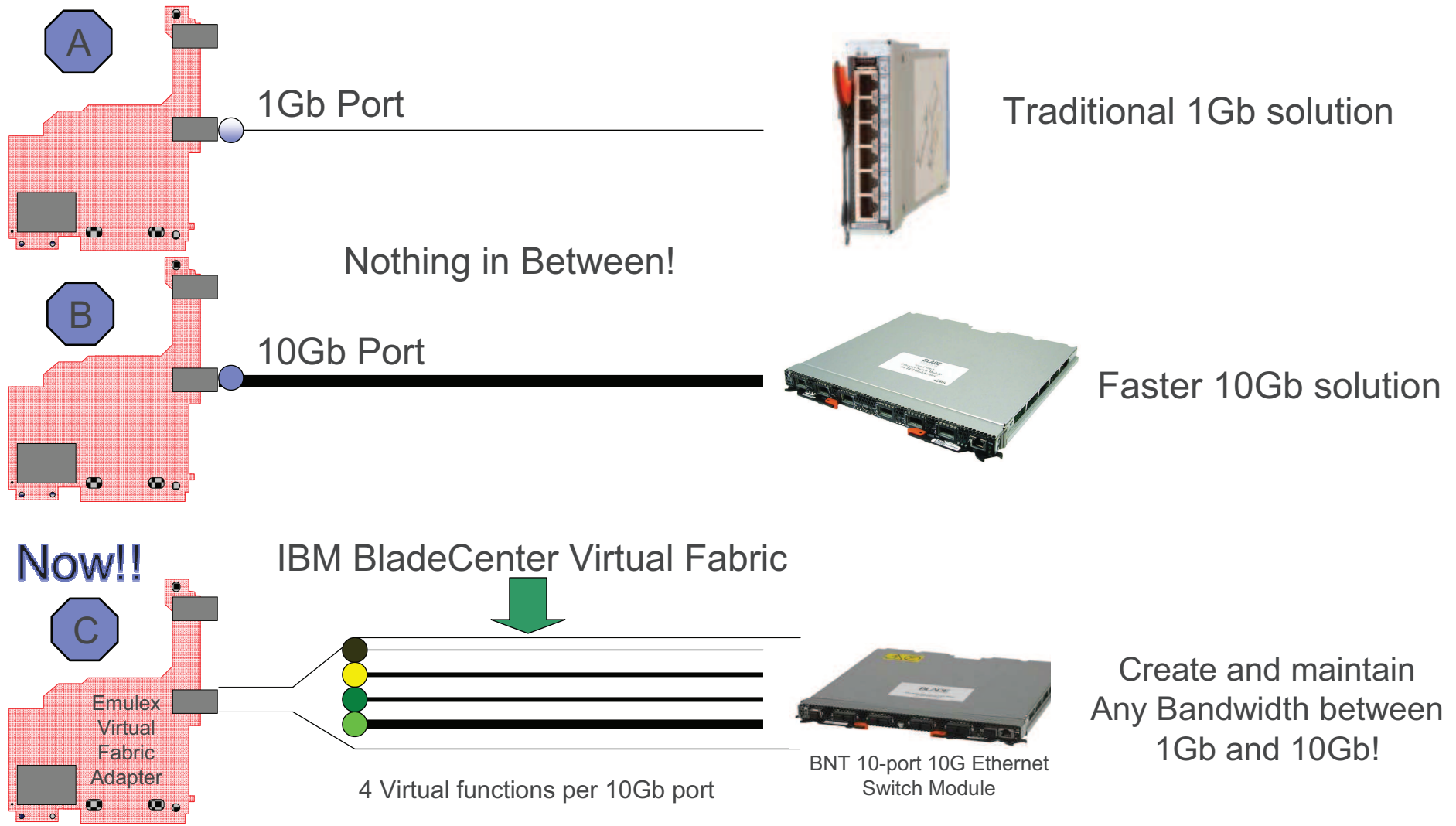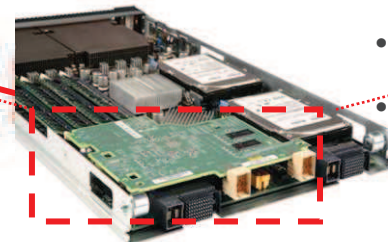# IBM Virtual Fabric Solution

xbu

IBM

Expanding IBM BladeCenter Ability to Offer Choice

A

1Gb Port ⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯ Traditional 1Gb solution

Nothing in Between!

B

10Gb Port ▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬ Faster 10Gb solution

Now!!

C

IBM BladeCenter Virtual Fabric

Emulex
Virtual
Fabric
Adapter

4 Virtual functions per 10Gb port

BNT 10-port 10G Ethernet
Switch Module

Create and maintain
Any Bandwidth between
1Gb and 10Gb!

Reduce hardware costs while maintaining existing setup!

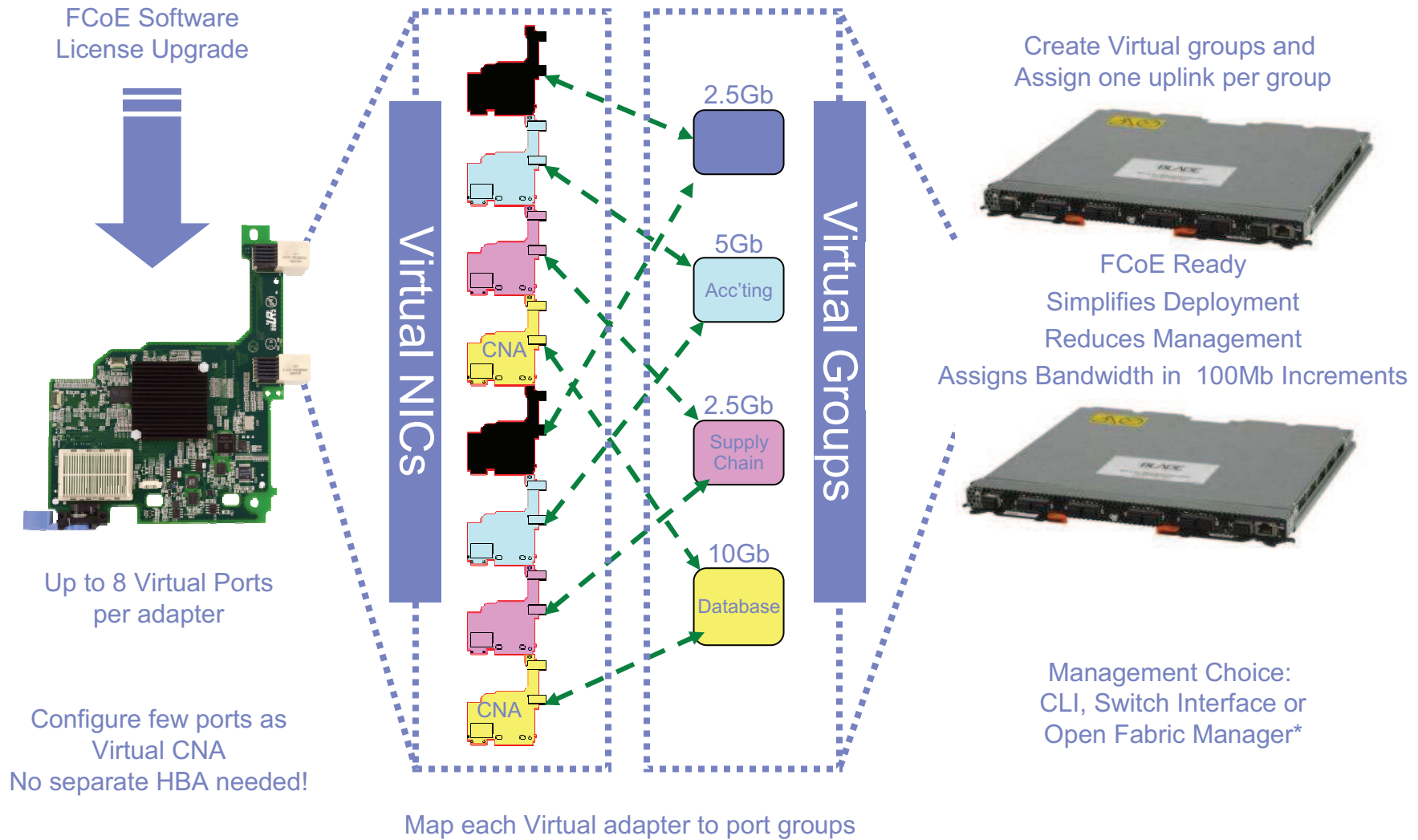Clients require dedicated adapters for:
- -Dedicated Bandwidth guarantee
- -Physical separation of Data
- -High availability

2Gb	4Gb	2Gb	2Gb
Corp LAN	Exchange	VMotion LAN	Mgmt LAN

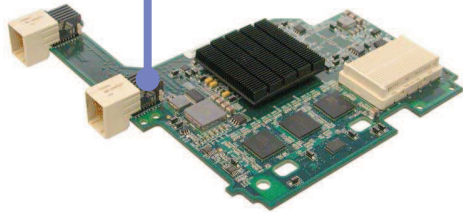Virtualized Single Emulex Virtual Fabric Adapter
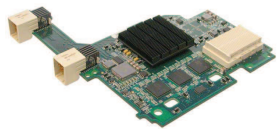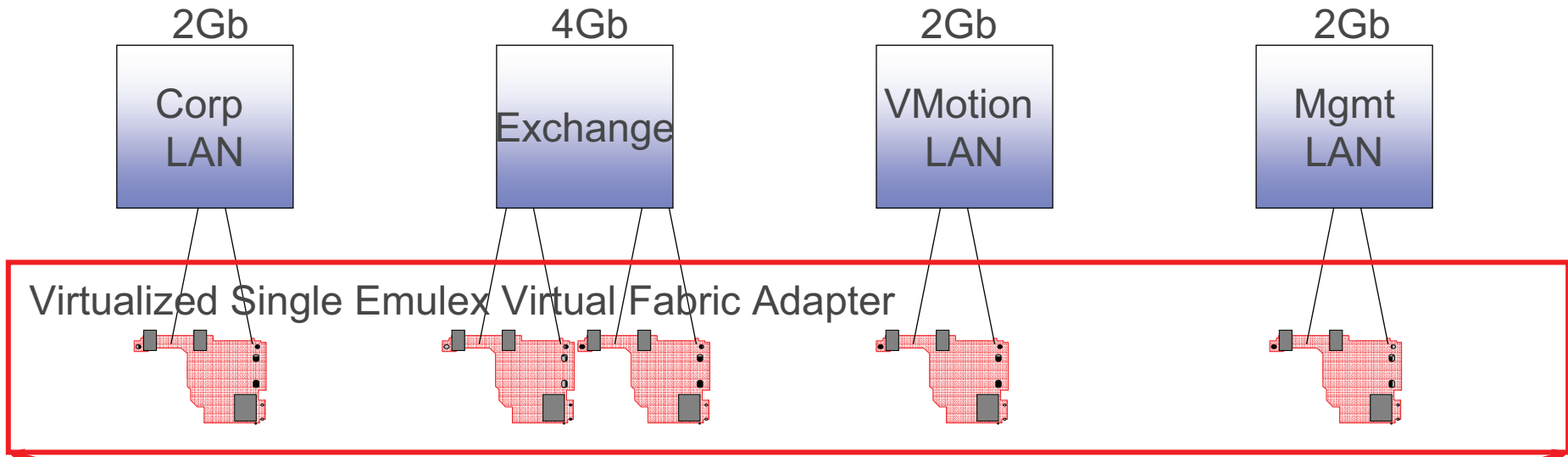
- •Replace multiple adapters with one
- •Up to 4 Virtual NICs per port.
- •Offers same benefits with less hardware.

xbu

Virtual NIC, IO Convergence, iSCSI all-in-one solution

FCoE Software
License Upgrade

Up to 8 Virtual Ports
per adapter

Configure few ports as
Virtual CNA
No separate HBA needed!

Virtual NICs

CNA

CNA

Virtual Groups

2.5Gb

5Gb
Acc'ting

2.5Gb
Supply
Chain

10Gb
Database

Create Virtual groups and
Assign one uplink per group

FCoE Ready

Simplifies Deployment

Reduces Management

Assigns Bandwidth in 100Mb Increments

Management Choice:
CLI, Switch Interface or
Open Fabric Manager*

Map each Virtual adapter to port groups

58

Multiple ways to manage your Virtual Fabric solution

1. Command Line Interface
• Virtual port setup on adapter & group setup on switch
• Bandwidth allocation
• Mapping between virtual ports, virtual groups & vSwitch

2. Graphical User Interface
• Virtual port setup on adapter & group setup on switch
• Bandwidth allocation
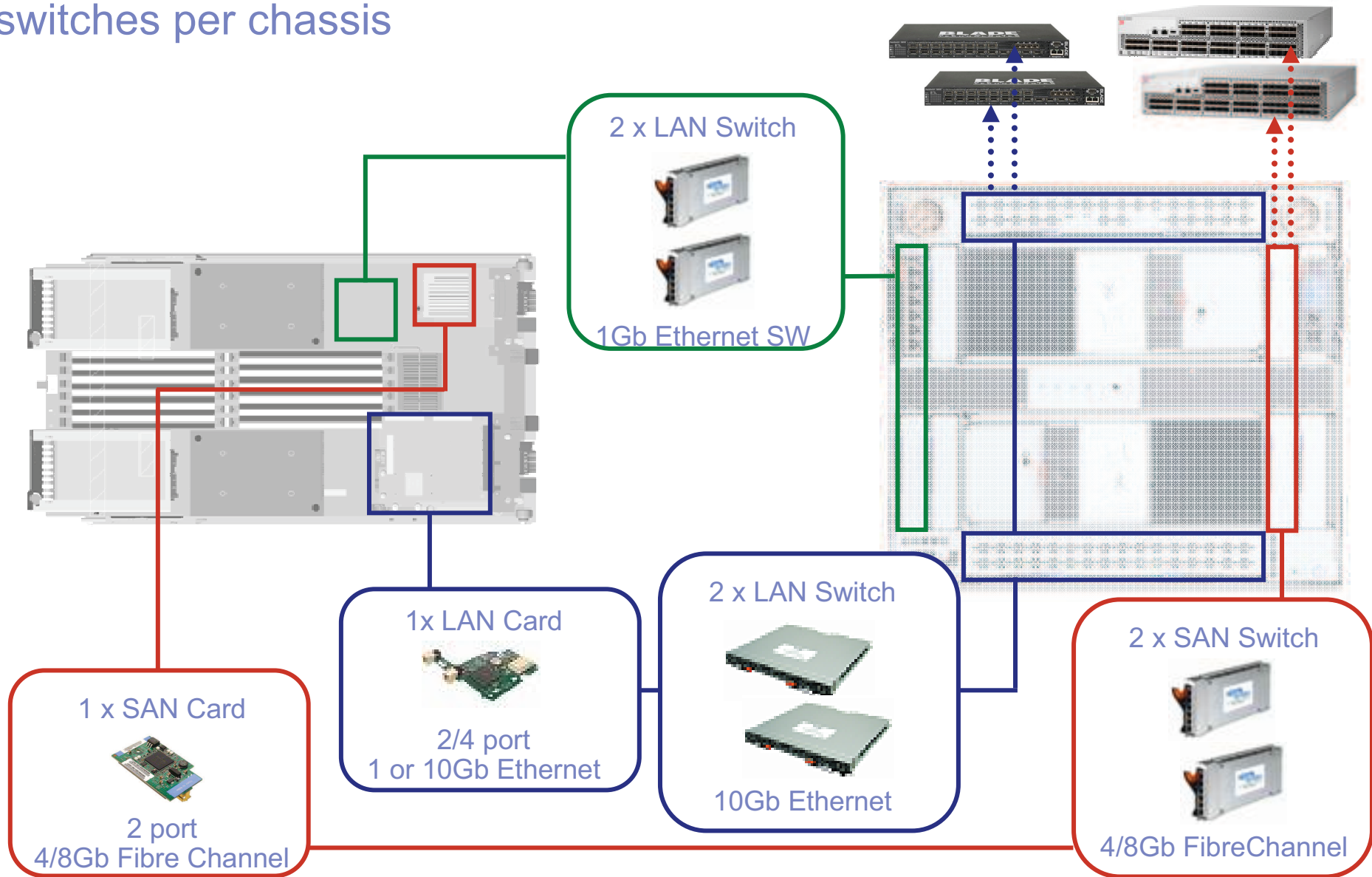• Mapping between virtual ports, virtual groups & vSwitch

3. BladeCenter Open Fabric Manager
• Easy to use web-based graphical user interface
• Manage up to 100 chassis/1400 blades from a single console
• Auto discover of chassis for easy deployment
• Automated failover
• Virtual port configuration
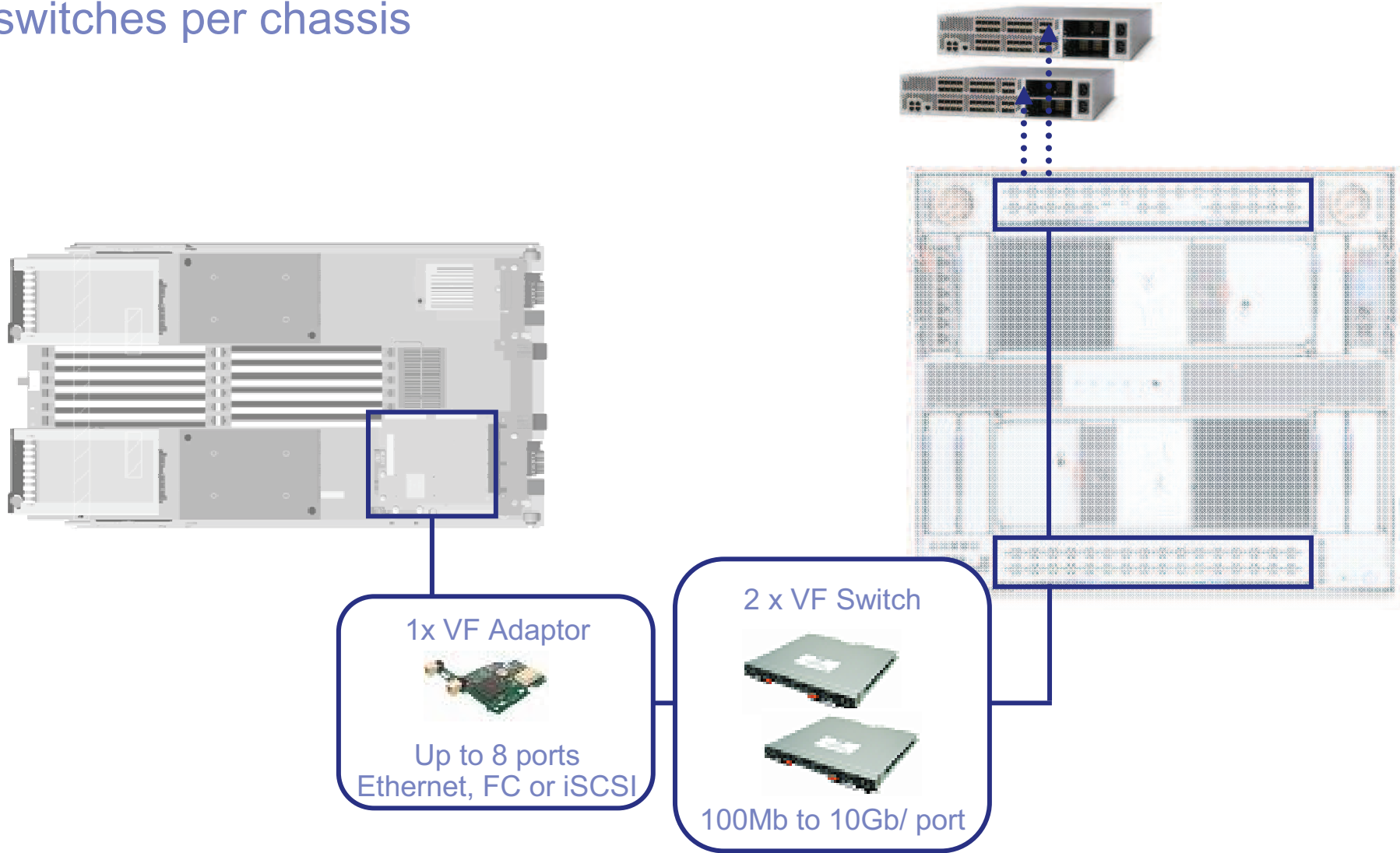• Virtual port bandwidth configuration
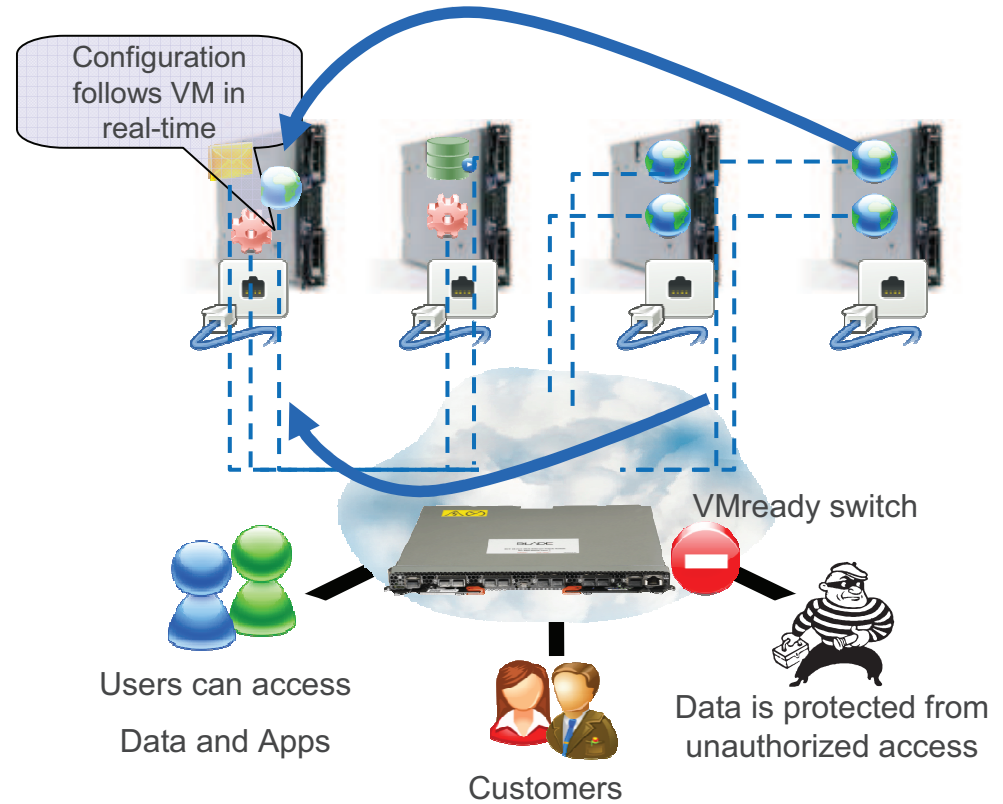• 'Smart Failure Monitoring'

Emulex
Virtual Fabric
Adapter

BNT
Virtual Fabric
10Gb Switch

Traditional setup for 6 ports requires 2 adapters per server and 6 switches per chassis

2 x LAN Switch

1Gb Ethernet SW

1x LAN Card

2/4 port
1 or 10Gb Ethernet

2 x LAN Switch

10Gb Ethernet

1 x SAN Card

2 port
4/8Gb Fibre Channel

2 x SAN Switch

4/8Gb FibreChannel

Virtual Fabric setup for 6 ports requires 1 adapter per server and 2 switches per chassis

1x VF Adaptor

Up to 8 ports
Ethernet, FC or iSCSI

2 x VF Switch

100Mb to 10Gb/ port

Introducing VMready™ - Virtual Machine aware networking

VMready Switches

Server

Server

Server

CNA

10G

CNA

v-ports

1000's of Virtual ports

Configuration
follows VM in
real-time

VMready switch

Users can access

Data and Apps

Customers

Data is protected from
unauthorized access
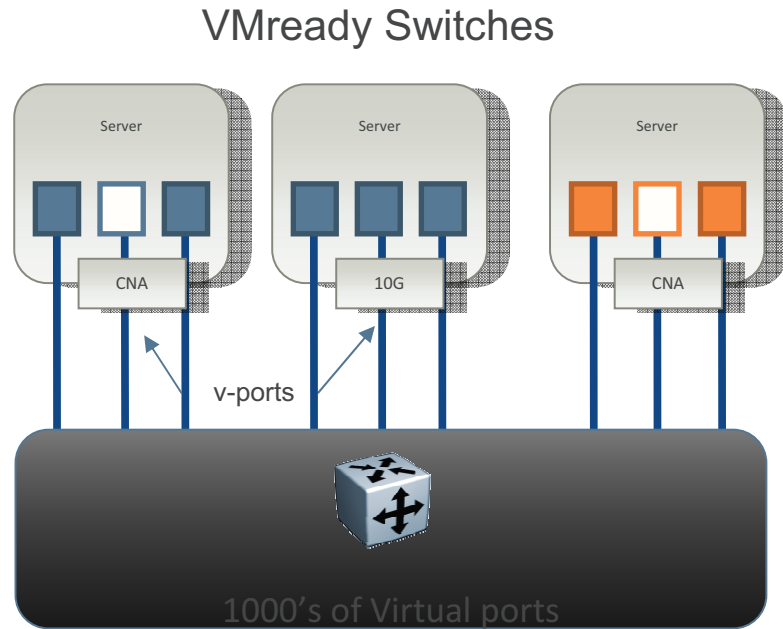
Virtual ports are the new switching unit

- • Fully aware of Virtual Machines

- • Configuration per virtual port

- • Automated Network mobility

- • Configuration follows Virtual Machines in real-time during migration

VMready networks are VM aware

• Security, QoS, policies follow the VM

• With VMready Migration is: Safe, Usable & Easy

• Automatic network configuration

• Enables Dynamic data centers