



## Software compatibility

This chapter describes aspects of software compatibility.

The following topics are described:

- ▶ 3.1, “Operating system support” on page 40
- ▶ 3.2, “BladeCenter Open Fabric Manager and IBM Fabric Manager” on page 45

## 3.1 Operating system support

This section contains compatibility information for IBM blades and operating systems. Operating systems are grouped by vendor and then by operating system version. All operating systems that support the current product line of blade servers are listed in the following tables. The information represents a snapshot of IBM ServerProven at the time of writing. Visit the IBM Server Proven website for the latest information at the following website:

<http://www.ibm.com/servers/eserver/serverproven/compat/us/nos/ematrix.shtml>

Unless it is otherwise specified, updates or service packs equal to or higher within the same operating system release family and version of the operating system are also supported. However, support for newer major versions is not supported unless specifically identified.

For customers interested in deploying operating systems that are not listed here, IBM can provide customers with server hardware-only warranty support. For operating system and software support, customers must contact the operating system vendor or community. Customers must obtain the operating system and OS software support directly from the operating system vendor or community. For more information, see “Additional OS Information” on the IBM ServerProven web page.

The information in Table 3-1 through Table 3-6 on page 44 is for general purposes. See the IBM ServerProven website for any additional information and limitations.

The operating systems that are described here include:

- ▶ “Microsoft” on page 40
- ▶ “Novell SUSE Linux” on page 42
- ▶ “Red Hat Linux” on page 43
- ▶ “Oracle Solaris” on page 43
- ▶ “VMware” on page 44
- ▶ “IBM” on page 44

### Microsoft

Table 3-1 summarizes support for operating systems from Microsoft.

Table 3-1 Supported Microsoft operating systems

Operating system	HS12 8028	HS22 7870	HS22V 7871	HS23 7875	HS23E 8038	HX5 7872	HX5 7873	PS700/1/2 8406	PS703/704 7891
<b>Microsoft Windows Server 2012</b>									
All Editions	N	Y	N	Y	Y	Y	Y	N	N
<b>Microsoft Windows Server 2008 R2</b>									
All Editions	Y	Y	Y	Y	Y	Y	Y	N	N
<b>Microsoft Windows Server 2008 x64</b>									
Foundation	Y	N	N	N	N	N	N	N	N
Web Edition	Y	Y	Y	Y	Y	Y	Y	N	N

Operating system	HS12 8028	HS22 7870	HS22V 7871	HS23 7875	HS23E 8038	HX5 7872	HX5 7873	PS700/1/2 8406	PS703/704 7891
Standard Edition	Y	Y	Y	Y	N	Y	Y	N	N
Enterprise Edition	Y	Y	Y	Y	Y	Y	Y	N	N
DataCenter Edition	N	Y	Y	Y	Y	Y	Y	N	N
HPC Edition	N	Y	Y	N	Y	Y	Y	N	N
HPC Server 2008	N	Y	N	Y	N	N	N	N	N
<b>Microsoft Windows Server 2008 x86</b>									
Web Edition	Y	Y	Y	N	N	N	N	N	N
Standard Edition	Y	Y	Y	N	N	N	N	N	N
Enterprise Edition	Y	Y	Y	N	N	N	N	N	N
DataCenter Edition	N	Y	Y	N	N	N	N	N	N
<b>Microsoft Windows Essentials Business Server 2008</b>									
Standard Edition	Y	Y	Y	N	N	N	N	N	N
Premium Edition	Y	Y	Y	N	N	N	N	N	N
<b>Microsoft Windows Small Business Server 2008</b>									
Standard Edition	Y	Y	Y	Y	N	Y	Y	N	N
Premium Edition	Y	Y	Y	Y	N	Y	Y	N	N
<b>Microsoft Windows Server 2003/2003 R2 x64</b>									
Standard Edition	Y	Y	N	N	N	N	N	N	N
Enterprise Edition	Y	Y	N	N	N	N	N	N	N
Enterprise Edition with MSCS	N	Y	N	N	N	N	N	N	N
DataCenter Edition	N	Y	N	N	N	N	N	N	N
Compute Cluster Edition	Y	Y	N	N	N	N	N	N	N
Compute Cluster Server 2003	Y	Y	N	N	N	N	N	N	N
<b>Microsoft Windows Server 2003/2003 R2</b>									
Web Edition	Y	Y	N	N	N	N	N	N	N
Standard Edition	Y	Y	N	N	N	N	N	N	N
Enterprise Edition	Y	Y	N	N	N	N	N	N	N
Enterprise Edition with MSCS	N	Y	N	N	N	N	N	N	N
DataCenter Edition	N	Y	N	N	N	N	N	N	N

Operating system	HS12 8028	HS22 7870	HS22V 7871	HS23 7875	HS23E 8038	HX5 7872	HX5 7873	PS700/1/2 8406	PS703/704 7891
<b>Windows Small Business Server 2003/2003 R2</b>									
Standard Edition	Y	Y	N	N	N	N	N	N	N
Premium Edition	Y	Y	N	N	N	N	N	N	N

### Novell SUSE Linux

Table 3-2 summarizes support for SUSE Linux operating systems from Novell.

Table 3-2 Supported SUSE Linux operating systems

Operating system	HS12 8028	HS22 7870	HS22V 7871	HS23 7875	HS23E 8038	HX5 7872	HX5 7873	PS700/1/2 8406	PS703/704 7891
<b>SUSE Linux Enterprise Server 11</b>									
Real Time for AMD64/EM64T	N	Y	Y	N	N	N	N	N	N
With Xen for AMD64/EM64T	Y	Y	Y	Y	Y	Y	Y	N	N
For AMD64/EM64T	Y	Y	Y	Y	Y	Y	Y	N	N
For x86	Y	Y	Y	Y	Y	N	N	N	N
For IBM POWER®	N	N	N	N	N	N	N	Y	Y
<b>SUSE Linux Enterprise Server 10</b>									
Real Time for AMD64/EM64T	N	Y	Y	N	N	N	N	N	N
With Xen for AMD64/EM64T	Y	Y	Y	N	N	N	N	N	N
With Xen for x86	Y	Y	Y	N	N	N	N	N	N
For AMD64/EM64T	Y	Y	Y	Y	Y	Y	Y	N	N
For x86	Y	Y	N	Y	N	N	N	N	N
For IBM POWER	N	N	N	N	N	N	N	Y	Y
<b>SUSE Linux Enterprise Server 9</b>									
For AMD64/EM64T	Y	N	N	N	N	N	N	N	N
For x86	Y	N	N	N	N	N	N	N	N

## Red Hat Linux

Table 3-3 summarizes support for Red Hat Linux operating systems from Red Hat.

Table 3-3 Supported Red Hat Linux operating systems

Operating system	HS12 8028	HS22 7870	HS22V 7871	HS23 7875	HS23E 8038	HX5 7872	HX5 7873	PS700/1/2 8406	PS703/704 7891
<b>Red Hat Enterprise Linux 6</b>									
Server x64 Edition	N	Y	Y	Y	Y	Y	Y	N	N
Server Edition	N	Y	N	Y	Y	N	N	N	N
<b>Red Hat Enterprise Linux 5</b>									
Server x64 Edition	Y	Y	Y	Y	Y	Y	Y	N	N
Server with Xen x64 Edition	Y	Y	Y	Y	Y	Y	Y	N	N
Server Edition	Y	Y	N	Y	Y	N	N	N	N
Server with Xen Edition	Y	Y	Y	N	N	N	N	N	N
For IBM POWER	N	N	N	N	N	N	N	Y	Y
<b>Red Hat Enterprise Linux 4</b>									
AS for AMD64/EM64T	Y	Y	Y	N	N	N	N	N	N
AS for x86	Y	Y	N	N	N	N	N	N	N
ES for AMD64/EM64T	Y	Y	Y	N	N	N	N	N	N
ES for x86	Y	Y	N	N	N	N	N	N	N
WS/HPC for AMD64/EM64T	Y	Y	Y	N	N	N	N	N	N
WS/HPC for x86	Y	Y	N	N	N	N	N	N	N
<b>Red Hat Enterprise MRG Realtime (x64)</b>									
MRG 1.0 Realtime (x64)	N	Y	Y	N	N	N	N	N	N
MRG 2.0 Realtime (x64)	N	Y	Y	N	N	Y	Y	N	N

## Oracle Solaris

Table 3-4 summarizes support for Solaris 10 operating systems from Oracle.

Table 3-4 Supported Oracle Solaris operating systems

Operating system	HS12 8028	HS22 7870	HS22V 7871	HS23 7875	HS23E 8038	HX5 7872	HX5 7873	PS700/1/2 8406	PS703/704 7891
Solaris 10	N	Y	Y	Y	N	Y	Y	N	N

## VMware

Table 3-5 summarizes support for VMware operating systems from VMware.

Table 3-5 Supported VMware operating systems

Operating system	HS12 8028	HS22 7870	HS22V 7871	HS23 7875	HS23E 8038	HX5 7872	HX5 7873	PS700/1/2 8406	PS703/704 7891
VMware vSphere 5.1 (ESXi)	N	Y	Y	Y	Y	Y	Y	N	N
VMware vSphere 5.0 (ESXi)	Y	Y	Y	Y	Y	Y	Y	N	N
VMware ESX 4.1	Y	Y	Y	Y	Y	Y	Y	N	N
VMware ESXi 4.1	Y	Y	Y	Y	Y	Y	Y	N	N
VMware ESX 4.0	Y	Y	Y	N	N	N	N	N	N
VMware ESXi 4.0	Y	Y	Y	N	N	N	N	N	N
VMware ESX 3.5	Y	Y	Y	N	N	N	N	N	N
VMware ESXi 3.5	Y	Y	Y	N	N	N	N	N	N

## IBM

Table 3-6 summarizes support for the IBM AIX and IBM i5/OS™ operating systems.

Table 3-6 Supported IBM AIX and i5/OS operating systems

Operating system	HS12 8028	HS22 7870	HS22V 7871	HS23 7875	HS23E 8038	HX5 7873	HX5 7873	PS700/1/2 8406	PS703/704 7891
IBM AIX 5L™ V5.3	N	N	N	N	N	N	N	Y	N
AIX V6.1	N	N	N	N	N	N	N	Y	Y
AIX V7.1	N	N	N	N	N	N	N	N	Y
IBM i Operating System 6.1	N	N	N	N	N	N	N	Y	Y
IBM i Operating System 7.1	N	N	N	N	N	N	N	Y	Y
IBM Virtual I/O Server	N	N	N	N	N	N	N	Y	Y
4690 Operating System V6	Y	N	N	N	N	N	N	N	N

## 3.2 BladeCenter Open Fabric Manager and IBM Fabric Manager

Table 3-7 lists the chassis, servers, and options that support the various BladeCenter Open Fabric Manager (BOFM) and IBM Fabric Manager offerings.

Table 3-7 BOFM and IBM Fabric Manager support matrix: chassis, blade servers, and expansion cards

Description (Y = supported, N = not supported)	BOFM Edition →		BOFM Basic	BOFM for BC-S	BOFM Advanced Upgrade V4.1 Standalone Utility	IBM Fabric Manager V3.1
	Machine type or part number	Feature code				
<b>Chassis</b>						
IBM BladeCenter E	8677	N/A	Yes	No	Yes	Yes
IBM BladeCenter H	8852	N/A	Yes	No	Yes	Yes
IBM BladeCenter S	8886	N/A	Yes	Yes	Yes	Yes
IBM BladeCenter T	8720, 8730	N/A	Yes	No	Yes	Yes
IBM BladeCenter HT	8740, 8750	N/A	Yes	No	Yes	Yes
<b>Blade servers</b>						
IBM BladeCenter HS22	7870	N/A	Yes	Yes	Yes	Yes
IBM BladeCenter HS22V	7871	N/A	Yes	Yes	Yes	Yes
IBM BladeCenter HS23	7875	N/A	Yes <sup>e</sup>	Yes <sup>e</sup>	Yes <sup>e</sup>	Yes
IBM BladeCenter HS23E	8038	N/A	Yes	Yes	Yes	Yes
IBM BladeCenter HX5	7872	N/A	Yes	Yes	Yes <sup>a</sup>	Yes
IBM BladeCenter HX5	7873	N/A	Yes	Yes	Yes <sup>a</sup>	Yes
IBM BladeCenter HS12	8028	N/A	Yes	Yes	Yes	Yes
IBM BladeCenter PS700/701/702 <sup>b</sup>	8406	N/A	Yes	Yes	Yes	Yes
IBM BladeCenter PS703/704 <sup>b</sup>	7891	N/A	Yes	Yes	Yes	Yes
<b>Ethernet expansion cards</b>						
Integrated Gigabit Ethernet	None	None	Yes	Yes	Yes	Yes
10Gb Interposer Card for HS23	94Y8550	A244	Yes	No	Yes	Yes
Ethernet Expansion Card (CFFv)	39Y9310	2969	Yes	Yes	Yes	Yes
Ethernet Expansion Card (CIOv)	44W4475	1039	Yes	Yes	Yes	Yes
2/4 Port Ethernet Exp. Card (CFFh)	44W4479	5476	Yes	Yes	Yes	Yes
QLogic 2-port 10Gb CNA (CFFh)	42C1830	3592	Yes	No	Yes	Yes
QLogic 2-port 10Gb CNA (CFFh)	00Y3280	A3JB	Yes	No	Yes	Yes
Broadcom 10Gb Gen 2 4-pt. Eth. (CFFh)	46M6164	0098	Yes	No	Yes	Yes
Broadcom 10Gb Gen 2 2-pt. Eth. (CFFh)	46M6168	0099	Yes	No	Yes	Yes

Description (Y = supported, N = not supported)	BOFM Edition →		BOFM Basic	BOFM for BC-S	BOFM Advanced Upgrade V4.1 Standalone Utility	IBM Fabric Manager V3.1
	Machine type or part number	Feature code				
Broadcom 2-port 10Gb VFA (CFFh)	81Y3133	A1QR	Yes <sup>c</sup>	No	Yes <sup>c</sup>	Yes
Emulex Virtual Fabric Adapter (CFFh)	49Y4235	5755	Yes	No	Yes	Yes
Emulex Virtual Fabric Adpt. Adv. (CFFh)	49Y4275	2435	Yes	No	Yes	Yes
Emulex Virtual Fabric Adapter II (CFFh)	90Y3550	A1XG	Yes <sup>d</sup>	No	Yes <sup>d</sup>	Yes
Emulex Virt. Fabric Adpt. Adv. II (CFFh)	90Y3566	AIXH	Yes <sup>d</sup>	No	Yes <sup>d</sup>	Yes
Emulex 10GbE VFA II for HS23	81Y3120	A287	Yes <sup>e</sup>	No	Yes <sup>e</sup>	Yes
Emulex 10GbE VFA Adv. II for HS23	90Y9332	A2ZN	Yes <sup>e</sup>	No	Yes <sup>e</sup>	Yes
Intel 10Gb 2-port Ethernet (CFFh)	42C1810	3593	No	No	No	No
Brocade 2-port 10Gb CNA (CFFh)	81Y1650	5437	No	No	No	No
<b>Fibre Channel expansion cards</b>						
Emulex 8Gb FC (CIOv)	46M6140	3598	Yes	Yes	Yes	Yes
QLogic 4Gb FC (CFFv)	41Y8527	2970	Yes	Yes	Yes	Yes
QLogic 4Gb FC (CIOv)	46M6065	3594	Yes	Yes	Yes	Yes
QLogic 8Gb FC (CIOv)	44X1945	1462	Yes	Yes	Yes	Yes
QLogic Ethernet and 8Gb FC (CFFh)	44X1940	5485	Yes	No	Yes	Yes
QLogic Ethernet and 8Gb FC (CFFh)	00Y3270	A3JC	Yes	No	Yes	Yes
<b>SAS expansion cards</b>						
SAS Expansion Card (CFFv)	39Y9190	2979	Yes	Yes	Yes	Yes
SAS Expansion Card (CFFv)	44E5688	A3J9	Yes	Yes	Yes	Yes
SAS Connectivity Card (CIOv)	43W4068	1041	Yes	Yes	Yes	Yes
ServeRAID MR10ie (CIOv)	46C7167	5752	No	No	No	No
ServeRAID H1135 (CIOv)	90Y4750	A1XJ	No	No	No	No

a. Advanced BOFM does not support double wide HX5 blades.

b. BOFM is not supported for SAS adapters on PSxxx blades. BOFM management of Fibre Channel (FC) boot targets is not supported on PSxxx blades. When configuring a code spare, FC targets can be pre-assigned in the boot list using SMS menus.

c. Not supported in Switch Independent Mode. Supported only in pNIC mode.

d. Not supported in Switch Independent Mode. Supported only in pNIC and vNIC1 modes.

e. Emulex VFA II expansion cards for HS23 (81Y3120 and 90Y9332) have four ports (ports 5, 6, 7 and 8).

Ports 5 and 7 pass through the onboard LOM ports. Ports 6 and 8 are the NIC ports on the expansion card itself. BOFM fully supports ports 5 and 7 in all modes (vNIC, FCoE, FCoE + vNIC, iSCSI, or iSCSI + vNIC), while ports 6 and 8 are *only* supported in pNIC mode. Ports 6 and 8 are *not* supported in vNIC, FCoE, FCoE + vNIC, iSCSI, or iSCSI + vNIC modes.



**I/O modules:**

- ▶ Any I/O module that is compatible with the chassis and expansion card can be used with BOFM.
- ▶ No InfiniBand adapters or I/O modules are supported by BOFM.

**Supported operating systems**

BOFM Basic and BOFM for BladeCenter S are operating system independent and support any operating system that is supported by the blade server itself.

BOFM Advanced Upgrade and IBM Fabric Manager are supported on selected Microsoft Windows and Linux operating systems on x86 architecture. Table 3-8 lists the operating system compatibility information for BOFM Advanced Upgrade and IBM Fabric Manager.

*Table 3-8 Operating system support for BOFM Advanced and IBM Fabric Manager*

BOFM Edition →	BOFM Advanced Upgrade V4.1 Stand-alone Utility	IBM Fabric Manager V3.1
OS Description (Yes = supported, No = not supported)		
Microsoft Windows 2008 R2 (64-bit)	Yes	Yes (up to SP1)
Microsoft Windows 2008 (32/64-bit)	Yes (SP1 and SP2)	Yes (SP1 and SP2)
Microsoft Windows 2003 R2 (32/64-bit)	Yes (SP1 and SP2)	Yes (SP1 and SP2)
Microsoft Windows 2003 (32/64-bit)	Yes (SP1 and SP2)	Yes (SP1 and SP2)
RHEL 6 (32/64-bit)	No	Yes (up to SP3)
RHEL 5 (32/64-bit)	Yes (up to SP5)	Yes (up to SP5)
RHEL 4 (32/64-bit)	Yes (up to SP8)	No
SLES 11 (32/64-bit)	Yes (up to SP1)	Yes (up to SP2)
SLES 10 (32/64-bit)	Yes (up to SP2)	Yes (up to SP2)
SLES 10 with Xen Kernel (32/64-bit)	Yes (up to SP2)	No
SLES 9 (32/64-bit)	Yes (up to SP4)	No

The operating systems that IBM Fabric Manager supports are listed in the IBM Flex System™ Information Center at the following website:

[http://publib.boulder.ibm.com/infocenter/flexsys/information/topic/com.ibm.acc.iofm.doc/dw11i\\_supported\\_os.html](http://publib.boulder.ibm.com/infocenter/flexsys/information/topic/com.ibm.acc.iofm.doc/dw11i_supported_os.html)

IBM Fabric Manager V3.1 supports the following web browsers:

- ▶ Internet Explorer 8
- ▶ Internet Explorer 9
- ▶ Firefox 14