Speed
Intel	Intel Ethernet Server Adapter x520-SR1 (E10G41BFSR) ³¹	10Gb
Intel	Intel Ethernet Server Adapter x520 T2 (E10G42BT) ³¹	10Gb
Intel	Intel Ethernet Server Adapter x520 DA2 (E10G42BTDA) ³¹	10Gb
Intel	Intel Ethernet Server Adapter I350-T2	1Gb
Intel	Intel Ethernet Server Adapter I350-T4	1Gb
Intel	Intel PRO 1000PT Dual Port 1GbE NIC (E1G44ET2BLK)	1Gb
Intel	Intel Gigabit ET2 Quad Port Server Adapter NIC (EXPI9402PTBLK)	1Gb
Intel	Intel AXX4GBIOMOD2 Quad Port Gigabit Ethernet I/O Module	1Gb
Intel	Intel AXXGBIOMOD Dual Port Gigabit Ethernet I/O Module	1Gb

Blacklisted Firmware (Thomas-Krenn)






Model/Device	Firmware Type	Blacklisted Revision
Intel SROMBSASMP2	Storage Controller	Intel-SROMBSASMP2-11.0.1-0022

³¹ Refer to Vendor documentation to determine supported SFP+ modules and cables

WORTMANN AG | IT – Made in Germany

Supported Wortmann® Configurations

Servers (Wortmann)

Model	Description	Memory (Min/Max)	Disks (Min/Max)	CPU Chip Vendor / Model
Terra Mini Server  <small>Qualität aus Deutschland</small>	1 CPU Socket, Intel Server Board S1200KP Pedestal Hot Swap Drives	2/16 GB	2/4	<ul style="list-style-type: none"> Intel Xeon E3 12X5 Series³²
Terra Server 4030 SAS  <small>Qualität aus Deutschland</small>	1CPU Socket Intel Server Board S1200BTL Pedestal 3.5 Inch Drives	2/32 GB	2/8	<ul style="list-style-type: none"> Intel Xeon E3-12XX Series
Terra Server 6120  <small>Qualität aus Deutschland</small>	2 CPU Socket Intel Server Board S5520UR 1U Rack Mount Active Midplane 2.5 Inch Drives	2/96 GB	2/8	<ul style="list-style-type: none"> Intel Xeon 55XX Series Intel Xeon 56XX Series
Terra Server 6220  <small>Qualität aus Deutschland</small>	2 CPU Socket Intel Server Board S5520UR 2U Rack Mount Passive Midplane 3.5 Inch Drives	2/96 GB	2/6	<ul style="list-style-type: none"> Intel Xeon 55XX Series Intel Xeon 56XX Series
Terra Server 6420  <small>Qualität aus Deutschland</small>	2 CPU Socket Intel Server Board S5520HC Pedestal Expansion backplane 3.5 Inch Drives	2/96 GB	2/10	<ul style="list-style-type: none"> Intel Xeon 55XX Series Intel Xeon 56XX Series

³² Xeon E3-12X0 processors (without embedded video) are not supported.

Storage Controllers (Wortmann)

Controller Vendor	Storage Controller	Restrictions
LSI	MegaRAID SAS 9260CV -4i	RAID 0, 1, 5, 6, 10 only
LSI	MegaRAID SAS 9260CV-8i	RAID 0, 1, 5, 6, 10 only
LSI	MegaRAID SAS 9260-4i	RAID 0, 1, 5, 6, 10 only
LSI	MegaRAID SAS 9260-8i	RAID 0, 1, 5, 6, 10 only
LSI	MegaRAID SAS 9260DE-8i	RAID 0, 1, 5, 6, 10 only
Intel	RAID Controller RS2BL080	RAID 0, 1, 5, 6, 10 only
Intel	RAID Controller RS2BL080 DE	RAID 0, 1, 5, 6, 10 only
Intel	RES2SV240	SAS Expander
Intel	AXX4DRV3GEXP/ AXX4DRV3G	Storage Enclosure. Min Firmware rev 2.12
Intel	AXX6DRV3GEXP/ AXX6DRV3G	Storage Enclosure. Min Firmware rev 2.12
Intel	SROMBSASMP2 ³³	SAS Active Midplane-2
Intel	FALSASMP	3Gb/s Passive Midplane
Intel	FURASMP	6 Gb/s Passive Midplane

Network Controllers (Wortmann)

Controller Vendor	Network Controller	Speed
Intel	Intel Ethernet Server Adapter x520-SR1 (E10G41BFSR) ³⁴	10Gb
Intel	Intel Ethernet Server Adapter x520 T2 (E10G42BT) ³⁴	10Gb
Intel	Intel Ethernet Server Adapter x520 DA2 (E10G42BTDA) ³⁴	10Gb
Intel	Intel Ethernet Server Adapter I350-T2	1Gb
Intel	Intel Ethernet Server Adapter I350-T4	1Gb
Intel	Intel PRO 1000PT Dual Port 1GbE NIC	1Gb
Intel	Intel PRO 1000PT Full Height Quad Port Server Adapter, Gigabit NIC	1Gb
Intel	Intel PRO 1000PT Low Profile Quad Port Server Adapter, Gigabit NIC	1Gb
Intel	Intel PRO 1000 ET Dual Port NIC	1Gb
Intel	Intel PRO 1000 ET Quad Port NIC	1Gb
Intel	Intel Gigabit ET2 Quad Port Server Adapter NIC	1Gb
Intel	Intel AXX4GBIOMOD2 Quad Port Gigabit Ethernet I/O Module	1Gb
Intel	Intel AXXGBIOMOD Dual Port Gigabit Ethernet I/O Module	1Gb

Blacklisted Firmware (Wortmann)

Model/Device	Firmware Type	Blacklisted Revision
Intel SROMBSASMP2	Storage Controller	Intel-SROMBSASMP2-11.0.1-0022

³³ Minimum firmware revision 11.0.1-0036

³⁴ Refer to Vendor documentation to determine supported SFP+ modules and cables

Guest Operating Systems

Vendor	OS Release	Bits
Microsoft	Windows 7	32
Microsoft	Windows 2000 Server SP4	32
Microsoft	Windows XP SP3	32
Microsoft	Windows Server 2003, Web, Small Business, Standard, Enterprise, Datacenter, SP1, SP2, R2	32
Microsoft	Windows Server 2003, Web, Small Business, Standard, Enterprise, Datacenter, SP2	64
Microsoft	Windows Server 2008, Web, Small Business, Standard, Enterprise, Datacenter, SP1, SP2	32/64
Microsoft	Windows Server 2008 R2, Web, Small Business, Standard, Enterprise, Datacenter, SP1	64
Microsoft	Windows Small Business Server 2011 Standard, Essential, Premium Add-on	64
RedHat	Red hat Enterprise Linux 4.6, 4.7, 4.8, WS, AS, ES	32
RedHat	Red Hat Enterprise Linux 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, WS, AS, ES	32/64
CentOS	CentOS Linux 4.6, 4.7, 4.8	32
CentOS	CentOS 5.1, 5.2, 5.3, 5.4, 5.5, 5.6	32/64

Internet Browsers

Microsoft Internet Explorer™ IE9
Microsoft Internet Explorer™ IE8
Mozilla Firefox 3.6+
Google Chrome 10.0+

Configuration Restrictions

Physical Machine Restrictions

Physical Device	Minimum	Maximum Tested	Architected	Notes
Number CPU Sockets per Physical Machine	1	2	No Practical limit	
Number of Cores per CPU Socket	2	6	No Practical limit	
Physical Memory	2 GBytes	64 GBytes	128 GBytes	
Internal Disk Count per Physical Machine	2	24	No Limit	A minimum of two drives per PM is required for mirroring of the Avance system disk. VM disks/volumes are not mirrored locally; they are mirrored across nodes.
Internal Disk Speed	7.2k RPM	15k RPM	No Limit	Slower/lower quality drives are not supported or recommended for HA environments
Logical Volume Size (Avance Boot Volumes)		5TB	No Limit	
Logical Data Volume Size (Non- Boot Volumes)		5TB	No Limit	
Private Link ENET Ports	1	1	1	
Sync Link ENET Ports	0	2	2	10 Gigabit Ethernet NICS are supported for data synchronization between nodes only.
Business ENET Ports	1	11	No Limit	10G connections are not supported for business links. Larger port counts can be tested upon request.

Virtual Machine Restrictions

Virtual Device	Minimum	Maximum Tested	Architected
VM Boot Volume Size, Linux or Windows	Specified by OS	2 TB	2 TB
VM Data Volume Size, Linux	Specified by OS	4 TB	Specified by OS
VM Data Volume Size, Windows 2008, 2008 R2, Windows 7	Specified by OS	4 TB	Specified by OS
VM Data Volume Size, Windows XP, 2000, 2003	Specified by OS	2 TB	2 TB
Number of Virtual CPUs per VM	1	8	8
Memory for 32 bit without PAE VM	750 MB	4 GB	4 GB
Memory for 32 bit with PAE VM	750 MB	32 GB	32 GB
Memory for 64 bit VM	750 MB	32 GB	32 GB
Number of Virtual Disks (Volumes) per Linux VM	1	7	8
Number of Virtual Disks (Volumes) per Windows VM	1	7	7
Number of Virtual Networks per Windows VM	1	5	7
Number of Virtual Networks (VIFs) per Linux VM	1	3	7
Combined Total Volumes and/or VCDs per Avance Unit		62	62
Number of Virtual Machines per Avance Unit ³⁵	1	16	32
Combined Total Virtual Network Interfaces per Avance Unit		16	64
Avance Foundation License– Maximum running VMs ³⁶	NA	2	2
Avance Foundation License – Maximum CPUs per system ³⁷	'NA	8	8
Avance Foundation License – Maximum total VCPUs used by all VMs	'NA	6	8
Avance Foundation License – Maximum memory per system ³⁸	NA	8 GB	8 GB
Avance Foundation License – Maximum memory for all VMs	NA	8 GB	8 GB

³⁵ The maximum number of VCPUs allocated to VMS should be less than (cores * hyperthreads/core) – 2 for optimal performance.

³⁶ Additional VMs may be created and stopped but VM creation is blocked if there are 2 VMs running already.

³⁷ Additional CPUs will not be utilized but Avance will still operate

³⁸ Additional memory will not be utilized but Avance will still operate

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