

We make sure



# Primergy Blade Server

---

*(Konsolidace a virtualizace)*

Petr Matěna    Prague, 15.8.2006

## Řešení FSC – Primergy, VMware, BladeFrame

Serverová platforma pro DDC (Dynamic Data Center)

Industry Standard  
servery



PRIMERGY

- n Windows, Linux, Solaris x86 aplikace

Mission Critical  
servery



PRIMEQUEST

- n Itanium High-end servery pro business critical Linux a Windows aplikace

UNIX servery



PRIMEPOWER

- n SPARC servery pro standardní Solaris aplikace

Virtuální servery



BladeFrame

- n Servery pro virtualizaci a automatizaci datového centra

## Řešení FSC – Primergy, VMware, BladeFrame




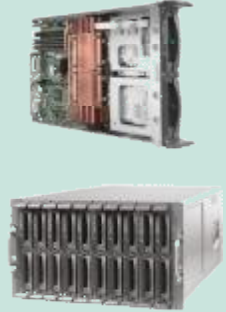
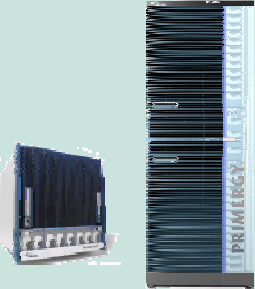
Založené na **platformě x86**:

- n FSC hardware plus third-party produkty
  - o **Primergy a VMware**
  
- n **OEM Egenera - BladeFrame**
  - o Řešení pro konsolidaci „mission-critical“ aplikací

We make sure



# Řešení FSC – Primergy, VMware, BladeFrame

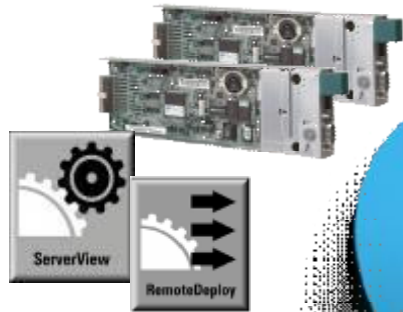
Industry Standard Servers for the DDC				DDC Solution
Economy Server Econel	Tower Server TX	Rack Server RX	Blade Server BX	BladeFrame BF
				
<b>ServerView Suite</b>				
<b>OS / Application Support, Certification</b>				
<b>Components, PRIMECENTER Rack, Storage</b>				
<b>Common Infrastructure</b>				

We make sure

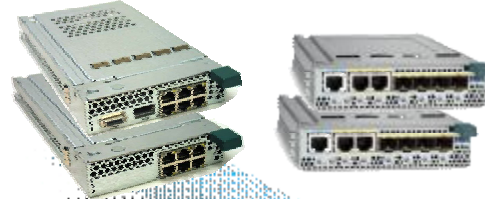


# Řešení FSC – Primergy Blade Server

Redundant Management Blades



Gigabit LAN Blades



Fibre Channel Blades



(Advanced) KVM Blade

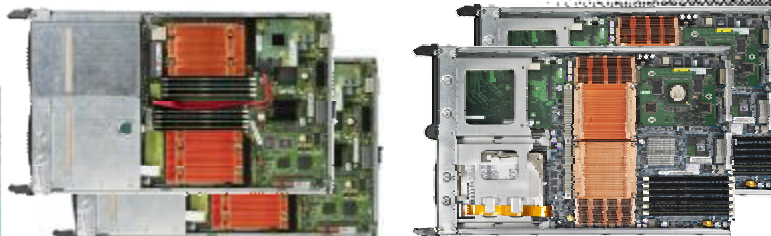


Chassis

I/O modules



Server Blades



Redundant power supplies & fans



## Řešení FSC – Primergy Blade Server

- n 7U Rack chassis
- n Dual-, Quad- and Octo-socket server blades
  - o hot-plug enabled
- n 1 – 10 Dual-socket server blades each with up to
  - o 2x Intel® Xeon® or AMD Opteron™ processor
  - o 32 Gbyte main memory (8x 4 Gbyte DIMM)
  - o 4x 1 Gbit/s Ethernet channel
  - o 2x 2 Gbit/s FC channel
  - o 2x hot-plug Ultra320, SATA or SAS hard disk
  - o 1x PCI slot extension module



## Řešení FSC – Primergy Blade Server

n 1 – 5 Quad-socket server blades each with up to

- o 4x AMD Opteron™ processor
- o 64 Gbyte main memory (16x 4 Gbyte DIMM)
- o 8x 1 Gbit/s Ethernet channel
- o 4x 2 Gbit/s FC channel
- o 4x hot-plug SAS hard disk
- o 2x PCI-Slot extension module

n 1 – 2 Octo-socket server blades each with up to

- o 8x AMD Opteron™ processor
- o 128 Gbyte main memory
- o 16x 1 Gbit/s Ethernet channel
- o 4x 2 Gbit/s FC channel
- o 4x hot-plug SAS hard disk



## Řešení FSC – Primergy Blade Server

### Options

- KVM blades as options

### Fabric 1

- 1 - 2 GbE switch blades,  
OR
- 1 - 2 GbE Pass-Thru blades

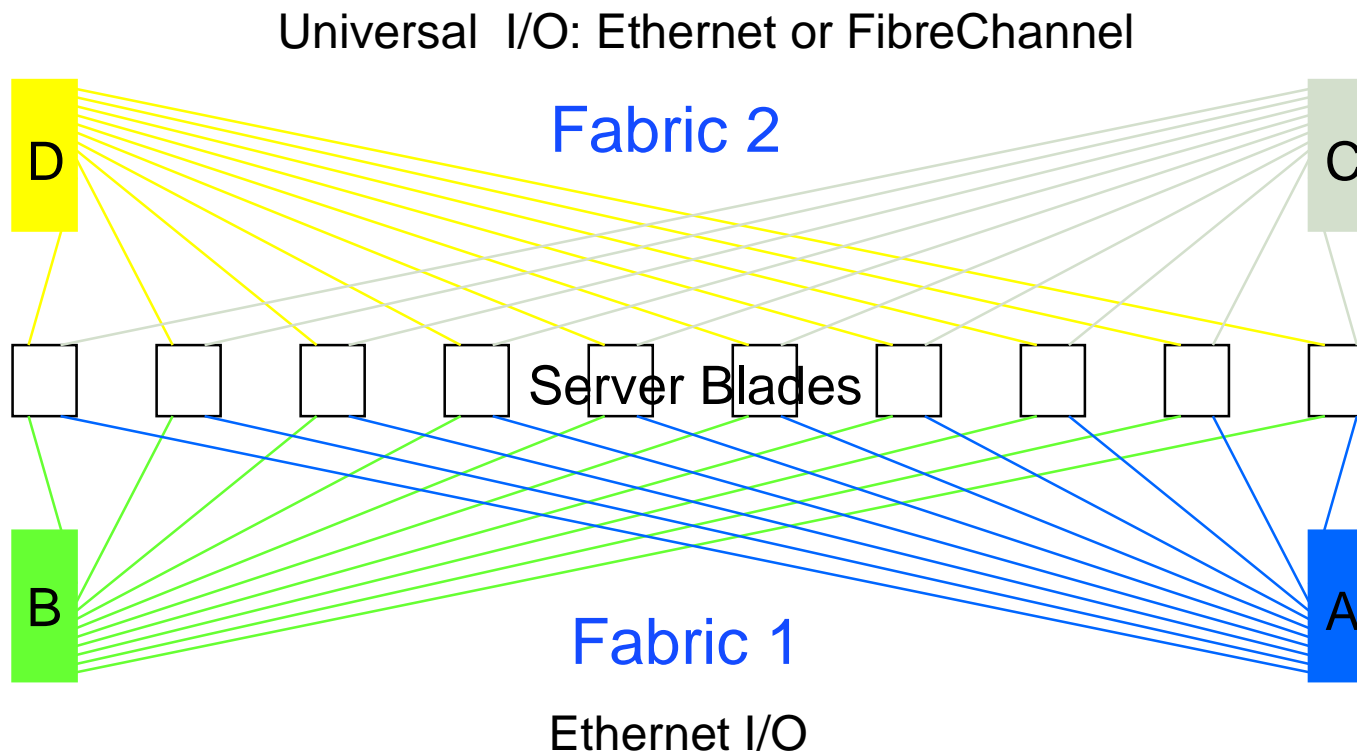
### Fabric 2

- 1 – 2 FC Pass-Thru blades,  
OR
- 1 – 2 FC Switch blades  
OR
- 1 – 2 GbE Switch blades,  
OR
- 1 – 2 GbE Pass-Thru blades

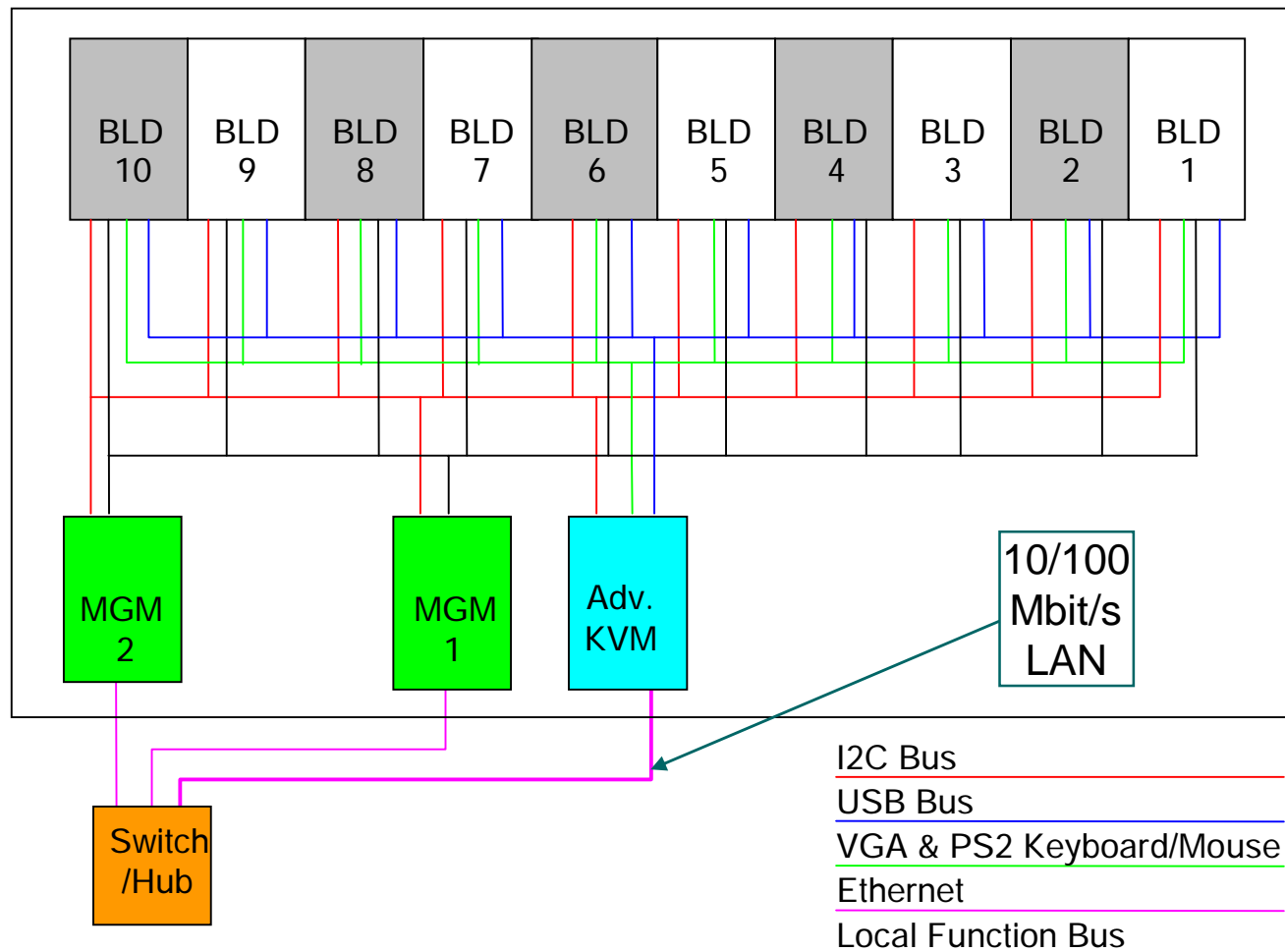




## Řešení FSC – Primergy Blade Server



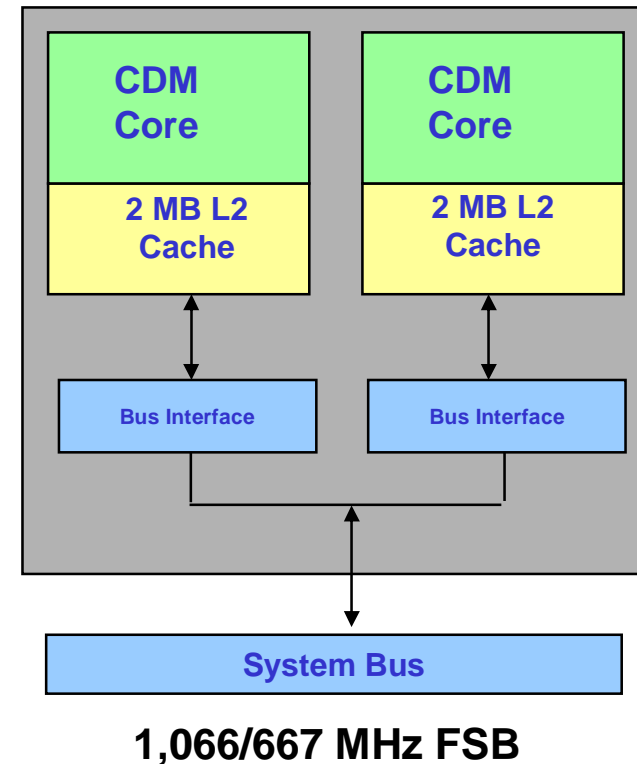
# Řešení FSC – Primergy Blade Server



## Řešení FSC – Primergy Blade Server Dual-Core Intel® Xeon® processor 5000 series

- n Targeted for DP Servers and Workstations
- n Platform
  - o LGA-771 socket
  - o 667/1,066 MHz Front Side Bus
- n Overview/Key Processor Features
  - o Dual-Core processor on 65 nm
  - o 2 MB L2 cache per core (4M total)
  - o Intel® Virtualization Technology
  - o Hyper-threading Technology
- n Performance/Power
  - o Frequency up to 3.73 GHz;
  - o Dempsey 1,066 FSB: TDP = 130W
  - o Dempsey MV mid-power SKU  
3.20 GHz/1,066 FSB: TDP = 95W
  - o Dempsey 667 FSB: TDP = 95W

### Dempsey

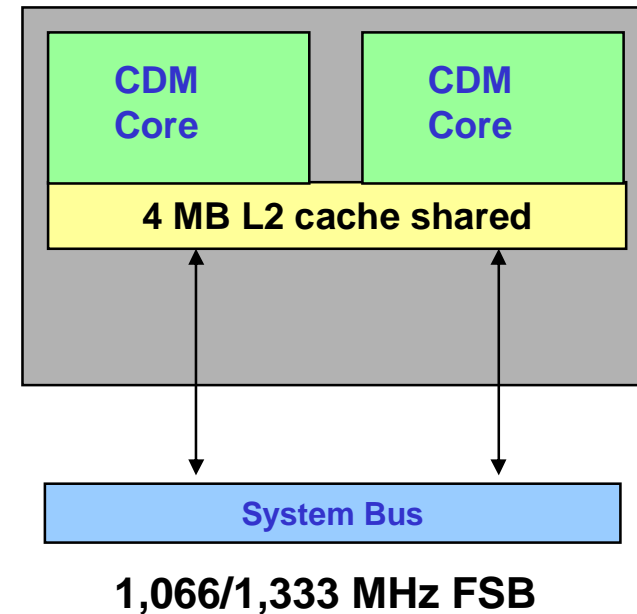


## Řešení FSC – Primergy Blade Server

### Dual-Core Intel® Xeon® processor 5100 series

- n Targeted for DP Servers and Workstations
- n Platform
  - o LGA-771 socket
  - o 1,066/1,333 MHz Front Side Bus dual independent point-to-point
- n Overview / Key Processor Features
  - o Dual core processor on 65 nm
  - o 4 MB shared L2 cache
  - o Intel® Virtualization Technology
- n Performance / Power
  - o Frequency up to 3.00GHz;
  - o Woodcrest 3 GHz variant 5160: TDP = 95W
  - o LV version 5148 1,333 FSB: TDP = 40W
  - o All other Woodcrest: TDP = 65W

### Woodcrest



## Řešení FSC – Primergy Blade Server

### Quad-Core Intel® Xeon® processor 5300 series

n Targeted for DP Servers and Workstations

n Platform

- o LGA-771 socket
- o 1,066 MHz Front Side Bus dual independent point-to-point

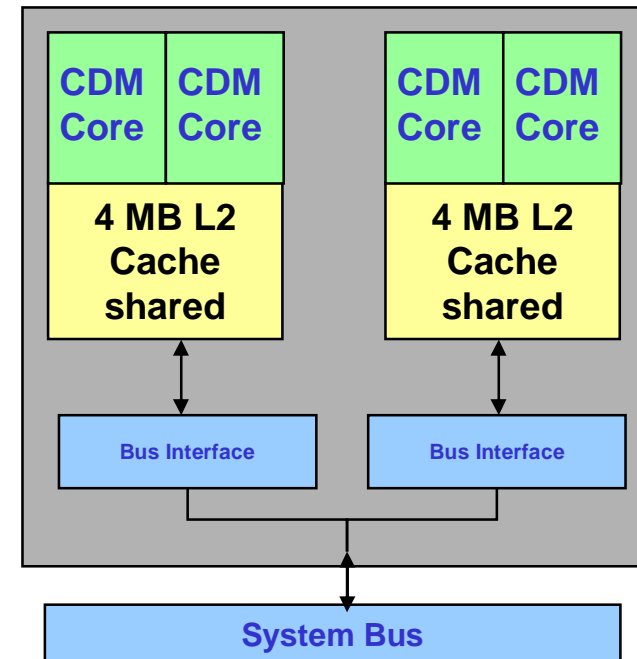
n Overview / Key Processor Features

- o **Quad-Core** processor on 65 nm
- o **2x 4 MB shared L2 cache**
- o Intel® Virtualization Technology

n Performance / Power

- o Frequency up to 1.86 GHz;
- o **TDP = 80W**

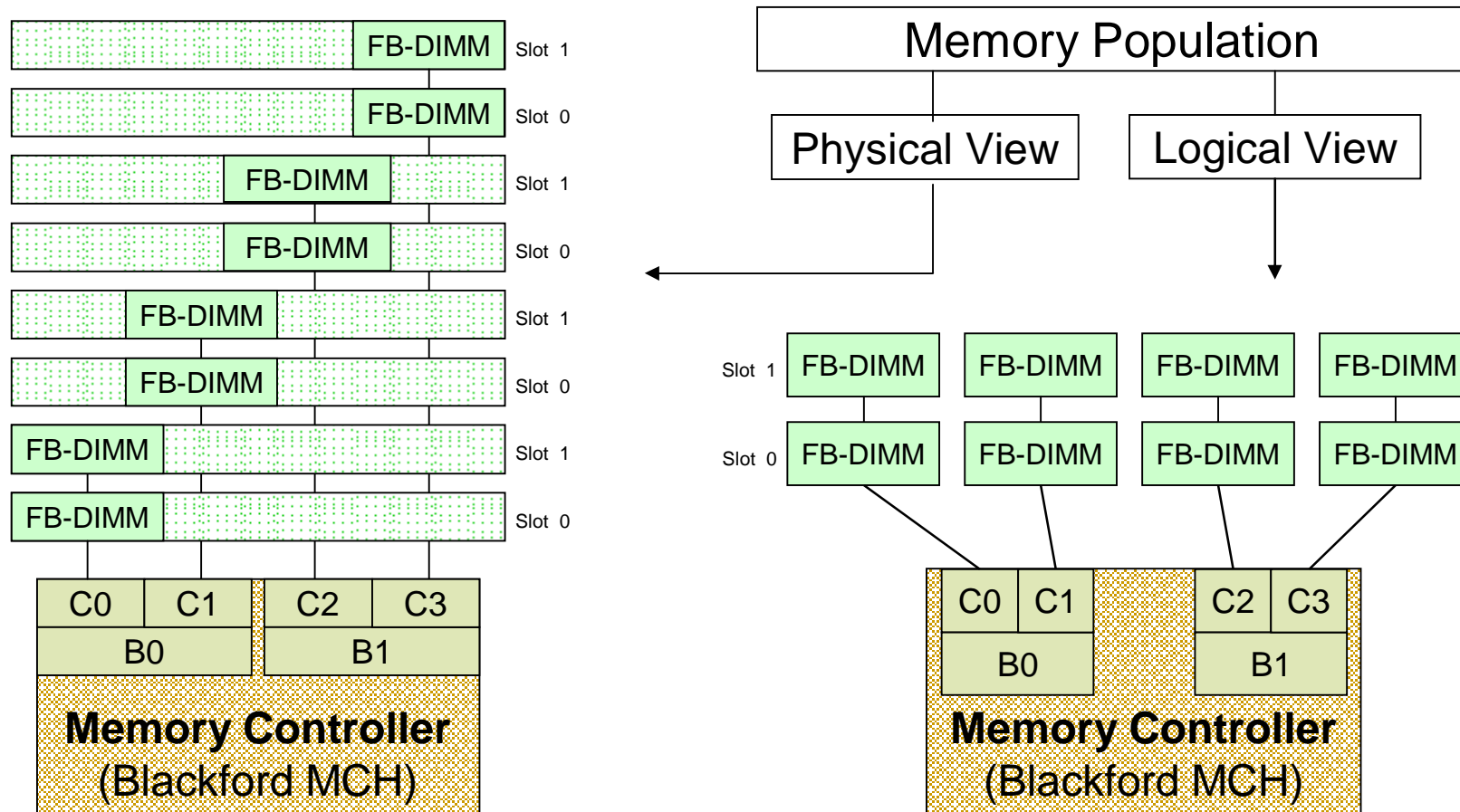
### Clovertown



1,066 MHz FSB

# Řešení FSC – Primergy Blade Server

## Blackford Chipset Memory assignment



## Řešení FSC – Primergy Blade Server

- n No single-point-of-failure
- n Complete hot-plug-functionality
- n Hot-replace of server blades
- n Passive midplane with future-proof connectivity
- n Redundant LAN/SAN blades
- n Redundant management blades

## Řešení FSC – Primergy Blade Server

Lower TCO for a high number of servers

- n Space saving form factor, reduces needed space in rack
- n Common infrastructure use on chassis level
- n Mix and match of Intel and AMD with dual and quad blades
- n Higher reliability by fewer (redundant) components
- n Reduced SAN/WAN costs and simplified cabling
- n Easy and fast extension with additional server blades while in operation
- n Reduced service costs by hot-replace of server and infrastructure blades
- n Redundant server management (two integrated management blades)