IBM PureFlex System offerings deliver two integrated systems to support compute, storage, and networking requirements

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At a glance

IBM® PureFlex System includes the following enhancements:

- Simplifies the ordering process to ensure you have a complete system on day one.
- Simplifies installation with many of the time-consuming tasks accomplished in IBM manufacturing facilities:
  - All power cables are prewired.
  - All data cables within the rack are installed and tested.
  - All switches in PureFlex are preconfigured to ensure redundancy.
  - POWER® ITEs have dual VIOS already installed.
- Delivers highly integrated systems that enable you to select various network and storage architectures such as Ethernet, Fibre Channel, FCoE, and in-rack or in-chassis shared storage.
- Offers Flex System Manager to manage all components within PureFlex.
- Enables you to order various TSS and Lab Services to further accelerate installation times.

Overview

PureFlex System delivers the following enhancements:

- PureFlex Express®: The Express configuration is designed for small and medium businesses and is the most affordable entry point into a PureFlex System. Businesses desire systems that deliver outstanding capabilities and can be tomorrow-ready today with the infrastructure that allows the business to master big data, social, mobile, analytics and the flow of critical information. PureFlex Express delivers an affordable starting point to build a customized infrastructure that can deliver business advantages and higher client satisfaction.
- PureFlex Enterprise: The Enterprise configuration is optimized for scalable cloud deployments and has built-in redundancy for highly reliable and resilient operation to support your critical applications and cloud services. Intended for your most demanding workloads and environments PureFlex Enterprise can be scaled as needed with the flexibility and versatility you demand and is designed for business-critical workloads and delivers on performance, availability, efficiency and virtualization in a way that is unique in the industry.
IBM PureFlex Solution for IBM i

The IBM PureFlex Solution for IBM i is a combination of IBM i and an IBM PureFlex System with POWER and x86 processor-based compute nodes that provides you a completely integrated business system. By consolidating their IBM i and Windows™ applications onto a single platform, the solution offers an attractive alternative for small and midsized clients who wish to reduce IT costs and complexity.

IBM PureFlex Solution for SmartCloud Desktop Infrastructure

The IBM PureFlex Solution for SmartCloud Desktop Infrastructure offers lower costs and complexity of existing desktop environments, while securely managing a growing mobile workforce. The integrated infrastructure for clients’ with unique desktop virtualization business needs is optimized to deliver performance, fast time to value and security for VDI environments. It leverages IBM’s breadth of hardware offerings, software, and services to complete successful VDI deployments.

IBM Technical support services

IBM Technical Support Services protect your PureFlex System investment and accelerate performance with long-standing expertise and client-proven best practices. The IBM range of tiered support offerings offers choice and flexibility to meet wide-ranging client needs. For the PureFlex System, IBM mandates the inclusion of essential support options through to tailored premium services. IBM Technical Support Services enhance the value of PureFlex System and support the quicker path to return on investment.

IBM Systems Lab services and training

IBM Systems Lab Services and Training is integrated into every IBM Flex System® product. Based out of IBM systems product development laboratories, IBM Systems Lab Services and Training has deep skills and broad experiences as a result of thousands of worldwide engagements to assist with the adoption of new technologies and solutions. Lab Services and Training can also deliver training and conferences tailored to your specific needs.

Key prerequisites

IBM PureFlex System configurations vary in type and quantity based on your IT needs. They are defined as Express or Enterprise offerings with a wide selection of compute, network, and storage elements.

Planned availability date

- November 15, 2013
- December 6, 2013, for 7893-92X features (#EB37, #EB38, #EB3A, #EB3B, #EB3C, #EB3D, #ESWB, #ESWC, #ESWD, #ESWE, and #ESWF)

Description

IBM PureFlex System

IBM introduced the first expert integrated systems, IBM PureSystems®, in 2012 to fundamentally change the economics and experience of IT. Over 10,000 clients rely on IBM technology to optimize their social, mobile, and big data workloads on cloud infrastructure. PureSystems solutions build on this cloud experience, integrating it into the system to improve efficiency and simplify deployment.

- Built-in expertise: Capturing and automating what experts do. IBM expert integrated systems represent the collective knowledge gained in thousands of deployments, established methods of work, innovative thinking, IT industry
leadership, and the distilled expertise of IBM and solution providers. All of this is built into the system in a deployable form from the base system infrastructure through the application.

- **Integration by design**: Integrating and tuning hardware and software. All the hardware and software components are deeply integrated, tuned in the lab and packaged in the factory into a single ready-to-go system that is optimized for the workloads you need to run. All of the integration is done for you, by experts.
- **Simplified experience**: Making every part of the IT lifecycle easier. With expert integrated systems, the entire experience is much simpler, from solution design to purchase, system setup to operation, maintenance to upgrades. Management of the entire system of physical and virtual resources is integrated and all this is done in an open manner to enable participation by a broad ecosystem of partners to bring their industry-optimized solutions to bear.

The simplicity of a PureFlex System begins with acquisition. You can choose one of two predefined and fully integrated, optimized configurations as your starting point. Your solution will ship to you as a complete, fully-tested and configured package of compute, storage and networking resources on which you and IBM Business Partners can customize a solution. With built-in expertise for deployment, management, and optimization (including cloud capabilities) to simplify key tasks across all of your IT resources, your system is designed to deploy quickly and be easy to manage. You can select the capabilities you need based on your target workload and environment. Each configuration is available with your choice of IBM POWER7™ based or Intel™ processor-based compute nodes and an array of networking and storage options.

The following PureFlex System offerings are available:

- **PureFlex System Express (#EFDA)** for smaller, single chassis installations
- **PureFlex System Enterprise (#EFDC)** for scalable cloud deployments, which includes redundancy for resilient operation

A PureFlex System consists of:

- **Flex System Compute Node**, chosen from:
  - Flex System p260 Compute Node (7895-23X)
  - Flex System p260 Compute Node (7895-23A)
  - Flex System p460 Compute Node (7895-43X)
  - Flex System p270 Compute Node (7954-24X)
  - Flex System x240 Compute Node (8737-15X)
  - Flex System x220 Compute Node (7906-25X)
  - Flex System x4400 Compute Node (7917-45X)
  - Flex System x222 Compute Node (7916-27X)
- **Flex System Enterprise Chassis (7893-92X)**.
- **Flex System Manager (7955-01M)**.
- **Storwize® V7000 Disk System (2076-124) or Flex System Storage® Node (4939-A49)**.
- **Up to two IBM RackSwitch™ G8264 (1455-64C)**.
- **Up to two IBM RackSwitch G8052 (1455-48E)**
- **PureFlex System 42U Rack (7953-94X) for PureFlex Enterprise or PureFlex Express. PureFlex Express includes the additional choice of Flex System 25U Rack (7014-S25) or no rack.**
- **IBM 7226-1U3 Multimedia Storage Enclosure.**
- **IBM 7316-TF3 Flat Panel Console Kit.**

Optional Flex System compute nodes, Flex System chassis, PureFlex System 42U racks, Flex System 25U racks with PureFlex Express, and Flex System Managers can be ordered after the basic requirements for the PureFlex System are met. These additional orders are indicated by feature #EFDF (Express Expansion Option).
The following defines Express and Enterprise Expansion components:

Express Expansion and components - single chassis only without rack mounted switches or top-of-rack (Ethernet or Fibre Channel):

Mandatory

- One or more Flex System Compute Nodes with network interfaces that match switch selection:
  - Flex System p260 (7895-23X)
  - Flex System p260 (7895-23A)
  - Flex System p460 (7895-43X)
  - Flex System p270 (7954-24X)
  - Flex System x240 (8737-15X)
  - Flex System x220 (7906-25X)
  - Flex System x440 (7917-45X)
  - Flex System x222 (7916-27X)
- Flex System Enterprise Chassis (7893-92X)
  - Includes 2x Chassis Management Modules
  - Includes chassis power supplies and fans for all compute, networks, and storage nodes
  - A choice of Ethernet/Fibre Channel or Converged Ethernet Switching
    - Ethernet 1Gb and 16Gb Fibre Channel for: 2 x #3598 (EN2092 Ethernet) and 2 x #ESW5 (Fibre Channel)
    - Ethernet 10Gb and 16Gb Fibre Channel for: 2 x #ESW7 (EN4093R Ethernet) and 2 x #ESW5 (Fibre Channel)
    - CN4093 Converged Ethernet for 2 x #ESW2 (Note: 1x ESW2 option is allowed only on express)
- A Flex System Manager (7955-01M)
- A Storwize V7000 Disk System (2076-124) or a IBM Flex System V7000 Storage Node (4939-A49)

Refer to the HDD and SSD options for the first controller.

Optional MTMs:

- An IBM PureFlex System 42U Rack (7953-94X) with various PDUs and line-cords preconfigured to support all PureFlex components
- Depending on the number of expansion units ordered an IBM PureFlex System 42U Rack (7953-94X) and IBM PureFlex System S25 Rack (7014-S25) with various PDUs and line-cords
- A Storwize V7000 Disk System (2076-124) or a second or third IBM Flex System V7000 Storage Node (4939-A49)

Refer to the HDD and SSD options for the first controller

- Storewize V7000 Expansion Units (2076-224)
- Flex V7000 Expansion Units (4939-A29)
- An IBM Media Tray (7226-1U3)
- An IBM Video Tray (7316-TF3)
- Various SSD/HDD options for the (2076-124 or 4939-A49) Storage controllers

Enterprise Expansion and components for Single Chassis:
Mandatory

- One or more Flex System Compute Nodes with network interfaces that match switch selection:
  - Flex System p260 (7895-23X)
  - Flex System p260 (7895-23A)
  - Flex System p460 (7895-43X)
  - Flex System p270 (7954-24X)
  - Flex System x240 (8737-15X)
  - Flex System x220 (7906-25X)
  - Flex System x440 (7917-45X)
  - Flex System x222 (7916-27X)
- A Flex System Enterprise Chassis (7893-92X)
  - Includes 2x Chassis Management Modules
  - Includes Chassis Power® Supplies and Fans for all compute, networks and storage nodes
  - A choice of Ethernet/Fibre Channel or Converged Ethernet Switching
    -- Ethernet 10Gb and 16Gb Fibre Channel for 2 x #ESW7 (EN4093R Ethernet) and 2 x #ESW5 (Fibre Channel)
    -- CN4093 Converged Ethernet for 2 x ESW2
- A Flex System Manager (7955-01M)
- A Storwize V7000 Disk System (2076-124) or a IBM Flex System V7000 Storage Node (4939-A49)
  Refer to the HDD and SSD options for the first controller.
- An IBM PureFlex System 42U Rack (7953-94X) with various PDUs and line-cords preconfigured to support all PureFlex components

Optional MTMs

- Depending on the number of expansion units ordered an IBM PureFlex System 42U Rack (7953-94X) and IBM PureFlex System S25 Rack (7014-S25) with various PDUs and line-cords
- Storewize V7000 Expansion Units (2076-224)
- Flex V7000 Expansion Units (4939-A29)
- An IBM Media Tray (7226-1U3)
- An IBM Video Tray (7316-TF3)
- Various SSD/HDD options for the (2076-124 or 4939-A49) Storage controllers
- Top-of-rack switches:
  - 2 x G8264 Ethernet Switch (1455-64C)
  - 2 x G8052 Ethernet Switch (1455-48E)
  - 2 x SAN24B SAN Switch (2498-B24)

Enterprise MTMs and components for Multiple Chassis:

Mandatory

- One or more Flex System Compute Nodes with network interfaces that match switch selection:
  - Flex System p260 (7895-23X)
  - Flex System p260 (7895-23A)
  - Flex System p460 (7895-43X)
  - Flex System p270 (7954-24X)
  - Flex System x240 (8737-15X)
- Flex System x220 (7906-25X)
- Flex System x440 (7917-45X)
- Flex System x222 (7916-27X)

- Two or three Flex System Enterprise Chassis (7893-92X)
  - Includes 2x Chassis Management Modules per chassis
  - Includes Chassis Power Supplies and Fans for all compute, networks and storage nodes
  - A choice of Ethernet/Fibre Channel or Converged Ethernet Chassis Switching
    - Ethernet 10Gb and 16Gb Fibre Channel for 2 x #ESW7 (EN4093R Ethernet) and 2 x #ESW5 (Fibre Channel)
    - CN4093 Converged Ethernet for 2 x #ESW2

- Top-of-rack switches:
  - 2 x G8264 Ethernet Switch (1455-64C)
  - 2 x G8052 Ethernet Switch (1455-48E)
  - 2 x SAN24B SAN Switch (2498-B24)

- A Flex System Manager (7955-01M)

- One or two Storwize V7000 Disk System (2076-124) or one, two, or three IBM Flex System V7000 Storage Node (4939-A49) per 7893-92X ordered
  Refer to the HDD and SSD options for the first controller.

- An IBM PureFlex System 42U Rack (7953-94X) with various PDUs and line-cords preconfigured to support all PureFlex components

Optional MTMs

- Depending on the number of expansion units ordered an IBM PureFlex System 42U Rack (7953-94X) with various PDUs and line-cords
- Storwize V7000 Expansion Units (2076-224) ¹, ²
- Flex V7000 Expansion Units (4939-A29)
- An IBM Media Tray (7226-1U3) ¹
- An IBM Video Tray (7316-TF3) ¹
- Various SSD/HDD options for the (2076-124 or 4939-A49) Storage controllers

¹ Options that drive rack and PDU support

² May drive a second 42U rack when expansion units cannot be contained in the first rack

When ordering those products, you can find information on minimum configurations and options in their online Sales Manuals at

http://www.ibm.com/common/ssi

For more information on PureFlex Systems, visit

http://www.ibm.com/pureflex

**IBM PureFlex Solution for IBM i**

PureFlex Solution for IBM i can be the perfect alternative to complex distributed environments reaping the benefits of centralized management and resource sharing. Instead of maintaining multiple rack or tower systems, you can run your business in a single footprint consisting of a mix of server technologies and workloads including both POWER and x86 based compute nodes. By consolidating their IBM i and Windows applications onto a single integrated business platform, small and midsized clients are offered an attractive alternative to reduce IT costs and complexity.

IBM i integrates a trusted combination of relational database, security, Web services, networking and storage management capabilities. The system provides a broad and highly stable database and middleware foundation for efficiently deploying business
processing applications. With support for over 5,000 solutions from over 2,500 ISVs, i solutions are offered through an extensive, highly skilled worldwide network of IBM Business Partners backed by trusted services and support infrastructure from IBM. The PureFlex System is a fully integrated platform with unified management of compute, storage, networking and virtualization resources that utilize built-in Patterns of Expertise based on IBM’s decades of experience and thousands of client deployments. With the inclusion of a 3-year warranty, the lease price of the new IBM PureFlex Solution for IBM i will often be less than what many i clients pay today for a stand-alone rack or tower system.

**IBM PureFlex Solution for SmartCloud Desktop Infrastructure**

The IBM PureFlex Solution for SmartCloud Desktop Infrastructure offering is optimized to deliver superior performance and flexibility to meet clients' unique desktop virtualization business needs:

- The integrated infrastructure is optimized to deliver performance, fast time to value and security for VDI environments
- Leverage IBM’s breadth of hardware offerings, software, and services to complete successful VDI deployments
- Lower costs and complexity of existing desktop environments, while securely managing a growing mobile workforce
- IBM PureFlex Solution for SmartCloud Desktop Infrastructure fits easily within a client’s existing and future networking environments
- Offers flexibility and choice with support for multiple hypervisors, and both Citrix XenDesktop and VMware View. Citrix XenDesktop offers clients a robust desktop virtualization solution that features multiple delivery models optimized for flexibility and cost efficiency. VMware View simplifies desktop and application management while enhancing security and control.

The IBM PureFlex Solution for SmartCloud Desktop Infrastructure configuration is based on the IBM PureFlex Enterprise configuration and is available with both the Intel processor-based IBM Flex System x222 and Flex System x240 compute nodes. The configuration also includes two management nodes and two storage nodes along with integrated storage. The Flex System compute nodes combined with the IBM Flex System V7000 Storage node offer clients both block and file storage for nonpersistent and persistent deployments. In addition to two Virtual Desktop Management nodes, the offering includes systems management capabilities with IBM Flex System Manager™ to easily and efficiently manage virtual desktops within the integrated infrastructure.

**IBM Technical support services**

Support to be included as the minimum essential element of each PureFlex System offering:

- **Express**: Annual Microcode Analysis included to ensure your Microcode levels are at the optimal level for your environment and with Electronic Service Agent™ activated for call-home support. In addition options for same-day warranty service and software support and installation of Microcode updates are available to give you support coverage across your PureFlex System environment.
- **Enterprise**: Twice-yearly Microcode Analysis included to ensure your Microcode levels are at the optimal level for your environment and with Electronic Service Agent activated for call-home support. Hardware maintenance service and software support (24x7) with an enhanced technical support advocate (24x7 where available) to act as the support focal point for your environment. In addition, options for installing Microcode updates are available to increase the support coverage across your PureFlex System environment.

For further information, contact your IBM seller and ask for details of the support available for your environment or visit

The following includes the foundation components and other features, but not all features of a given product. For the complete product definition, refer to the sales manual of the product.

The PureFlex requirements when ordering the Flex System p260 Compute Node (7895-23X) are:

1 x Flex System p260 Compute Node (7895-23X), with the following features:
- 1 x #EPR, #EPRB, or #EPRD Processor Module
- 1 x #8491 Processor Activations per core (Minimum of 4)
- 8 x #8196, #EEMD, #EEME, #EEMF Memory options (Minimum memory is 2 GB per available core)
- 1 x #1762 Flex System EN4054 4-port 10Gb Ethernet Adapter (requires #ESW7)
- 1 x #1763 Flex System EN2024 4-port 1Gb Ethernet Adapter (requires #3598)
- 1 x #EC24 Flex System CN4058 8-port 10Gb Converged Adapter (requires #ESW2)
- 1 x #EC2E Flex System FC5054 4-port 16Gb FC Adapter
- 0 or 2 x #8207 177GB, 1.8", SATA S/S DRIVE
- 0 or 2 x #8274 300GB 10K RPM SFF SAS HDD
- 0 or 2 x #8276 600GB 10K RPM SFF SAS HDD
- 0 or 2 x #8311 900GB 10K RPM SFF SAS HDD
- 1 x #5005 Software Preinstall
- 1 x #2145 or #2146 or #2147 Operating system indicator
- 1 x #0265 or #0266 or #0277 Partition Specify
- 1 x #4646 Integrate ITE in Chassis
- 1 x #4651 Rack Indicator, Rack #1
- 1 x #4681 Chassis Specify, Chassis #1
- 1 x #7067 or #7068 or #7069 Top Cover
- 1 x #ED21-#ED2E Installation/User Guide
- 1 x #ESC0 Shipping and Handling (No charge)
- 1 x #EFDA PureFlex Express Order Indicator
- 1 x #EFDF PureFlex Express Expansion Order Indicator
- 1 x #EFDC PureFlex Enterprise Order Indicator
- 1 x #EFDH PureFlex Enterprise Expansion Order Indicator
- 1 x #EFDE PureFlex Custom Order Indicator

- Memory options: #8196 - 8 GB (2 x 4 GB), 1066 MHz, DDR3, VLP, #EEMD - 16 GB (2 x 8 GB), 1066 MHz, 4 Gb DDR3 DRAM, #EEME - 32 GB (2 x 16 GB), 1066 MHz, 4 Gb DDR3 DRAM, #EEMF - 64 GB (2 x 32 GB), 1066 MHz, 4 Gb DDR3 DRAM
- At least one Ethernet adapter #1762, #1763, or #EC24 is required to be on the initial order.
- The maximum number of #1762/#1763/#EC24 is 2.
- The maximum number of #1764/#EC23/#EC26/#EC2E is 1.
- Any DASD may be installed on the 7895-23X regardless of the combination of PCI-E expansion cards installed. Reduces maximum memory.
- PCI expansion cards (Mezz) installed require a switch module in the chassis of the same connectivity type. They are a function of the Chassis switches selected.
- Either none or two HDD/SSD required, #8207, #8274, #8276, or #8311.
- One Express or Enterprise Indicator #EFDA, #EFDF, #EFDC, #EFDH, or #EFDE per order.

The PureFlex requirements when ordering the Flex System p260 Compute Node (7895-23A) are:

1 x Flex System p260 Compute Node (7895-23A), with the following features:
- 1 x #8491 Processor Activations per core (Minimum of 4)
Memory options: #8196 - 8GB (2 x 4 GB), 1066 MHz, DDR3, VLP, #EEMD - 16 GB (2 x 8 GB), 1066 MHz, 4 Gb DDR3 DRAM, #EEME - 32 GB (2 x 16 GB), 1066 MHz, 4 Gb DDR3 DRAM, #EEMF - 64 GB (2 x 32 GB), 1066 MHz, 4 Gb DDR3 DRAM

At least one Ethernet adapter #1762, #1763, or #EC24 is required to be on the initial order.

The maximum number of #1762/#1763/#EC24 is 2.

The maximum number of #1764/#EC23/#EC26/#EC2E is 1.

Any DASD may be installed on the 7895-23A regardless of the combination of PCI-E expansion cards installed. Reduces maximum memory.

PCI expansion cards (Mezz) installed require a switch module in the chassis of the same connectivity type. They are a function of the Chassis switches selected.

Either none or two HDD/SSD required, #8207, #8274, #8276, or #8311.

One Express or Enterprise Indicator #EFDA, #EFDF, #EFDC, #EFDH, #EFDE, or #EBM1 per order.

The PureFlex requirements when ordering the Flex System p460 Compute Node (7895-43X) are:

1 x Flex System p460 Compute Node (7895-43X), with the following features:

1 x #EPRJ, #EPRH, or #EPRK Processor Module
1 x #8491 Processor Activations per core
1 x #8491 Processor Activations per core (Minimum of 4)
16 x #8196, #EEMD, #EEME, #EEMF Memory options (Minimum memory is 2GB per available core)
2 x #1762 Flex System EN4054 4-port 10Gb Ethernet Adapter (requires #ESw7)
2 x #1763 Flex System EN2024 4-port 1Gb Ethernet Adapter (requires #3598)
2 x #EC24 Flex System CN4058 8-port 10Gb Converged Adapter (requires #ESw2)
2 x #EC2E Flex System FC5054 4-port 16Gb FC Adapter
• Memory options: #8196 - 8GB (2 x 4 GB), 1066 MHz, DDR3, VLP, #EEMD - 16 GB (2 x 8 GB), 1066 MHz, 4 Gb DDR3 DRAM, #EEME - 32 GB (2 x 16 GB), 1066 MHz, 4 Gb DDR3 DRAM, #EEMF - 64 GB (2 x 32 GB), 1066 MHz, 4 Gb DDR3 DRAM

• At least one Ethernet adapter #1762, #1763, or #EC24 is required to be on the initial order.

• The maximum number of #1762/#1763/#EC24 is 4.

• The maximum number of #1764/#EC23/#EC26/#EC2E is 2.

• The maximum number of #EC26 is 3.

• Any DASD may be installed on the 7895-43A regardless of the combination of PCI-E expansion cards installed. Reduces maximum memory.

• PCI expansion cards (Mezz) installed require a switch module in the chassis of the same connectivity type. They are a function of the Chassis switches selected.

• Either none or two HDD/SSD required, #8207, #8274, #8276, or #8311.

• One Express or Enterprise Indicator #EFDA, #EFDF, #EFDC, #EFDH, or #EFDE per order.

The PureFlex requirements when ordering the Flex System p270 (7954-24X) are:

1 x Flex System p270 Compute Node (7954-24X), with the following features:

1 x #EPRE  Processor Module Power7+ 3.416GHz 12 Core
1 x #EPRF  Processor Module Power7+ 3.136GHz 12 Core
1 to 24 x #EPW1  Processor Activations per core for #EPRE
1 to 24 x #EPW2  Processor Activations per core for #EPRF
8 x #8196, EEMD, EEME, EEMF  Memory options
1 x #EC2F  Flex System Dual VIOS Adapter
1 x #EC2E  Flex System FC5054 4-port 16Gb FC Adapter
1 x #EC24  Flex System CN4058 8-port 10Gb Converged Adapter
1 x #1763  Flex System EN2024 4-port 1Gb Ethernet Adapter
1 x #1762  Flex System EN4054 4-port 10Gb Ethernet Adapter
0 or 2 x #8207  177GB, 1.8”, SATA S/S DRIVE
0 or 2 x #8274  300GB 10K RPM SFF SAS HDD
0 or 2 x #8276  600GB 10K RPM SFF SAS HDD
0 or 2 x #8311  900GB 10K RPM SFF SAS HDD
1 x #5005  Software Preinstall
1 x #2145 or #2146 or #2147  Operating system indicator
1 x #0265 or #0266 or #0277  Partition Specify
1 x #4646  Integrate ITE in Chassis
1 x #4651  
Rack Indicator, Rack #1

1 x #4681  
Chassis Specify, Chassis #1

1 x #EVC4 or #EVC5 or #EVC6  
Top Cover

1 x #ED21-#ED2E  
Installation/User Guide

1 x #ESC0  
Shipping and Handling (No charge)

1 x #EFDA  
PureFlex Express Order Indicator

1 x #EFDF  
PureFlex Express Expansion Order Indicator

1 x #EFDC  
PureFlex Enterprise Order Indicator

1 x #EFDH  
PureFlex Enterprise Expansion Order Indicator

1 x #EFDE  
PureFlex Custom Order Indicator

- Memory options: #8196 - 8 GB (2 x 4 GB), 1066 MHz, DDR3, VLP, #EEMD - 16 GB (2 x 8 GB), 1066 MHz, 4 Gb DDR3 DRAM, #EEME - 32 GB (2 x 16 GB), 1066 MHz, 4 Gb DDR3 DRAM, #EEMF - 64 GB (2 x 32 GB), 1066 MHz, 4 Gb DDR3 DRAM

- DASD associated memory DIMM restrictions are:
  - 4 GB and 8 GB VLP DIMMs only when HDD option is installed.
  - 16 GB and 32 GB LP DIMMs are used when SSD option is installed.

- Either none or two HDD/SSD required, #8207, #8274, #8276, or #8311.

- PCI Expansion Cards (Mezz) installed require a Switch Module in the Chassis of the same connectivity type. They are a function of the Chassis switches selected.

- One Express or Enterprise Indicator #EFDA, #EFDF, #EFDC, #EFDH, or #EFDE per order.

The PureFlex requirements when ordering the Flex System x240 Compute Node (8737-15X) are:

1 x Flex System x240 Compute Node (8737-15X), with the following features:

1 x #A18C  
Compute Node with 10 Gb Virtual Fabric

or

1 x #A1BD  
Compute Node without 10 Gb Virtual Fabric

1 or 2  
Processor options, reference note

1/24  
Memory options, reference note

1 x #A1R1  
IBM Flex System CN4054 10 Gb Virtual (Required for #A1BD)

1 x #A1R0  
Flex System CN4054(R) Virtual Fabric Adapter (SW Upgrade)(Required for #ESW2 and #A1R1)

1 x #A2TD  
Virtual Fabric Advanced Software Upgrade (LOM) (Required for #ESW2 and #A1BD)

1 x #A1BP  
IBM Flex System FC5022 2-Port 16Gb FC Adapter

or with #ESW5

1 x #A2NS  
FC3052 Emulex 8Gb FC Mezz SysX 2 port

1 x #A3EB  
Integrate ITE in Chassis

1 x #4651  
Rack Indicator, Rack #1

1 x #4681  
Chassis Specify, Chassis #1

1 x #EMS4  
MS Windows 08’R2 Ent 10 Cal OS, Multi-Lingual

1 x #A1C2 – A1CF  
System publications and media

1 x #ESC0  
Shipping and Handling (No charge)

1 x #EFDF or #EFDH  
PureFlex System Order Indicator

1 x #ESCE  
Smart Cloud Entry on x86 Compute Node Indicator

1 x #A3A3  
Flex System x240 USB Enablement Kit

1 x #EBK3  
2GB USB Hypervisor Key (latest VMware level for PureFlex) (Quantity is 0, if #ESCE ordered)

1 x #EFDA  
PureFlex Express Order Indicator

1 x #EFDC  
PureFlex Enterprise Order Indicator

1 x #EFDE  
PureFlex Custom Order Indicator

1 x #EVD1  
PureFlex SmartCloud Desktop Infrastructure Indicator
• If #ESW2 is ordered in the 7893-92X in a PureFlex order and #A1BD is selected in the 8737-15X, then 1 x #A1R1 and 1 x #A1R0 is required in the 8737-15X.
• If #ESW7 or #3598 is ordered in the 7893-92X in a PureFlex order and #A1BD is selected in the 8737-15X, then 1 x #A1R1 is required in the 8737-15X.
• #A3A3, #EBK3 and #ESCE are required only if Smart Cloud entry software is ordered.
• One Express or Enterprise Indicator #EFDA, #EFDC, EFDF, EFD1, or #EFDE per order.

• Processor options:
  - #A1BB and #A1D9: Intel Xeon™ Processor E5-2680 8C 2.7GHz 20MB Cache 1600MHz 130W
  - #A1CQ and #A1D1: Intel Xeon Processor E5-2603 4C 1.8GHz 10MB Cache 1066MHz 80W
  - #A1CS and #A1D3: Intel Xeon Processor E5-2609 4C 2.4GHz 10MB Cache 1066MHz 80W
  - #A1CT and #A1D4: Intel Xeon Processor E5-2620 6C 2.0GHz 15MB Cache 1333MHz 95W
  - #A1CU and #A1D5: Intel Xeon Processor E5-2630 6C 2.3GHz 15MB Cache 1333MHz 95W
  - #A1CV and #A1D6: Intel Xeon Processor E5-2640 6C 2.5GHz 15MB Cache 1333MHz 95W
  - #A1CW and #A1D7: Intel Xeon Processor E5-2650 8C 2.0GHz 20MB Cache 1600MHz 95W
  - #A1CX and #A1D8: Intel Xeon Processor E5-2660 8C 2.2GHz 20MB Cache 1600MHz 95W
  - #A1CY and #A1DA: Intel Xeon Processor E5-2643 4C 3.3GHz 10MB Cache 1600MHz 130W
  - #A1CZ and #A1DB: Intel Xeon Processor E5-2667 6C 2.9GHz 15MB Cache 1600MHz 130W
  - #A1ER and #A1DD: Intel Xeon Processor E5-2630L 6C 2.0GHz 15MB Cache 1333MHz 60W
  - #A1ES and #A1DE: Intel Xeon Processor E5-2650L 8C 1.8GHz 20MB Cache 1600MHz 70W
  - #A1SX and #A1SY: Intel Xeon Processor E5-2670 8C 2.6GHz 20MB Cache 1600MHz 115W
  - #A2EP and #A2EQ: Intel Xeon Processor E5-2637 2C 3.0GHz 5MB Cache 1600MHz 80W
  - #A2ER and #A2ES: Intel Xeon Processor E5-2690 8C 2.9GHz 20MB Cache 1600MHz 135W
  - #A2ET and #A2EU: Intel Xeon Processor E5-2665 8C 2.4GHz 20MB Cache 1600MHz 115W
  - #A319 and #A31B: Intel Xeon Processor E5-2658 8C 2.1GHz 20MB Cache 1600MHz 95W
  - #A31A and #A31C: Intel Xeon Processor E5-2648L 8C 1.8GHz 20MB Cache 1600MHz 70W
  - Supports up to two dual or quad-core processors. The first processor is required. The additional processor is optional.
  - The processors can not be mixed. For example, the first processor #A1BB requires the additional processor to be #A1D9.

• Memory options:
  - #8648 - 4GB (1x4GB, 2Rx8, 1.35V) PC3L-10600 CL9 ECC DDR3 1333MHz LP UDIMM
  - #8923 - 8GB (1x8GB, 2Rx4, 1.35V) PC3L-10600 CL9 ECC DDR3 1333MHz LP RDIMM
  - #8939 - 16GB (1x16GB, 4Rx4, 1.35V) PC3L-8500 CL7 ECC DDR3 1066MHz LP RDIMM
  - #8940 - 2GB (1x2GB, 1Rx8, 1.35V) PC3L-10600 CL9 ECC DDR3 1333MHz LP RDIMM
The PureFlex ordering options for the IBM Flex System x220 Compute Node (7906-25X) are:

1 x Flex System x220 Compute Node (7906-25X), with the following features:

1 x #A1VQ, #A1VS, #A1VT, #A1VU, #A1Ww, #A1VX, #A1VY, #A1VZ, #A1W0, #A1W1, #A1W2
1 x #A1W4, #A1W6, #A1W7, #A1W8, #A1WA, #A1WB, #A1WC, #A1WD, #A1WE
1 x #8648, #8923, #8939, #8941, #8942, #A0QS, #A292
1 x #A1BP

or

1 x #A2N5
1 x #A1R0

IBM Europe, Middle East, and Africa Hardware
Announcement ZG13-0330
1 x #A1R1  IBM Flex System CN4054 10Gb Virtual Fabric Adapter
1 x #A26R  Flex System Compute Node Fabric Connector
1 x #A2TJ  Flex System x220 Compute Node Air Baffle - Left
1 x #A33Q  ServeRAID C105 for IBM Flex System
0, 1 or 2 x #5409, #5420, #5428, #5433, #5536, #5599, #A1AV, #A1NX, #A1NZ, #A1P3, #A282, #A283, #A2FN SSD/HDD DASD options
1 x #A1VM  Flex System Compute Node with embedded 1 GB Ethernet (LOM)
or
1 x #A1VN  Flex System Compute Node (LOM less)
(Requires #A1R1)
1 x #A1BL  Flex System Compute Node 2.5' SAS 2.0 Backplane
1 x #EBK3  2GB USB Hypervisor Key (latest VMware level for Pureflex) (Quantity is 0, if #ESCE ordered)
1 x #ESCE  Smart Cloud Entry on x86 Compute Node Indicator
1 x #EFDA  PureFlex Express Order Indicator
1 x #EFDF  PureFlex Express Expansion Order Indicator
1 x #EFDC  GA4 Enterprise Foundation Indicator
1 x #EFDH  PureFlex Enterprise Expansion Order Indicator
1 x #EFDE  PureFlex Custom Order Indicator
1 x #A3CL  System Routing Indicator
1 x #A3EB  Integrate Blade Server in Chassis
1 x #4651  Rack #1 Indicator
1 x #4681  Chassis #1 Specify

• Other configuration and manufacturing specify features are required.
• Intel Xeon processors:
  – #A1VQ Intel Xeon Processor E5-2470 8C 2.3GHz 20MB Cache 1600MHz 95W
  – #A1VS Intel Xeon Processor E5-2450 8C 2.1GHz 20MB Cache 1600MHz 95W
  – #A1VT Intel Xeon Processor E5-2440 6C 2.4GHz 15MB Cache 1333MHz 95W
  – #A1VU Intel Xeon Processor E5-2430 6C 2.2GHz 15MB Cache 1333MHz 95W
  – #A1VW Intel Xeon Processor E5-2420 6C 1.9GHz 15MB Cache 1333MHz 95W
  – #A1VX Intel Xeon Processor E5-2407 4C 2.2GHz 10MB Cache 1066MHz 80W
  – #A1VY Intel Xeon Processor E5-2403 4C 1.8GHz 10MB Cache 1066MHz 80W
  – #A1VZ Intel Pentium™ Processor 1403 2C 2.6GHz 5MB Cache 1066MHz 80W
  – #A1W0 Intel Pentium Processor 1407 2C 2.8GHz 5MB Cache 1066MHz 80W
  – #A1W1 Intel Xeon Processor E5-2450L 8C 1.8GHz 20MB Cache 1600MHz 70W
  – #A1W2 Intel Xeon Processor E5-2430L 6C 2.0GHz 15MB Cache 1333MHz 60W
• Additional Intel Xeon processors:
  – #A1W4 Addl Intel Xeon Processor E5-2470 8C 2.3GHz 20MB Cache 1600MHz 95W
  – #A1W6 Addl Intel Xeon Processor E5-2450 8C 2.1GHz 20MB Cache 1600MHz 95W
  – #A1W7 Addl Intel Xeon Processor E5-2440 6C 2.4GHz 15MB Cache 1333MHz 95W
  – #A1W8 Addl Intel Xeon Processor E5-2430 6C 2.2GHz 15MB Cache 1333MHz 95W
  – #A1WA Addl Intel Xeon Processor E5-2420 6C 1.9GHz 15MB Cache 1333MHz 95W
  – #A1WB Addl Intel Xeon Processor E5-2407 4C 2.2GHz 10MB Cache 1066MHz 80W
  – #A1WC Addl Intel Xeon Processor E5-2403 4C 1.8GHz 10MB Cache 1066MHz 80W
• Memory options:
  - #8648 4GB (1x4GB, 2Rx8, 1.35V) PC3L-10600 CL9 ECC DDR3 1333MHz LP UDIMM
  - #8923 8GB (1x8GB, 2Rx4, 1.35V) PC3L-10600 CL9 ECC DDR3 1333MHz LP RDIMM
  - #8939 16GB (1x16GB, 4Rx4, 1.35V) PC3L-8500 CL7 ECC DDR3 1066MHz LP RDIMM
  - #8941 4GB (1x4GB, 1Rx4, 1.35V) PC3L-10600 CL9 ECC DDR3 1333MHz LP RDIMM
  - #8942 4GB (1x4GB, 2Rx8, 1.35V) PC3L-10600 CL9 ECC DDR3 1333MHz LP RDIMM
  - #A0QS 2GB (1x2GB, 1Rx8, 1.35V) PC3L-10600 ECC DDR3 1333MHz LP UDIMM
  - #A292 8GB (1x8GB, 2Rx4, 1.5V) PC3-12800 CL11 ECC DDR3 1600MHz LP RDIMM

• SSD/HDD DASD options:
  - #5409 IBM 500GB 7200 6Gbps NL SAS 2.5" SFF Slim-HS HDD
  - #5420 IBM 200GB SATA 1.8" MLC SSD
  - #5428 IBM 50GB SATA 1.8" MLC SSD
  - #5433 IBM 600GB 10K 6Gbps SAS 2.5" SFF Slim-HS HDD
  - #5536 IBM 146GB 15K 6Gbps SAS 2.5" SFF Slim-HS HDD
  - #5599 IBM 300GB 10K 6Gbps SAS 2.5" SFF Slim-HS HDD
  - #A1AV IBM 1TB 7.2K 6Gbps NL SATA 2.5" SFF HS HDD
  - #A1NX IBM 250GB 7.2K 6Gbps NL SATA 2.5" SFF HS HDD
  - #A1NZ IBM 500GB 7.2K 6Gbps NL SATA 2.5" SFF HS HDD
  - #A1P3 IBM 1TB 7.2K 6Gbps NL SAS 2.5" SFF HS HDD
  - #A282 IBM 900GB 10K 6Gbps SAS 2.5" SFF HS HDD
  - #A283 IBM 300GB 15K 6Gbps SAS 2.5" SFF HS HDD
  - #A2FN IBM 200GB SATA 2.5" MLC HS SSD

The PureFlex ordering options for the IBM Flex System x222 Compute Node (7916-27X) are:

1 x Flex System x222 Compute Node (7916-27X), with the following features:
  1 x #A35R, #A35S, #A35T,
      #A35U, #A35V, #A35W,
      #A35X, #A35Y, #A35Z,
      #A360, #A361, #A362
  1 x #A36U, #A36V, #A36W,
      #A36X, #A36Y, #A36Z,
      #A370, #A371, #A372,
      #A373, #A374, #A375
  1 x #B923, #B941, #B942,
      #A1QT, #A24L, #A28Z,
      #A291, #A292, #A2u5
  1 x #A3HU
  0, 1, or 2 x #A369, #A36A,
      #A36B, #A36C, #A36D,
      #A3AN, #A3HQ
  1 x #A26R
  1 x #A363
  1 x #A36E

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2 x #A2TD Virtual Fabric Advanced Software Upgrade (LOM)

1 x #EBK3 2GB USB Hypervisor Key (latest VMware level for PureFlex)

1 x #A3EB Integrate Blade Server in Chassis

1 x #4651 Rack #1 Indicator

1 x #4681 Chassis #1 Specify

1 x #A3EB Integrate ITE in Chassis

1 x #EFDA PureFlex Express Order Indicator

1 x #EFD PureFlex Express Expansion Order Indicator

1 x #EFDC GA4 Enterprise Foundation Indicator

1 x #EFDH PureFlex Enterprise Expansion Order Indicator

1 x #EFDE PureFlex Custom Order Indicator

• Other configuration and manufacturing specify features are required.


• Intel Xeon processors:
  - #A35R Intel Xeon Processor E5-2470 8C 2.3GHz 20MB Cache 1600MHz 95W
  - #A35S Intel Xeon Processor E5-2450 8C 2.1GHz 20MB Cache 1600MHz 95W
  - #A35T Intel Xeon Processor E5-2440 6C 2.4GHz 15MB Cache 1333MHz 95W
  - #A35U Intel Xeon Processor E5-2430 6C 2.2GHz 15MB Cache 1333MHz 95W
  - #A35V Intel Xeon Processor E5-2420 6C 1.9GHz 15MB Cache 1333MHz 95W
  - #A35W Intel Xeon Processor E5-2407 4C 2.2GHz 10MB Cache 1066MHz 80W
  - #A35X Intel Xeon Processor E5-2403 4C 1.8GHz 10MB Cache 1066MHz 80W
  - #A35Y Intel Xeon Processor E5-2450L 8C 1.8GHz 20MB Cache 1600MHz 70W
  - #A35Z Intel Xeon Processor E5-2430L 6C 2.0GHz 15MB Cache 1333MHz 60W
  - #A360 Intel Xeon Processor E5-2418L 4C 2.0GHz 10MB Cache 1333MHz 50W
  - #A361 Intel Xeon Processor E5-2448L 8C 1.8GHz 20MB Cache 1333MHz 70W
  - #A362 Intel Xeon Processor E5-2428L 6C 1.8GHz 15MB Cache 1333MHz 60W

• Additional Intel Xeon processors:
  - #A36U Addl Intel Xeon Processor E5-2470 8C 2.3GHz 20MB Cache 1600MHz 95W
  - #A36V Addl Intel Xeon Processor E5-2450 8C 2.1GHz 20MB Cache 1600MHz 95W
  - #A36W Addl Intel Xeon Processor E5-2440 6C 2.4GHz 15MB Cache 1333MHz 95W
  - #A36X Addl Intel Xeon Processor E5-2430 6C 2.2GHz 15MB Cache 1333MHz 95W
  - #A36Y Addl Intel Xeon Processor E5-2420 6C 1.9GHz 15MB Cache 1333MHz 95W
  - #A36Z Addl Intel Xeon Processor E5-2407 4C 2.2GHz 10MB Cache 1066MHz 80W
  - #A370 Addl Intel Xeon Processor E5-2403 4C 1.8GHz 10MB Cache 1066MHz 80W
  - #A371 Addl Intel Xeon Processor E5-2450L 8C 1.8GHz 20MB Cache 1600MHz 70W
  - #A372 Addl Intel Xeon Processor E5-2430L 6C 2.0GHz 15MB Cache 1333MHz 60W
  - #A373 Addl Intel Xeon Processor E5-2418L 4C 2.0GHz 10MB Cache 1333MHz 50W
  - #A374 Addl Intel Xeon Processor E5-2448L 8C 1.8GHz 20MB Cache 1333MHz 70W
  - #A375 Addl Intel Xeon Processor E5-2428L 6C 1.8GHz 15MB Cache 1333MHz 60W
• Memory options:
  – #8923 8GB PC3L-10600 CL9 ECC DDR3 1333MHz LP RDIMM (1x8GB, 2Rx4, 1.35V)
  – #8941 4GB PC3L-10600 CL9 ECC DDR3 1333MHz LP RDIMM (1x4GB, 1Rx4, 1.35V)
  – #8942 4GB PC3L-10600 CL9 ECC DDR3 1333MHz LP RDIMM (1x4GB, 2Rx8, 1.35V)
  – #A1QT 16GB PC3L-10600 CL9 ECC DDR3 1333MHz LP RDIMM (1x16GB, 2Rx4, 1.35V)
  – #A24L 4GB PC3-12800 CL11 ECC DDR3 1600MHz LP RDIMM (1x4GB, 2Rx4, 1.5V)
  – #A28Z 4GB PC3-12800 CL11 ECC DDR3 1600MHz LP RDIMM (1x4GB, 1Rx4, 1.5V)
  – #A291 32GB PC3L-10600 CL9 ECC DDR3 1333MHz LP LRDIMM (1x32GB, 4Rx4, 1.35V)
  – #A292 8GB PC3-12800 CL11 ECC DDR3 1600MHz LP RDIMM (1x8GB, 2Rx4, 1.5V)
  – #A2U5 16GB PC3-12800 CL11 ECC DDR3 1600MHz LP RDIMM (1x16GB, 2Rx4, 1.5V)

• SSD/HDD DASD options:
  – #A369 IBM 500GB 7.2K 6Gbps SATA 2.5” G2SS HDD
  – #A36A IBM 1TB 7.2K 6Gbps SATA 2.5” G2SS HDD
  – #A36B IBM 128GB SATA 2.5” MLC Enterprise Value SSD for Flex System x222
  – #A36C IBM 256GB SATA 2.5” MLC Enterprise Value SSD for Flex System x222
  – #A36D IBM 100GB SATA 2.5” MLC Enterprise SSD for Flex System x222
  – #A3AN IBM 200GB SATA 1.8” MLC Enterprise SSD
  – #A3HQ IBM 100GB SATA 1.8” MLC Enterprise SSD

The PureFlex ordering options for the IBM Flex System x440 Compute Node (7917-45X) are:

1 x Flex System x440 Compute Node (7917-45X), with the following features:
  1 x #A2C0, #A2C3, #A2C6, #A2C9, #A2CC, #A2CF, #A2C3
  1 x #A2C1, #A2C2, #A2C4, #A2C5, #A2C7, #A2C8, #A2CA, #A2CB, #A2CD, #A2CE, #A2CG, #A2CH, #A2CK, #A2CL, #A2QV, #A2QW
  1 x #A28Z, #A291, #A2U5, #A892, #A984, #A984, #A1QT, #A290, #A292
  2 x #A1BP Flex System FC5022 2-port 16Gb FC Adapter
     or
  2 x #A2N5 Flex System FC3052 2-port 8Gb FC Adapter
  2 x #A1R0 Flex System CN4054 Virtual Fabric Adapter (Sw Upgrade)(Order switch)
  2 x #A1R1 Flex System CN4054 10Gb Virtual Fabric Adapter
  2 x #A26R Flex System Compute Node Fabric Connector (Not ordered with #A2BD)
  1 x #A2BC Flex System x440 Compute Node with embedded 10 Gb Virtual Fabric (LOM)
     (Order switch)
     or
  1 x #A2BD Flex System x440 Compute Node (LOM less) (Order switch)
  2 x #A2TD Virtual Fabric Advanced Software Upgrade
1 x #A3EB (LOM) (Order switch)

1 x #5413, #5420, #5428,
#A282, #A283, #A2XB,
#A2XC, #A2XD, #A2XE,
#A1AV, #A1NX, #A1NZ,
#A1P3, #A2FN, #A2U3,
#A2U4

1 x #A284

1 x #A248

1 x #A28F

1 x #A2BG

1 x #A2QO

1 x #A2BY

1 x #A248

1 x #A2BF

1 x #A2BG

1 x #A2QQ

1 x #EBK3

1 x #ESCE

1 x #A103

1 x #EFDC

1 x #4651

1 x #A3EB

1 x #4681

1 x #8036

1 x #8037

1 x #8038

1 x #9201

1 x #9202

1 x #9203

1 x #9204

1 x #9207

1 x #9208

1 x #EFDA

1 x #EFDF

1 x #EFDH

1 x #EFDE

• Other configuration and manufacturing specify features are required.

• Intel Xeon and additional Intel Xeon processors:
  - #A2C0 Intel Xeon Processor E5-4603 4C 2.0GHz 10M Cache 1066MHz 95W
  - #A2C1 Addl Intel Xeon Processor E5-4603 4C 2.0GHz 10MB Cache 1066MHz 95W
  - #A2C2 Addl Intel Xeon Processor E5-4603 4C 2.0GHz 10MB Cache 1066MHz 95W
  - #A2C3 Intel Xeon Processor E5-4607 6C 2.2GHz 12M Cache 1066MHz 95W
  - #A2C4 Addl Intel Xeon Processor E5-4607 6C 2.2GHz 12MB Cache 1066MHz 95W
  - #A2C5 Addl Intel Xeon Processor E5-4607 6C 2.2GHz 12MB Cache 1066MHz 95W
  - #A2C6 Intel Xeon Processor E5-4610 6C 2.4GHz 15M Cache 1333MHz 95W
  - #A2C7 Addl Intel Xeon Processor E5-4610 6C 2.4GHz 15MB Cache 1333MHz 95W
  - #A2C8 Addl Intel Xeon Processor E5-4610 6C 2.4GHz 15MB Cache 1333MHz 95W
  - #A2C9 Intel Xeon Processor E5-4617 6C 2.9GHz 15M Cache 1600MHz 130W
  - #A2CA Addl Intel Xeon Processor E5-4617 6C 2.9GHz 15MB Cache 1600MHz 130W
  - #A2CB Addl Intel Xeon Processor E5-4617 6C 2.9GHz 15MB Cache 1600MHz 130W
  - #A2CC Intel Xeon Processor E5-4640 8C 2.4GHz 20M Cache 1600MHz 95W
– #A2CD Addl Intel Xeon Processor E5-4640 8C 2.4GHz 20MB Cache 1600MHz 95W
– #A2CE Addl Intel Xeon Processor E5-4640 8C 2.4GHz 20MB Cache 1600MHz 95W
– #A2CF Intel Xeon Processor E5-4620 8C 2.2GHz 16MB Cache 1333MHz 95W
– #A2CG Addl Intel Xeon Processor E5-4620 8C 2.2GHz 16MB Cache 1333MHz 95W
– #A2CH Addl Intel Xeon Processor E5-4620 8C 2.2GHz 16MB Cache 1333MHz 95W
– #A2CJ Intel Xeon Processor E5-4650 8C 2.7GHz 20M Cache 1600MHz 130W
– #A2CK Addl Intel Xeon Processor E5-4650 8C 2.7GHz 20MB Cache 1600MHz 130W
– #A2CL Addl Intel Xeon Processor E5-4650 8C 2.7GHz 20MB Cache 1600MHz 130W
– #A2QV Addl Intel Xeon Processor E5-4650L 8C 2.6GHz 20MB Cache 1600MHz 115W
– #A2QW Addl Intel Xeon Processor E5-4650L 8C 2.6GHz 20MB Cache 1600MHz 115W

• Memory options:
  – #A28Z 4GB PC3-12800 CL11 ECC DDR3 1600MHz LP RDIMM (1x4GB, 1Rx4, 1.5V)
  – #A291 32GB PC3L-10600 CL9 ECC DDR3 1333MHz LP LRDIMM (1x32GB, 4Rx4, 1.35V)
  – #A2U5 16GB PC3-12800 CL11 ECC DDR3 1600MHz LP RDIMM (1x16GB, 2Rx4, 1.5V)
  – #8923 8GB PC3L-10600 CL9 ECC DDR3 1333MHz LP RDIMM (1x8GB, 2Rx4, 1.35V)
  – #8941 4GB PC3L-10600 CL9 ECC DDR3 1333MHz LP RDIMM (1x4GB, 1Rx4, 1.35V)
  – #8942 4GB PC3L-10600 CL9 ECC DDR3 1333MHz LP RDIMM (1x4GB, 2Rx8, 1.35V)
  – #A1QT 16GB PC3L-10600 CL9 ECC DDR3 1333MHz LP RDIMM (1x16GB, 2Rx4, 1.35V)
  – #A290 16GB PC3L-10600 CL9 ECC DDR3 1333MHz LP LRDIMM (1x16GB, 4Rx4, 1.35V)
  – #A292 8GB PC3-12800 CL11 ECC DDR3 1600MHz LP RDIMM (1x8GB, 2Rx4, 1.5V)

• SSD/HDD DASD options:
  – #5413 IBM 300GB 10K 6Gbps SAS 2.5" SFF Slim-HS SED
  – #5420 IBM 200GB SATA 1.8" MLC SSD
  – #5428 IBM 50GB SATA 1.8" MLC SSD
  – #A282 IBM 900GB 10K 6Gbps SAS 2.5" SFF HS HDD
  – #A283 IBM 300GB 15K 6Gbps SAS 2.5" SFF HS HDD
  – #A2XB IBM 146GB 15K 6Gbps SAS 2.5" SFF G2HS HDD
  – #A2XC IBM 300GB 10K 6Gbps SAS 2.5" SFF G2HS HDD
  – #A2XD IBM 600GB 10K 6Gbps SAS 2.5" SFF G2HS HDD
  – #A2XE IBM 500GB 7.2K 6Gbps NL SAS 2.5" SFF G2HS HDD
  – #A1AV IBM 1TB 7.2K 6Gbps NL SATA 2.5" SFF HS HDD
  – #A1NX IBM 250GB 7.2K 6Gbps NL SATA 2.5" SFF HS HDD
  – #A1NZ IBM 500GB 7.2K 6Gbps NL SATA 2.5" SFF HS HDD
  – #A1P3 IBM 1TB 7.2K 6Gbps NL SAS 2.5" SFF HS HDD
  – #A2FN IBM 200GB SATA 2.5" MLC HS SSD
  – #A2U3 IBM 256GB SATA 2.5" MLC HS Enterprise Value SSD
  – #A2U4 IBM 128GB SATA 2.5" MLC HS Enterprise Value SSD
The PureFlex requirements when ordering the Flex System Enterprise Chassis (7893-92X) are:

1 x Flex System Enterprise Chassis (7893-92X), with the following features:
1 x #9039                  Base CME
1 x #3592                  Redundant CME
2 x #9059                  Base Power Module (2X)
2 x #4558                  Power Cord (2.5M) to PDU/UPS
or
2 x #4560                  Power Cord (4.3M) to wall (208V/16A)
1 x #9038                  Base Fans (4X)
1 x #4649                  Rack Integration Services
1 x #4650                  Not Factory Integrated Indicator
1 x #4651                  Rack Indicator, Rack #1
2 x #4681                  Chassis Specify, Chassis #1
1 x #4682                  Chassis Specify, Chassis #2
   (Enterprise only)
1 x #4683                  Chassis Specify, Chassis #3
   (Enterprise only)
4 x #1111                  Cat5e Ethernet Cable, 3M Blue
1 x #0457                  Integrate 8737-15X in Chassis
1 x #ECS0                  Enterprise Chassis Content Specify - 7955-03M
1 x #ECS9                  Enterprise Chassis Content Specify - 7895-43X
1 x #ECS2                  Enterprise Chassis Content Specify - 4939-49A
1 x #EPU1-#EPUE            System documentation and software
1 x #ECSD                  IBM Flex System Management Serial Access Cable 1 x #ECB2, 1.5 Meter Ethernet cable
1 x #EFDA                  PureFlex Express Order Indicator
1 x #EFDF                  PureFlex Express Expansion Order Indicator
1 x #EFDC                  PureFlex Enterprise Order Indicator
1 x #EFDH                  PureFlex Enterprise Expansion Order Indicator
1 x #EFDE                  PureFlex Custom Order Indicator
1 x #EBM1                  PureFlex IBM i Edition Order Indicator
1 x #EVD1                  PureFlex VDI Edition Order Indicator
1 x #ETS1                  Transparent Mode Switch Indicator
1 x #ETS2                  non-Transparent Mode Switch Indicator

#EFDA minimum requirements to support, for example, a second IBM Flex System Chassis (7893-92X).
#EFDF does not require the following features: #0466, #3282, or #EB29. #EFDF requires #0492.
If #EFDA or #EFDC = 1, you must select at least one of #0457, #ECSD, #ECS3, #ECS9, #ECS4, #ECS7, #ECS8, or #ECSB
If #EBM1 = 1, you must select at least one of #ECS0.
If #EVD1 = 1 then must select at least 4 x of #0457.
Must select one and only one of #EFDA, #EFDF, #EFDC, #EFDE, #EBM1 or #EVD1.
Each order must have either 1 x #ETS1 or 1 x #ETS2 depending on existence of #ESW2, #ESW7 or #3598.
Each order must have either 1 x #ETS1 or 1 x #ETS2 depending on existence of #ESW2, #ESW7 or #3598.

• The IBM Flex System Enterprise Chassis (7893-92X) requirements for transceivers and cables required depend on the switch selection:
  - If #EFDA or #EFDC = 1 with 2 x #ESW2 with 4939-A49 as controller or #EFDA = 1 with 1 x #ESW2 with 4939-A49 as controller
- If #EFDA = 1 and 2 x #ESW2 with 2076-124 as controller
- If #EFDA = 1 with 4939-A49 as storage controller and 2 x #3598 plus 2 x #ESW5
- If #EFDA = 1 with 2076-124 as storage controller and 2 x #3598 plus 2 x #ESW5
- If #EFDA = 1 with 4939-A49 as storage controller and 2 x #ESW7 plus 2 x #ESW5
- If #EFDA = 1 with 2076-124 as storage controller and 2 x #ESW7 plus 2 x #ESW5
- #EFDA or #EFDC = 1 with 2 x #ESW2 with 4939-A49 as controller or #EFDA = 1 with 1 x #ESW2 with 4939-A49 as controller:

• With Single Switch for Express Foundation with Flex System V7000 Control Enclosure (4939-A49)

1 x #ESW2 SND 10Gb FCoE OMNI PORT BASE SWITCH FOR 92X
(14/42 INT, 8/22 EXT 2@10Gb + 6 OMNI PORTS)
1 x #EB28 IBM SFP+ SR Transceiver
2 x #EB29 2 x #EB29 IBM SFP RJ45 Transceiver
1 x #3286 8Gb SFP+ SHORT WAVE OPTIC TRANSCEIVER
With Redundant Switch
1 x #ESW2 CN4093 10Gb Converged Scalable Switch (FCoE) (14/42 INT, 2 SFP+ and 6 Omni ports
2 x #ESU1 CN4093 PORT UPGRADE FOR ESW2 (Additional 14 int. and two ext. QSFP+ 40Gb ports)
4 x #EB28 IBM SFP+ SR Transceiver
4 x #EB29 IBM SFP RJ45 Transceiver
4 x #3286 8Gb SFP+ SHORT WAVE OPTIC TRANSCEIVER
1 x #EB2B 1M IBM PASSIVE QSFP+ TO QSFP+ CABLE
1 x #EFPT Fibre Channel Pass-Thru Indicator

Additional 1 x 3286 is required, if Media drawer (7226-1U3) with tape drive is selected in single chassis and tape drive is 1.
Additional 2 x 3286 is required, if Media drawer (7226-1U3) with tape drive is selected in single chassis and tape drive is 2.

• #EFDA = 1 and 2 x #ESW2 with 2076-124 as controller:

2 x #ESW2 SND 10Gb FCoE OMNI PORT BASE SWITCH FOR 92X
(14/42 INT, 8/22 EXT 2@10Gb + 6 OMNI PORTS)
2 x #ESU1 ScSE PORT UPGRADE FOR FC ESW2 (14/42 INT, 8/22 EXTERNAL WITH 2@40Gb)
4 x #EB28 IBM SFP+ SR Transceiver
4 x #EB29 IBM SFP RJ45 Transceiver
4 x #3286 8Gb SFP+ SHORT WAVE OPTIC TRANSCEIVER
1 x #EB2B 1M IBM PASSIVE QSFP+ TO QSFP+ CABLE

In single chassis configuration, Media drawer (7226-1U3) and 2nd V7000 (2076-124) are mutually exclusive.
Additional 1 x 3286 is required, if Media drawer (7226-1U3) with tape drive is selected in single chassis and tape drive is 1.
Additional 2 x 3286 is required, if Media drawer (7226-1U3) with tape drive is selected in single chassis and tape drive is 2.
Additional 4 x 3286 are required, if 2nd V7000 controller (2076-124) is ordered.

• #EFDA = 1 with 4939-A49 as storage controller and 2 x #3598 plus 2 X #ESW5:

2 x #3598 EN2092 (14/28 INT, 10/20 EXT) 1Gb PORTS
ETHERNET ScSE
2 x #ESw5 BROCADE 16Gb FIBER CHANNEL w/oESB- ScSE (includes 2x16Gb SFP) (24/48 PORTS)
4 x #3773 ScSE PORT UPGRADE #2 (ADDS 24 PORTS) FOR FC 3770/3771/ESw5
Additional 1 x #5370 is required, if Media drawer (7226-1u3) with tape drive is selected in single chassis and tape drive is 1.
Additional 2 x #5370 is required, if Media drawer (7226-1u3) with tape drive is selected in single chassis and tape drive is 2.
If quantity of #ESW5 ports greater than 24, then add 2 x #3773.
Quantity of #ESW5 port equal (Quantity 4939-A49) x 8 + (Quantity #EC2E) x 4 + (Quantity #1764) x 2 + (Quantity #A1BP) x 2 + (Quantity #A2N5) x 2 + 4.
- #EFDA = 1 with 2076-124 as storage controller and 2 x #3598 plus 2 X #ESW5:

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<thead>
<tr>
<th>Quantity</th>
<th>Description</th>
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<tbody>
<tr>
<td>2 x #3598</td>
<td>EN2092 (14/28 INT, 10/20 EXT) 1Gb PORTS ETHERNET SCSE</td>
</tr>
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<td>2 x #3594</td>
<td>EN2092 ScSE PORT UPGRADE SFP PORTS FOR FC 3598 (28/28 INT, 20/20 EXT)</td>
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<td>2 x #ESW5</td>
<td>BROCADE 16Gb FIBER CHANNEL w/oESB- SCSE (includes 2x16Gb SFP)(24/48 PORTS)</td>
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<td>4 x #3773</td>
<td>ScSE PORT UPGRADE #2 (ADDS 24 PORTS) FOR FC 3770/3771/ESW5</td>
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<tr>
<td>4 x #5370</td>
<td>BROCADE 8Gb SFP+ SHORT-WAVE OPTICAL TRANSCEIVER</td>
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</tbody>
</table>

Additional 1 x #5370 is required, if Media drawer (7226-1u3) with tape drive is selected in single chassis and tape drive is 1.
Additional 2 x #5370 is required, if Media drawer (7226-1u3) with tape drive is selected in single chassis and tape drive is 2.
If quantity of #ESW5 ports greater than 24, then add 2 x #3773.
Quantity of #ESW5 port equal (Quantity 4939-A49) x 8 + (Quantity #EC2E) x 4 + (Quantity #1764) x 2 + (Quantity #A1BP) x 2 + (Quantity #A2N5) x 2 + 4.
- #EFDA = 1 with 4939-A49 as storage controller and 2 x #ESW7 plus 2 X #ESW5:

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<th>Quantity</th>
<th>Description</th>
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<tr>
<td>2 x #ESW7</td>
<td>EN4093R 10GB Ethernet Scalable Switch (14/42 int and 10 ext SFP+ ports)</td>
</tr>
<tr>
<td>0/2 x #3596</td>
<td>EN4093 Upgrade 28/42 int, 10 SFP+ &amp; 2 QSFP+ ext ports</td>
</tr>
<tr>
<td>4 x #EB28</td>
<td>IBM SFP+ SR Transceiver</td>
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<tr>
<td>4 x #EB29</td>
<td>IBM SFP R345 Transceiver</td>
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<tr>
<td>2 x #ESW5</td>
<td>BROCADE 16Gb FIBER CHANNEL w/o ESB- SCSE (includes 2x16Gb SFP)(24/48 PORTS)</td>
</tr>
<tr>
<td>1/2 x #3773</td>
<td>ScSE PORT UPGRADE #2 FOR FC 3770/3771/ESW5 (ADDS 24 PORTS)</td>
</tr>
<tr>
<td>1 x #EB2B</td>
<td>IBM PASSIVE QSFP+ TO QSFP+ CABLE</td>
</tr>
<tr>
<td>4 x #5370</td>
<td>BROCADE 8Gb SFP+ SHORT-WAVE OPTICAL TRANSCEIVER</td>
</tr>
</tbody>
</table>

Additional 1 x #5370 is required, if Media drawer (7226-1u3) with tape drive is selected in single chassis and tape drive is 1.
Additional 2 x #5370 is required, if Media drawer (7226-1u3) with tape drive is selected in single chassis and tape drive is 2.
Quantity of #3596 is 0, if only System x ITE without #1759/#A1R1 is installed in chassis.
Quantity of #3596 is 2, if Power ITE greater than 0 or Caracara greater than 0 or #1759/#A1R1 greater than 0.
If quantity of #ESW5 ports 24, then add 2 x 3773.
Quantity of #ESW5 port equal (Quantity 4939-A49) x 8 + (Quantity #EC2E) x 4 + (Quantity #1764) x 2 + (Quantity #A1BP) x 2 + (Quantity #A2N5) x 2 + 4.
- #EFDA = 1 with 2076-124 as storage controller and 2 x #ESW7 plus 2 X #ESW5:

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 x #ESW7</td>
<td>EN4093R 10GB Ethernet Scalable Switch (14/42 int and 10 ext SFP+ ports)</td>
</tr>
<tr>
<td>0/2 x #3596</td>
<td>EN4093 Upgrade 28/42 int, 10 SFP+ &amp; 2 QSFP+ ext ports</td>
</tr>
<tr>
<td>4 x #EB28</td>
<td>IBM SFP+ SR Transceiver</td>
</tr>
</tbody>
</table>

IBM is a registered trademark of International Business Machines Corporation
4 x #EB29       IBM SFP RJ45 Transceiver
2 x #ESW5       BROCADE 16Gb FIBER CHANNEL w/o ESB- ScSE
                (includes 2x16Gb SFP)(24/48 PORTS)
1/2 x #3773      ScSE PORT UPGRADE #2 FOR FC 3770/3771/ESW5
                (ADDs 24 PORTS)
1 x #EB2B        IM IBM PASSIVE QSFP+ TO QSFP+ CABLE

Additional 1 x #5370 is required, if Media drawer (7226-1U3) with tape drive
is selected in single chassis and tape drive is 1.
Additional 2 x #5370 is required, if Media drawer (7226-1U3) with tape drive
is selected in single chassis and tape drive is 2.
Quantity of #3596 is 0, if only System x ITE without #1759/#A1R1 is installed
in chassis.
Quantity of #3596 is 2, if Power ITE greater than 0 or Caracara greater than
0 or #1759/#A1R1 greater than 0.
If quantity of #ESW5 ports greater than 24, then add 2 x 3773.

Quantity of #ESW5 port equal (Quantity 4939-A49) x 8 + (Quantity #EC2E) x 4 +
(Quantity #1764) x 2 + (Quantity #A1BP) x 2 + (Quantity #A2N5) x 2 + 4.

The PureFlex requirements when ordering the Flex System Manager (7955-01M)
are:

1 x Flex System Manager (7955-01M), with the following features:
1 x #EB31        Platform Manager S/W Bundle
4 x #EM09        32 GB memory
2 x #1770        IBM 200 GB 1.8-inch SATA SSD
1 x #3767        1 TB, 7,200 RPM 2.5-inch SATA Disk Drive
1 x #4646        Integrate ITE in Chassis
1 x #4651        Rack Indicator, Rack #1
1 x #4681        Chassis Specify, Chassis #1
1 x #ED11-ED1E   System publications and media
1 x #ESC0        Shipping and handling (No charge)
1 x #EFDA        PureFlex Express Order Indicator
1 x #EFDC        PureFlex Enterprise Order Indicator
1 x #EFSS        PureFlex VDI Windows Storage Server
1 x #EBM1        PureFlex IBM i Edition Order Indicator
1 x #EVD1        PureFlex SmartCloud Desktop Infrastructure Indicator

The PureFlex requirements when ordering the Storwize V7000 Disk System
(2076-124) are:

1 x Storwize V7000 Disk System (2076-124), with the following features:
1 x #0010        Storage Engine Preload
4 x #5305        Fiber Optic Cable (Mgf select length)
2 x #6008        Cache 8 GB
1 x #9730        Power cord - PDU Connection
2 x #9801        AC power supply
1 x #EFD0        V7000 routing indicator
1 x #4651        Rack Indicator, Rack #1
1 x #9170        Controller #1 Group
1 x #EFDA        PureFlex Express Order Indicator
1 x #EFDF        PureFlex Express Expansion Order Indicator
1 x #EFDC        PureFlex Enterprise Order Indicator
1 x #EFDH        PureFlex Enterprise Expansion Order Indicator
1 x #EFDH        PureFlex Custom Order Indicator

- #EFDF does not require the following features: #3206, #3512, #3514, or
  #9170.
- #EFDF requires #9171.
- One Express or Enterprise Indicator #EFDA, #EFDF, #EFDC, #EFDH, or #EFDE
  per order.
- The following storage requirements depend on the mixture of Power ITEs,
  System x ITEs, and Smart Cloud Entry.
<table>
<thead>
<tr>
<th>Code</th>
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<tbody>
<tr>
<td>#3512</td>
<td>200GB SAS Small Form Factor SSD</td>
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<td>#3514</td>
<td>400GB SAS Small Form Factor SSD</td>
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<tr>
<td>#3542</td>
<td>1.2 TB 6Gb SAS 2.5-inch SFF HDD</td>
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<td>#3543</td>
<td>300 GB 6Gb SAS 10K 2.5-inch SFF HD</td>
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<td>600 GB 6Gb SAS 10K 2.5-inch SFF HD</td>
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<td>900 GB 6Gb SAS 10K 2.5-inch SFF HD</td>
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<td>#3253</td>
<td>300GB 15K SAS Small Form Factor Disk Drive Module</td>
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<tr>
<td>#3271</td>
<td>1TB Nearline SAS Small Form Factor Disk Drive Module</td>
</tr>
</tbody>
</table>

The PureFlex requirements when ordering the Storwize V7000 Control Enclosure (4939-A49) are:

1 x Storwize V7000 Control Enclosure (4939-A49), with the following features:
- 1 x #AD00 IBM Flex System V7000 Control Enclosure
- 1 x #AD81 10Gb Converged Network Adapter 2 Port Daughter Card
- 1 x #AD82 8Gb FC 4 Port Daughter Card
- 1 x #4681 BladeCenter® Chassis Specify Chassis #1
- 1 x #4651 Rack Indicator, Rack #1
- 1 x #9170 Controller #1 Group
- 1 x #EFDA PureFlex Express Foundations Indicator
- 1 x #EFDF PureFlex Express Expansion Order Indicator
- 1 x #EFDC PureFlex Enterprise Order Indicator
- 1 x #EFDH PureFlex Enterprise Expansion Order Indicator
- 1 x #EFDE PureFlex Custom Order Indicator
- 1 x #EBM1 PureFlex IBM i Edition Order Indicator
- 1 x #EVD1 PureFlex VDI Edition Order Indicator

- All configurations with Power ITEs 7895-23X/23A/43X and 7954-24X or Hybrid (Power and System x ITEs) and without Smart Cloud Entry

16 x #AD11 500 GB 7,200 RPM 6Gbs 2.5-inch NL SAS HDD
8 x #AD12 1TB 7,200 RPM 6Gbs 2.5-inch NL SAS HDD
16 x #AD21 300 GB 10,000 RPM 6Gbps 2.5-inch SAS HDD
8 x #AD23 600 GB 10,000 RPM 6Gbps 2.5-inch SAS HDD (default)
8 x #AD24 900 GB 10,000 RPM 6Gbps 2.5-inch SAS HDD
8 x #AD25 1.2TB 10K 6GBs 2.5 inch SAS HDD
16 x #AD32 300 GB 15,000 RPM 6Gbps 2.5-inch SAS HDD

- All configurations with System x ITEs 7863-10X, 7906-25X, 7916-27X, or 7917-45X and with Smart Cloud Entry

8 x #AD11 500 GB 7,200 RPM 6Gbs 2.5-inch NL SAS HDD
8 x #AD12 1TB 7,200 RPM 6Gbs 2.5-inch NL SAS HDD
8 x #AD21 300 GB 10,000 RPM 6Gbps 2.5-inch SAS HDD
8 x #AD23 600 GB 10,000 RPM 6Gbps 2.5-inch SAS HDD (default)
8 x #AD24 900 GB 10,000 RPM 6Gbps 2.5-inch SAS HDD
8 x #AD25 1.2TB 10K 6GBs 2.5 inch SAS HDD
8 x #AD32 300 GB 15,000 RPM 6Gbps 2.5-inch SAS HDD

- All configurations with Hybrid (Power and System x ITEs) and with Smart Cloud Entry

16 x #AD11 500 GB 7,200 RPM 6Gbs 2.5-inch NL SAS HDD
16 x #AD12 1TB 7,200 RPM 6Gbs 2.5-inch NL SAS HDD
16 x #AD21 300 GB 10,000 RPM 6Gbps 2.5-inch SAS HDD
16 x #AD23  600 GB 10,000 RPM 6Gbps 2.5-inch SAS HDD  
(Default)
16 x #AD24  900 GB 10,000 RPM 6Gbps 2.5-inch SAS HDD
16 x #AD25  1.2TB 10K 6Gbps 2.5 inch SAS HDD
16 x #AD32  300 GB 15,000 RPM 6Gbps 2.5-inch SAS HDD

- System x ITEs 7863-10X, 7906-25X, 7916-27X or 7917-45X and without Smart 
  Cloud Entry does not have an HDD drive requirement.
- The maximum quantity of drives (SSD and HDD) per 4939-A49 is 24.
- All SSDs installed in the primary controller must be identical in size.

#AD41  200 GB 6Gbps 2.5-inch SAS SSD
#AD43  400 GB 6Gbps 2.5-inch SAS SSD
#AD47  800 GB 2.5-inch SSD

The PureFlex requirements when ordering the PureFlex System 42U Rack 
(7953-94X) are:

1 x IBM PureFlex System 42U Rack (7953-94X), with the following 
features:
4 x #4651  Rack Indicator, Rack #1
2 x #7189 or #7196  Optional PDUs
1 x #ER01  Integrate Chassis in Rack
1 x #EC02 or #EC05  Rack Rear Door or RDHX
1 x #EC03  Side Doors
1 x #EC01 or #EU21  Rack Front Door (Blue)
1 x #ER04  Rack Content Specify - 2076-124
1 x #ER1B  Reserve 1u empty space - bottom
1 x #ER1T  Reserve 1u empty space - top
1 x #ESC0  Shipping and handling (No charge)
1 x #EFDA  PureFlex Express Order Indicator
1 x #EFDF  PureFlex Express Expansion Order Indicator
1 x #EFDC  PureFlex Enterprise Order Indicator
1 x #EFDH  PureFlex Enterprise Expansion Order Indicator
1 x #EFDE  PureFlex Custom Order Indicator
1 x #EBM1  PureFlex IBM i Edition Order Indicator
1 x #EVD1  PureFlex VDI Edition Order Indicator

- #EFDF does not require the following features: #ER01, #ER03, #ER04, #4651, 
  #7189, or #7196.
- #EFDF requires either #EC03 or #EC04.
- #ER04 is only required in the rack with #4651, if 4939-A49 is not ordered.
- One Express or Enterprise Indicator #EFDA, #EFDF, #EFDC, #EFDH, or #EFDE 
  per order.

Minimum essential support element to be included with a PureFlex Express offering: 
Annual Microcode Analysis included to ensure your Microcode levels are at the 
optimal level for your environment and with Electronic Service Agent activated for 
call-home support. In addition, options for same-day warranty service and software 
support and installation of Microcode updates are available to enable support 
coverage across your PureFlex System environment.

Minimum essential support element to be included with a PureFlex Enterprise 
offering: Twice-yearly Microcode Analysis included to ensure your Microcode levels 
are at the optimal level for your environment and with Electronic Service Agent 
avivated for call-home support. Hardware maintenance service and software 
support (24x7) with an enhanced technical support advocate (24x7 where available) 
to act as the support focal point for your environment. In addition, options for
installing Microcode updates are available to increase the support coverage across your PureFlex System environment.

Product number

The following are newly announced features on the specific models of the IBM Power Systems™ 1455, 7014, 7316, 7893, 7895, 7953, 7954, and 7955 machine types:

Planned availability date: November 15, 2013

New features

<table>
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<th>Feature</th>
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The following are newly announced features on the specific models of the IBM Power Systems 1455, 7014, 7316, 7893, 7895, 7953, 7954, and 7955 machine types:

**Planned availability date: December 6, 2013**

### New features

<table>
<thead>
<tr>
<th>Description</th>
<th>MT</th>
<th>Model Feature</th>
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**Publications**

No publications are shipped with these features.

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For details on available IBM Business Continuity and Recovery Services, contact your IBM representative or visit


For details on education offerings related to specific products, visit


Select your country, and then select the product as the category.
Technical information

Specified operating environment

Physical specifications
Physical specifications are not applicable at the feature level. For the physical specifications of a specific Machine Type/Model, refer to the appropriate Sales Manual.

Hardware requirements
Refer to the appropriate sales manuals for details.

Software requirements
The IBM Flex System Compute Node servers supports the AIX, Linux™, and IBM i operating systems, offering the flexibility of using applications written for any one of the three. Refer to the appropriate sales manuals for details.

Planning information

Cable orders
No cables required.

Security, auditability, and control
This product uses the security and auditability features of host software and application software.

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communications facilities.

Global Technology Services

Contact your IBM representative for the list of selected services available in your country, either as standard or customized offerings, for the efficient installation, implementation, and/or integration of this product.

IBM Electronic Services

Electronic Service Agent and the IBM Electronic Support web portal are dedicated to providing fast, exceptional support to IBM Systems customers. The IBM Electronic Service Agent tool is a no-additional-charge tool that proactively monitors and reports hardware events, such as system errors, performance issues, and inventory. The Electronic Service Agent tool can help you stay focused on your company's strategic business initiatives, save time, and spend less effort managing day-to-day IT maintenance issues. Servers enabled with this tool can be monitored remotely around the clock by IBM Support all at no additional cost to you.

Now integrated into the base operating system of AIX 5.3, AIX 6.1, and AIX 7.1, Electronic Service Agent is designed to automatically and electronically report system failures and utilization issues to IBM, which can result in faster problem resolution and increased availability. System configuration and inventory information collected by the Electronic Service Agent tool also can be viewed on the secure Electronic Support web portal, and used to improve problem determination and resolution by you and the IBM support team. To access the tool main menu, simply type "smitty esa_main", and select "Configure Electronic Service Agent." In addition, ESA now includes a powerful Web user interface, giving the administrator...
easy access to status, tool settings, problem information, and filters. For more information and documentation on how to configure and use Electronic Service Agent, refer to

http://www.ibm.com/support/electronic

The IBM Electronic Support portal is a single Internet entry point that replaces the multiple entry points traditionally used to access IBM Internet services and support. This portal enables you to gain easier access to IBM resources for assistance in resolving technical problems. The My Systems and Premium Search functions make it even easier for Electronic Service Agent tool-enabled customers to track system inventory and find pertinent fixes.

Benefits

Increased uptime: The Electronic Service Agent tool is designed to enhance the Warranty or Maintenance Agreement by providing faster hardware error reporting and uploading system information to IBM Support. This can translate to less wasted time monitoring the "symptoms," diagnosing the error, and manually calling IBM Support to open a problem record. Its 24 x 7 monitoring and reporting mean no more dependence on human intervention or off-hours customer personnel when errors are encountered in the middle of the night.

Security: The Electronic Service Agent tool is designed to be secure in monitoring, reporting, and storing the data at IBM. The Electronic Service Agent tool securely transmits either via the Internet (HTTPS or VPN) or modem, and can be configured to communicate securely through gateways to provide customers a single point of exit from their site. Communication is one way. Activating Electronic Service Agent does not enable IBM to call into a customer's system. System inventory information is stored in a secure database, which is protected behind IBM firewalls. It is viewable only by the customer and IBM. The customer's business applications or business data is never transmitted to IBM.

More accurate reporting: Since system information and error logs are automatically uploaded to the IBM Support center in conjunction with the service request, customers are not required to find and send system information, decreasing the risk of misreported or misdiagnosed errors. Once inside IBM, problem error data is run through a data knowledge management system and knowledge articles are appended to the problem record.

Customized support: Using the IBM ID entered during activation, customers can view system and support information in the "My Systems" and "Premium Search" sections of the Electronic Support Web site at

http://www.ibm.com/support/electronic

My Systems provides valuable reports of installed hardware and software using information collected from the systems by Electronic Service Agent. Reports are available for any system associated with the customer's IBM ID. Premium Search combines the function of search and the value of Electronic Service Agent information, providing advanced search of the technical support knowledgebase. Using Premium Search and the Electronic Service Agent information that has been collected from your system, customers are able to see search results that apply specifically to their systems.

For more information on how to utilize the power of IBM Electronic Services, contact your IBM Systems Services Representative, or visit

http://www.ibm.com/support/electronic

Terms and conditions

Field-installable feature

Yes
**Warranty period**

Three years

**Note:** For configurations that support the RAID battery, the RAID battery will be warranted for one year effective on its "Date of Installation". All other product warranty terms for the machine remain unchanged.

An IBM part or feature installed during the initial installation of an IBM machine is subject to a full warranty effective on the date of installation of the machine. An IBM part or feature that replaces a previously installed part or feature assumes the remainder of the warranty period for the replaced part or feature. An IBM part or feature added to a machine without replacing a previously installed part or feature is subject to a full warranty effective on its date of installation. Unless specified otherwise, the warranty period, type of warranty service, and service level of a part or feature are the same as those for the machine in which it is installed.

**Customer setup**

Yes.

**Machine code**

Same license terms and conditions as base machine.

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**Prices**

For all local charges, contact your IBM representative.

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**Announcement countries**

All European, Middle Eastern, and African countries except Iran, Sudan, and Syria.

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**Corrections**

**(Corrected on January 31, 2014)**
In Description section made changes to lists of requirements.

**(Corrected on December 9, 2013)**
In the Description section revised the PureFlex™ requirements for the Flex System
x240 Compute Node, Flex System x220 Compute Node, and Flex System x222
Compute Node under 1 x #EBK3.