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IBM i on POWER Blades Supported Environments

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The tables list the supported hardware configurations for running IBM i on a POWER blade installed in an IBM BladeCenter chassis. There is a table for each of the components: Chassis, SAN I/O Modules for BladeCenter H Chassis, Ethernet I/O Modules, Additional I/O Modules, System Management Modules, JS12 POWER Blade, JS22 POWER Blade, JS23 POWER Blade, JS43 POWER Blade, I/O Expansion Cards for POWER Blade, SANs and Tape Drives.

JS12/JS22/JS23/JS43 POWER Blade and BladeCenter S Minimum Supported Environment

- BladeCenter S chassis:
 - 1 Advanced Management Module
 - 1 supported Ethernet I/O module from table below
 - 1 IBM BladeCenter S 6-Disk Storage Module
 - If storage protection being done in IBM i
 - 2 SAS Hot-swap hard disks (73GB, 146GB, 300GB or 450GB)
 - 1 SAS Connectivity Module
 - If storage protection being done in SAS Module
 - 3 SAS Hot-swap hard disks (73GB, 146GB, 300GB or 450GB)
 - 2 SAS RAID Controller Modules

- JS12 POWER Blade:
 - JS12 blade
 - 4 GB memory
 - SAS Expansion Card (CFFv)
 - 1 SAS disk drive (Not required if storage protection done with SAS RAID Controller Module)

- JS22 POWER Blade:
 - JS22 blade
 - 4 GB memory
 - SAS Expansion Card (CFFv)
 - 1 SAS disk drive (Not required if storage protection done with SAS RAID Controller Module)
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- JS23 POWER Blade:
 - JS23 blade
 - 4 GB memory
 - SAS Connectivity Card (CIOv)
 - 1 SAS or SSD disk drive (Not required if storage protection done with SAS RAID Controller Module)

- JS43 POWER Blade:
 - JS43 blade
 - 4 GB memory
 - SAS Connectivity Card (CIOv)

- 1 SAS or SSD disk drive (Not required if storage protection done with SAS RAID Controller Module)

JS12/JS22/JS23/JS43 POWER Blade and BladeCenter H Minimum Supported Environment

- BladeCenter H chassis:
 - 1 Advanced Management Module
 - 1 supported Ethernet I/O module from table below
 - If using DS3200 storage:
 - SAS Connectivity Module
 - If using Fibre Channel storage - see supported FC SANs below:
 - Blades with QLogic Ethernet and 4 GB Fibre Channel Expansion Card(CFFh)
 - 1 Multi-Switch Interconnect Module (if using CFFh FC adapter, not required if using CIOv adapter for FC connection)
 - 1 supported SAN I/O module from table below

- JS12 POWER Blade:
 - JS12 blade
 - 4 GB memory
 - If using DS3200 storage or using Virtual Tape (SAS):
 - SAS Expansion Card (CFFv)
 - If using Fibre Channel storage - see supported FC SANs below:
 - QLogic Ethernet and 8 GB Fibre Channel Expansion Card (CFFh)
 - QLogic Ethernet and 4 GB Fibre Channel Expansion Card (CFFh)

- JS22 POWER Blade:
 - JS22 blade
 - 4 GB memory
 - If using DS3200 storage or using Virtual Tape (SAS):
 - SAS Expansion Card (CFFv)
 - If using Fibre Channel storage - see supported FC SANs below:
 - QLogic Ethernet and 8 GB Fibre Channel Expansion Card (CFFh)
 - QLogic Ethernet and 4 GB Fibre Channel Expansion Card (CFFh)

- JS23 POWER Blade:
 - JS23 blade
 - 4 GB memory
 - If using DS3200 storage or using Virtual Tape (SAS):
 - SAS Connectivity Card (CIOv)
 - If using Fibre Channel storage - see supported FC SANs below:
 - A Fibre Channel Expansion Card chose one:
 - QLogic Ethernet and 8 GB Fibre Channel Expansion Card (CFFh)
 - QLogic Ethernet and 4 GB Fibre Channel Expansion Card (CFFh)
 - Emulex 8Gb Fibre Channel Expansion Card (CIOv)

- QLogic 4Gb Fibre Channel Expansion Card (CIOv)
- QLogic 8Gb Fibre Channel Expansion Card (CIOv)

- JS43 POWER Blade:
 - JS43 blade
 - 8 GB memory
 - If using DS3200 storage or using Virtual Tape (SAS):
 - SAS Connectivity Card (CIOv)
 - If using Fibre Channel storage - see supported FC SANs below:
 - A Fibre Channel Expansion Card chose one:
 - QLogic Ethernet and 8 GB Fibre Channel Expansion Card (CFFh)
 - QLogic Ethernet and 4 GB Fibre Channel Expansion Card (CFFh)
 - Emulex 8Gb Fibre Channel Expansion Card (CIOv)
 - QLogic 4Gb Fibre Channel Expansion Card (CIOv)
 - QLogic 8Gb Fibre Channel Expansion Card (CIOv)

(see table below for feature codes and options)

Chassis

Power System MTM	Supported with IBM i JS12 JS22	System x MTM	Description	Notes:
7989-BCH	Y Y	8852-xxx	BladeCenter H Chassis	Download Firmware : http://www-304.ibm.com/jct01004c/systems/support/supportsite.wss/mainselect?familyind=5297403&typeind=5297408&modelind=0&osind=0&brandind=5000020&oldfamily=5297403&continue.x=5&continue.y=10
7779-BCS	Y Y	8886-xxx	BladeCenter S Chassis	Download Firmware: http://www-304.ibm.com/systems/support/supportsite.wss/selectproduct?familyind=5356544&typeind=0&osind=0&brandind=5000020&oldbrand=5000020&oldfamily=5356544&oldtype=0&taskind=2&psid=sp&continue.x=19&continue.y=12
n/a	N N	8677-xxx	BladeCenter E Chassis	
n/a	N N	8720-xxx 8730-xxx 8740-xxx 8750-xxx	BladeCenter T Chassis	

SAN I/O Modules for BladeCenter H Chassis

- If attaching to fibre SAN, at least one Fibre channel I/O module is required.
- If using CFFh adapter on POWER blade - The I/O module must be installed in the right I/O Module bay of a Multi Switch Interconnect Module (MSIM) that is installed in I/O bays 7 & 8 and/or 9 & 10. If you want redundant paths to your SAN, than two Fibre channel I/O modules are required each installed in the right I/O Module bay of two Multi Switch Interconnect Modules (MSIM) one installed in I/O bays 7 & 8 and one installed in I/O bays 9 & 10.
- If using fibre CIOv adapter on POWER blade - The I/O module must be installed in I/O Module bay 3 and/or I/O Module bay 4.

Power Feature Code	Supported with IBM i	System x Option Number	System x Feature Code	NPIV Support	Description
3207	Y	32R1813	1571	N	Brocade 4Gb 10-port SAN Switch Module for IBM eServer BladeCenter
3206	Y	32R1812	1569	N	Brocade 4Gb 20-port SAN Switch Module for IBM eServer BladeCenter
5045	Y	44X1921	?	Y	Brocade 8Gb 10-port SAN Switch Module
5869	Y	44X1920	?	Y	Brocade 8Gb 20-port SAN Switch Module
n/a	N	32R1822	n/a	N	Brocade 4Gb 10-port Upgrade
3203	Y	32R1904	1575	N	QLogic 4Gb 10-port Fibre Channel Switch Module for IBM eServer BC
3202	Y	26R0881	1560	N	QLogic 4Gb 20-port Fibre Channel Switch Module for IBM eServer BC
3243	Y	43W6724	2986	Y	QLogic 10-port 4Gb SAN Switch Module (no support with
3244	Y	43W6725	2987	Y	QLogic 20-port 4Gb SAN Switch Module
3245	Y	43W6723	2985	N	QLogic 4Gb Intelligent Pass-thru Module
3284	Y	44X1905	5478	Y	Qlogic 20-port 8Gb SAN Switch Module
5449	Y	44X1907	5482	N	Qlogic 8Gb Intelligent Pass-thru Module
3241	Y	39Y9284	2984	N	Cisco Systems 4Gb 10-port Fibre Channel Module
3242	Y	39Y9280	2983	N	Cisco Systems 4Gb 20-port Fibre Channel Module
3217	N	32R17564	1574	N	Cisco Systems 4X InfiniBand Switch module
3178	Y	43W6836	n/a	NA	QLogic SAN Doctor
3183	Y	43W6838	n/a	NA	QLogic Enterprise Fabric Suite 2007
3181	Y	43W6837	n/a	NA	QLogic Fabric Security
3209	N	32R1905	1576		McData 4Gb 10-port Fibre Channel Switch Module for eServer
3208	N	32R1833	1562		McData 4Gb 20-port Fibre Channel Module for eServer BladeCenter
n/a	N	32R1912	n/a		QLogic/ McData 10-port Upgrade for IBM eServer BladeCenter
n/a	N	39Y9207	2941		QLogic InfiniBand Ethernet Bridge Module

n/a	N	39Y9211	2942		QLogic InfiniBand Fibre Channel BladeCenter
3216	N	43W4419	2990		4X InfiniBand Pass-thru Module

Ethernet I/O Modules

- At least one Ethernet I/O module installed in I/O bay 1 is required for external Ethernet connections.
- For BladeCenter H Chassis: If a second external Ethernet connection is required, a second Ethernet I/O module is installed in I/O bay 2. For third and fourth external Ethernet connections, 2 additional Ethernet I/O modules are installed in the left I/O Module bay of two Multi Switch Interconnect Modules (MSIM) one installed in I/O bays 7 & 8 and one installed in I/O bays 9 & 10. The 8252 QLogic Ethernet and 4 GB Fibre Channel Expansion Card (CFFh)
- For BladeCenter S Chassis: The first and second external Ethernet connections are surfaced through Ethernet I/O module installed in I/O bay 1. If redundant external Ethernet connections are required then the 8252 QLogic Ethernet and 4 GB Fibre Channel Expansion Card CFFh adapter must be installed on the POWER blade and an additional Ethernet I/O module installed in I/O bay 2 (RPQ 8A1747 required). The first and second Ethernet ports on the 8252 CFFh are surfaced through I/O bay 2.

Power Feature Code	Supported with IBM i BCS BCH	System x Option Number	System x Feature Code	Description
3211	Y Y	32R1859	1494	Nortel Networks Layer 2-7 Gb Ethernet Switch Mod (not supported in MSIM in BCH)
3212	Y Y	32R1860	1495	Nortel Networks L2/L3 Copper Gb Ethernet Sw Mod
3213	Y Y	32R1861	1496	Nortel Networks L2/L3 Fiber Gb Ethernet Sw Mod
3214	N Y	32R1888	1497	Cisco Systems Fiber Intelligent Gb Ethrnt Sw Mod
3215	N Y	32R1892	1498	Cisco Systems Intelligent Gb Ethernet Sw Mod
3174	Y Y	43W4395	5450	Cisco Catalyst Ethernet Switch Module - 3012
3171	N Y	41Y8522	2988	Cisco Catalyst Ethernet Switch Module - 3110X
3173	N Y	41Y8523	2989	Cisco Catalyst Ethernet Switch Module - 3110G
5452	Y Y	44W4483	5452	Intelligent Copper Passthru Module
3219	Y Y	39Y9320	2900	IBM BladeCenter Copper Passthru Module
3218	Y Y	39Y9316	1556	IBM BladeCenter Optical Passthru Module
3220	Y Y	39Y9324	1484	Server Connectivity Module
3210	Y Y	32R1783	1493	Nortel 10Gb Uplink Ethernet Switch Module
n/a	N N	39Y92674	2952	Nortel 10Gb Ethernet Switch Module

Additional I/O Modules

Power Feature Code	Supported with IBM i BCS BCH	System x Option Number	System x Feature Code	Description
3239	N Y	39Y9314	2971	Multi-Switch Interconnect Module (MSIM) Notes: - Required in BCH if connecting to fibre SAN using CFFh adapter on POWER blade
3267	Y Y	39Y9195	2980	IBM BladeCenter SAS Connectivity Module

				Notes: <ul style="list-style-type: none"> - Required in BCS when using hard disks in chassis and want IBM i to do storage protection - Required in BCS or BCH if attaching to DS3200
3734	Y N	43W3584	3734	IBM BladeCenter S SAS RAID Controller Module Notes: <ul style="list-style-type: none"> - Qty of two required - One battery backup unit is shipped/packaged with each SAS RAID Controller Module - Does not support DS3200 attachment - Does not support SATA disks
5412	N Y	46M6181		10 Gb Ethernet Pass-Thru Module for IBM BladeCenter
3248	N Y	46C7191		BNT Vitrual Fabric 10Gb Switch Module for IBM BladeCenter

Systems Management Modules

Power Feature Code	Supported with IBM i BCS BCH	System x Option Number	System x Feature Code	Description
3201	Y Y	25R5778	1604	IBM BladeCenter KVM/Advanced Management Module

JS12 POWER Blade

	Power Feature Code	Description	Notes
Blade	8442	IBM BladeCenter JS12 2-core, 3.8 GHz	
Processor	8444	Processor Entitlement (Qty 2)	two processor entitlements required
	8444	<u>Express Config</u> Processor Entitlement (Qty 1)	
	8443	Zero-priced Processor Entitlement (Qty 1)	
Memory	8229	4 GB (2 x 2 GB) DDR2 667 MHz DIMMs	one required, up to four supported
	8239	8 GB (2 x 4 GB) DDR2 667 MHz DIMMs	
	8245	16 GB (2 x 8 GB) DDR2 533 MHz DIMMs	
Disk	8237	IBM 73 GB SAS 10K SFF HDD	zero required, up to two supported
	8236	IBM 146 GB SAS 10K SFF HDD	
Fibre I/O Expansion Card	8252	QLogic Ethernet and 4 GB Fibre Channel Expansion Card (CFFh)	<ul style="list-style-type: none"> • required if fibre channel SAN connection in BCH • optional for redundant Ethernet connection in BCS
	8271	Qlogic Ethernet and 8GB Fibre Channel Expansion Card (CFFh)	<ul style="list-style-type: none"> • Required for FC tape support using NPIV. • Ethernet ports not supported
FCoCEE	8275	QLogic 2-port 10Gb Converged Network Adapter (CFFh)	<ul style="list-style-type: none"> • Required for FCoCEE
SAS I/O Expansion Card	8250	SAS Expansion Card (CFFv)	<ul style="list-style-type: none"> • required if SAS SAN in BCH • optional for SAS tape connection in BCH • required for SAS disk and tape in BCS

JS22 POWER Blade

	Power Feature Code	Description	Notes
Blade	8400	IBM BladeCenter JS22 4-core, 4.0 GHz	
Processor	8401	Processor Entitlement (Qty 4)	four processor entitlements required
	8401 8399	<u>Express Config</u> Processor Entitlement (Qty 2) Zero-priced Processor Entitlement (Qty 2)	
Memory	8233	4 GB (2 x 2 GB) DDR2 667 MHz DIMMs	one required, up to two supported
	8234	8 GB (2 x 4 GB) DDR2 667 MHz DIMMs	
	8235	16 GB (2 x 8 GB) DDR2 533 MHz DIMMs	
Disk	8237	IBM 73 GB SAS 10K SFF HDD	zero required, up to one supported
	8236	IBM 146 GB SAS 10K SFF HDD	
Fibre I/O Expansion Card	8252	QLogic Ethernet and 4 GB Fibre Channel Expansion Card (CFFh)	<ul style="list-style-type: none"> required if fibre channel SAN connection in BCH optional for redundant Ethernet connection in BCS
	8271	Qlogic Ethernet and 8GB Fibre Channel Expansion Card (CFFh)	<ul style="list-style-type: none"> Required for FC tape support using NPIV. Ethernet ports not supported
FCoCEE	8275	QLogic 2-port 10Gb Converged Network Adapter (CFFh)	<ul style="list-style-type: none"> Required for FCoCEE
SAS I/O Expansion Card	8250	SAS Expansion Card (CFFv)	<ul style="list-style-type: none"> required if SAS SAN in BCH optional for SAS tape connection in BCH required for SAS disk and tape in BCS

JS23 POWER Blade

	Power Feature Code	Description	Notes
Blade	Base	IBM BladeCenter JS23 4-core, 4.2 GHz with L3 cache	7778-23X
Processor	8395	Processor Entitlement (Qty 4)	four processor entitlements required
	8395 8393	<u>Express Config</u> Processor Entitlement (Qty 2) Zero-priced Processor Entitlement (Qty 2)	
Memory	8233	4 GB (2 x 2 GB) DDR2 667 MHz DIMMs	one required, up to four supported
	8234	8 GB (2 x 4 GB) DDR2 667 MHz DIMMs	
	8235	16 GB (2 x 8 GB) DDR2 533 MHz DIMMs	
Disk	8237	IBM 73 GB SAS 10K SFF HDD	zero required, up to one supported
	8236	IBM 146 GB SAS 10K SFF HDD	
	8273	IBM 69 GB SFF SAS Solid State Drive	
Fibre I/O Expansion Card	8240	Emulex 8Gb Fibre Channel Expansion Card (CIOv)	<ul style="list-style-type: none"> one expansion card required if fibre channel SAN connection in BCH, up to two supported (one CIOv and one CFFh) CIOv expansion cards not supported in BCS CFFh expansion card optional for redundant Ethernet connection in BCS
	8241	QLogic 4Gb Fibre Channel Expansion Card (CIOv)	
	8242	QLogic 8Gb Fibre Channel Expansion Card (CIOv)	
	8252	QLogic Ethernet and 4 GB Fibre Channel Expansion Card (CFFh)	
	8271	Qlogic Ethernet and 8GB Fibre Channel Expansion Card (CFFh)	<ul style="list-style-type: none"> Required for FC tape support using NPIV. Ethernet ports not supported
FCoCEE	8275	QLogic 2-port 10Gb Converged Network	<ul style="list-style-type: none"> Required for FCoCEE

		Adapter (CFFh)	
SAS I/O Expansion Card	8246	SAS Connectivity Card (CIOv)	<ul style="list-style-type: none"> required if SAS SAN in BCH optional for SAS tape connection in BCH required for SAS disk and tape in BCS

JS43 POWER Blade

	Power Feature Code	Description	Notes
Blade	8446	IBM BladeCenter JS43 8-core, 4.2 GHz with L3 cache	7778-23X with FC #8446
Processor	8395	Processor Entitlement (Qty 8)	Eight processor entitlements required
	8395	Express Config	
	8393	Processor Entitlement (Qty 4) Zero-priced Processor Entitlement (Qty 4)	
Memory	8233	4 GB (2 x 2 GB) DDR2 667 MHz DIMMs	two required, up to eight supported
	8234	8 GB (2 x 4 GB) DDR2 667 MHz DIMMs	
	8235	16 GB (2 x 8 GB) DDR2 533 MHz DIMMs	
Disk	8237	IBM 73 GB SAS 10K SFF HDD	zero required, up to two supported
	8236	IBM 146 GB SAS 10K SFF HDD	
	8273	IBM 69 GB SFF SAS Solid State Drive	
Fibre I/O Expansion Card	8240	Emulex 8Gb Fibre Channel Expansion Card (CIOv)	<ul style="list-style-type: none"> one expansion card required if fibre channel SAN connection in BCH, up to four supported (two CIOv and two CFFh) CIOv expansion cards not supported in BCS CFFh expansion card optional for redundant Ethernet connection in BCS
	8241	QLogic 4Gb Fibre Channel Expansion Card (CIOv)	
	8242	QLogic 8Gb Fibre Channel Expansion Card (CIOv)	
	8252	QLogic Ethernet and 4 GB Fibre Channel Expansion Card (CFFh)	
	8271	Qlogic Ethernet and 8GB Fibre Channel Expansion Card (CFFh)	
FCoCEE	8275	QLogic 2-port 10Gb Converged Network Adapter (CFFh)	<ul style="list-style-type: none"> Required for FC tape support using NPIV. Ethernet ports not supported
SAS I/O Expansion Card	8246	SAS Connectivity Card (CIOv)	<ul style="list-style-type: none"> required if SAS SAN in BCH optional for SAS tape connection in BCH required for SAS disk and tape in BCS

I/O Expansion Cards on POWER Blade

Power Feature Code	Supported with IBM i BCS BCH	System x Option Number	System x Feature Code	Description
For JS12 and JS22				
8250	Y Y	39Y9190	2979	SAS Expansion Card (CFFv)
For JS23 and JS43				
8240	N Y	46M6140	?	Emulex 8Gb Fibre Channel Expansion Card (CIOv)
8241	N Y	46M6065	3594	QLogic 4Gb Fibre Channel Expansion Card (CIOv)
8242	N Y	44X1945	?	QLogic 8Gb Fibre Channel Expansion Card (CIOv)
8246	N Y	43W4068	1041	SAS Connectivity Card (CIOv)
For JS12, JS22, JS23 and JS43				

8252	Y Y	39Y9306	2968	Qlogic Ethernet & 4Gb Fibre Channel Exp Card (CFFh) - if in BCS, then RPQ 8A1747 required.
8271	N Y	44X1940	?	Qlogic Ethernet & 8Gb Fibre Channel Exp Card (CFFh) - only Fibre Channel ports supported, not Ethernet
8275	N Y	42C1830	?	QLogic 2-port 10Gb Converged Network Adapter (CFFh)
8249	N N	39Y9310	2969	Ethernet Expansion Card (CFFv)
8238	N N	32R1923	1358	Qlogic iSCSI Daughtercard
8298	N N	43W4420	2993	Voltaire 4X InfiniBand DDR Expansion Card (CFFh)
8297	N N	43W4421	2992	Cisco 4X InfiniBand DDR Expansion Card (CFFh)
8256	N N	32R1760	1466	Cisco Systems 4X InfiniBand expansion card
8258	N N	43W4423	2991	4X InfiniBand DDR Expansion Card (CFFh)
8251	N N	43W6859	2994	Emulex 4Gb Fibre Channel Expansion Card (CFFv)
8248	N N	41Y8527	2970	QLogic 4Gb Fibre Channel Expansion Card (CFFv)
n/a	N N	73P6000	1546	Myrinet Cluster Exp. Card
n/a	N N	39R8624	1548	SFF Gb Ethernet Exp. Card
n/a	N N	39Y9271	2967	NetXen 10Gb Ethernet Expansion Card (CFFh)
n/a	N N	26K6457	1551	Topspin InfiniBand host channel expansion card for eServer
n/a	N N	26R0890	1577	QLogic 4Gb SFF Fibre Channel Expansion Card for eServer
n/a	N N	39Y9186	2925	Emulex 4Gb SFF Fibre Channel Expansion Card
n/a	N N	26K5939	1568	cKVM Feature Card
n/a	N N	39R7563	4265	IBM BladeCenter Storage and I/O Expansion Blade

SANs

Supported with IBM i on POWER Blade in BCS BCH	Description	Notes
Y Y	IBM System Storage DS3200	
N Y	IBM System Storage DS3400	
N Y	IBM System Storage DS4700	
N Y	IBM System Storage DS4800	
N Y	IBM System Storage DS5020	
N Y	IBM System Storage DS5100	
N Y	IBM System Storage DS5300	
N Y	IBM System Storage DS8100	
N Y	IBM System Storage DS8300	
N Y	IBM XIV Storage	
N Y	IBM System Storage SAN Volume Controller	

Tape Drives and Libraries

Supported with IBM i	Description	Model number
Y	IBM System Storage TS2240 Tape Drive (LTO4) note: this model supported with IBM i Virtual Tape	3580S4E (SAS version)
Y	IBM System Storage TS2230 Tape Drive (LTO3)	3580S3E (SAS version)
Y	IBM System Storage TS3100 with LTO4 drives	3573F4S
Y	IBM System Storage TS3200 with LTO4 drives	3573F4H
Y	IBM System Storage TS3500 with LTO4 drives	3584 L53/D53/S54

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