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Taking Virtualization to the Next Level: Private Cloud and Bring Your Own Device (BYOD)



Presented by:
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FOCUS

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Taking Virtualization to the Next Level

Key Takeaways:

- **Cloud & Virtualization are top IT priorities**
  - Server virtualization: 50-70% growth remaining
  - Move to private cloud driven by CIO
  - Success requires infrastructure optimization, automation, management, and self-service
- **Consumerization of IT & BYOD are next**
  - Desktop, app delivery & mobile projects must connect to cloud
- **CIOs and IT staff are looking for guidance**
  - Cloud success is career maker/breaker

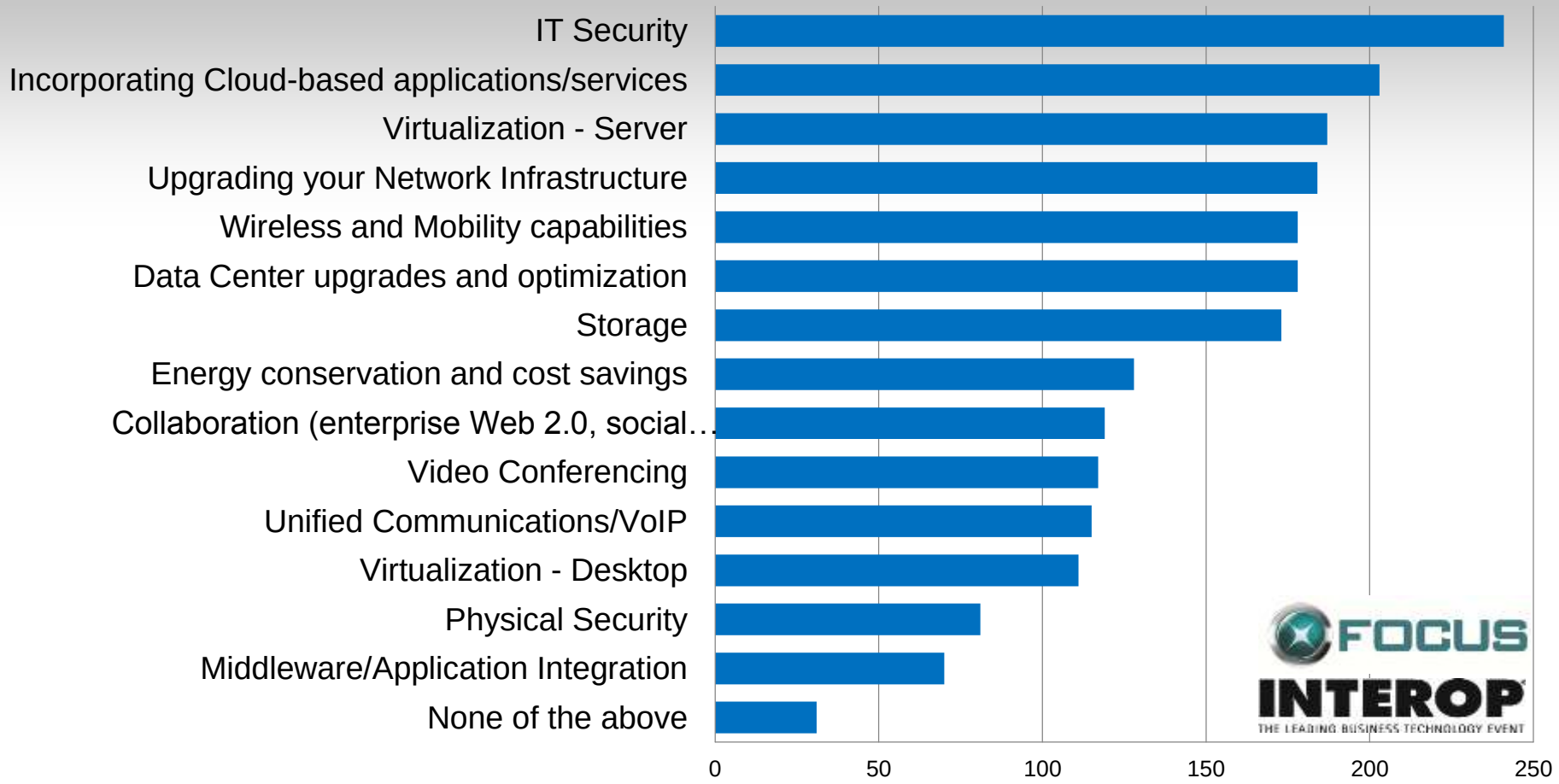
➢ Huge need for partners with right solutions, knowledge, skill sets, experience and abilities – from business level to technical best practices

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Technology Implementation Priorities 2011/2012



Q: Which of the following technology initiatives are currently being implemented OR will begin implementation within your organization over the next 12 months.

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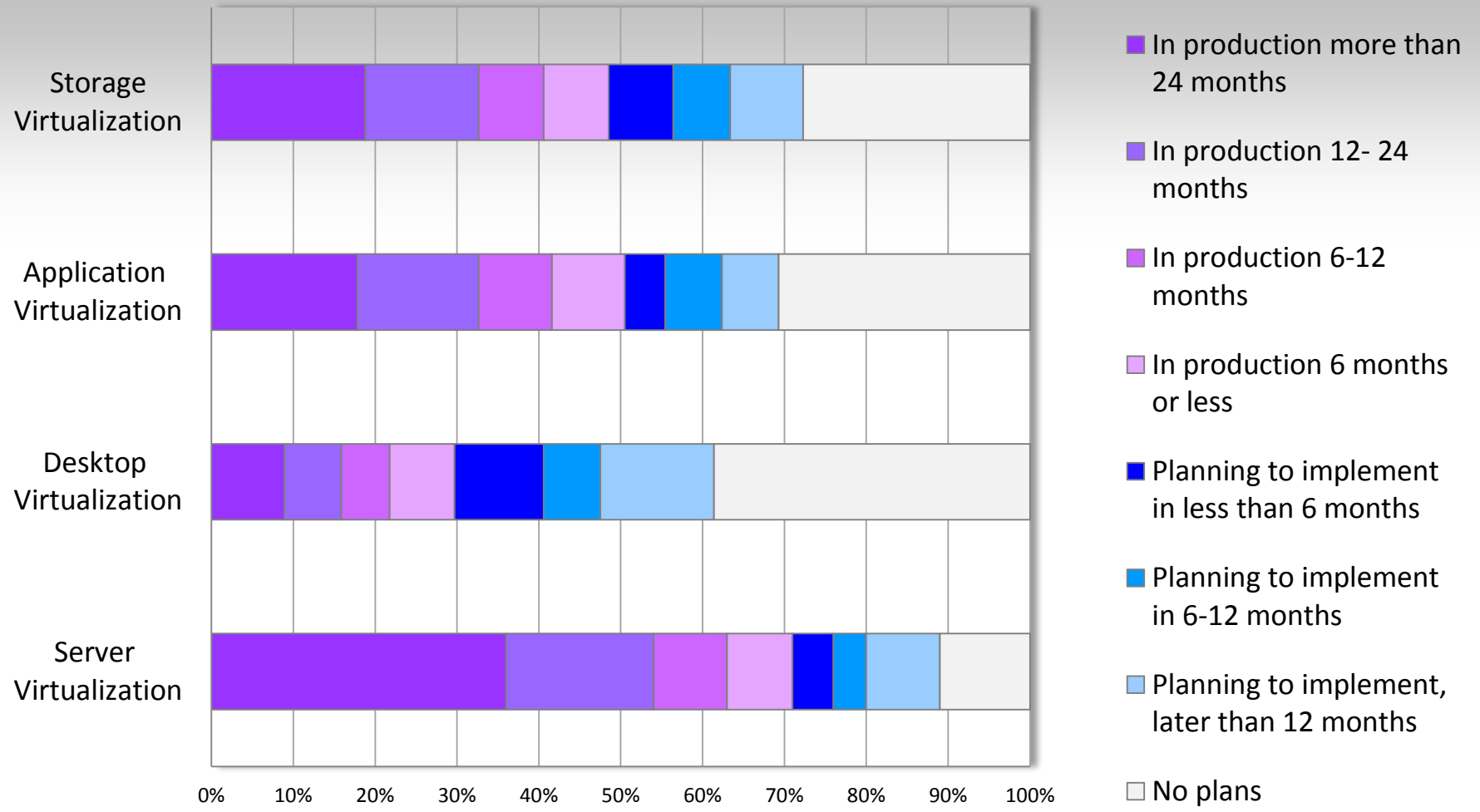
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State of the Industry: Virtualization

- Virtualization is ubiquitous
  - New VM created every 6 seconds. > than # live births in US
  - 5.5 vMotions per second. > than aircraft in flight
  - Virtual first policies
  - 34% using 2 virtualization solutions, 36% using 3 or more
  - 40% of x86 server workloads have been virtualized (Gartner)
  - 65% to 70% will be virtualized by 2013 (IDC prediction)

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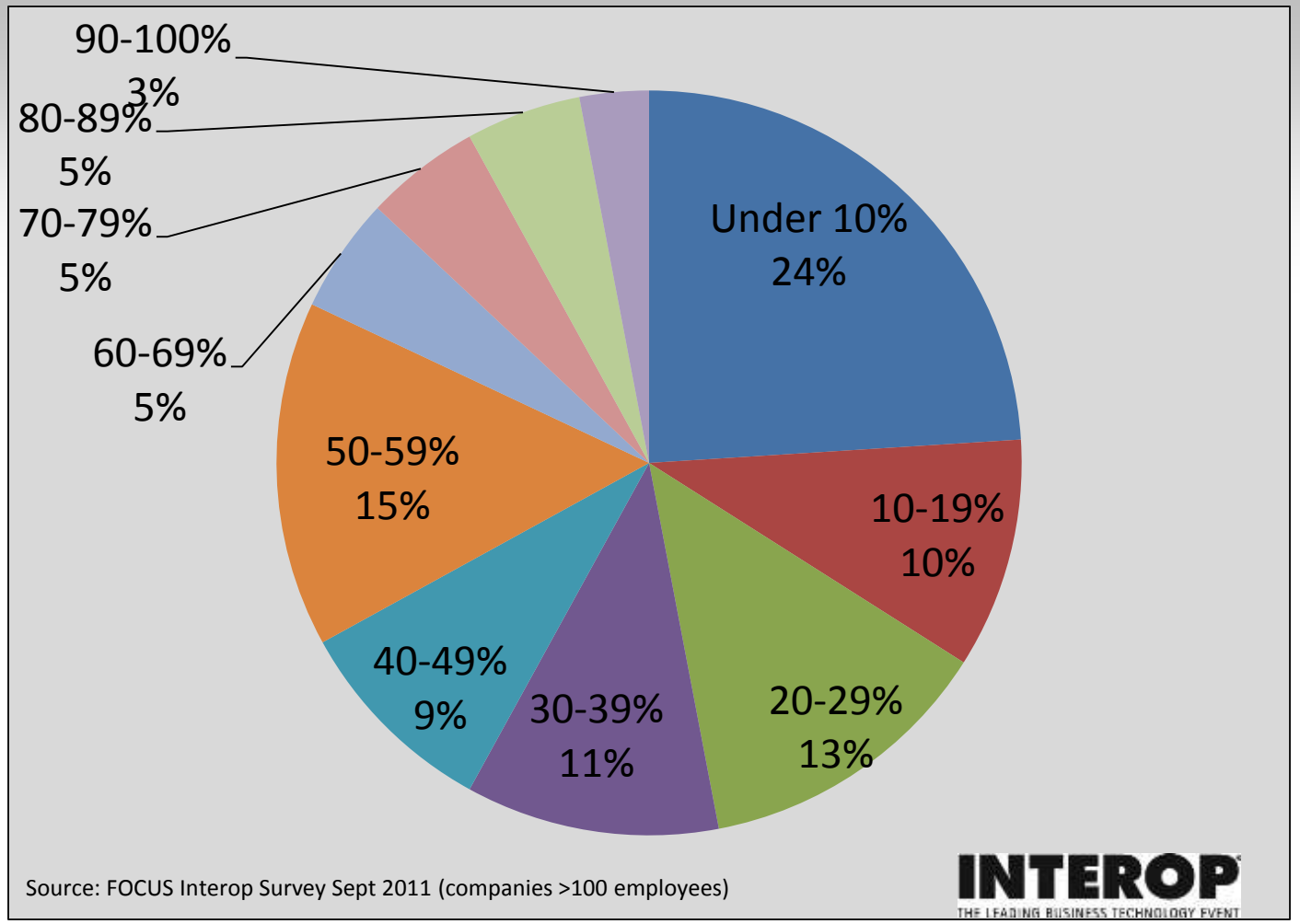
Virtualization Adoption 2011



Source: FOCUS Interop Survey Sept 2011 (Companies with >100 employees)

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Percent Virtualized



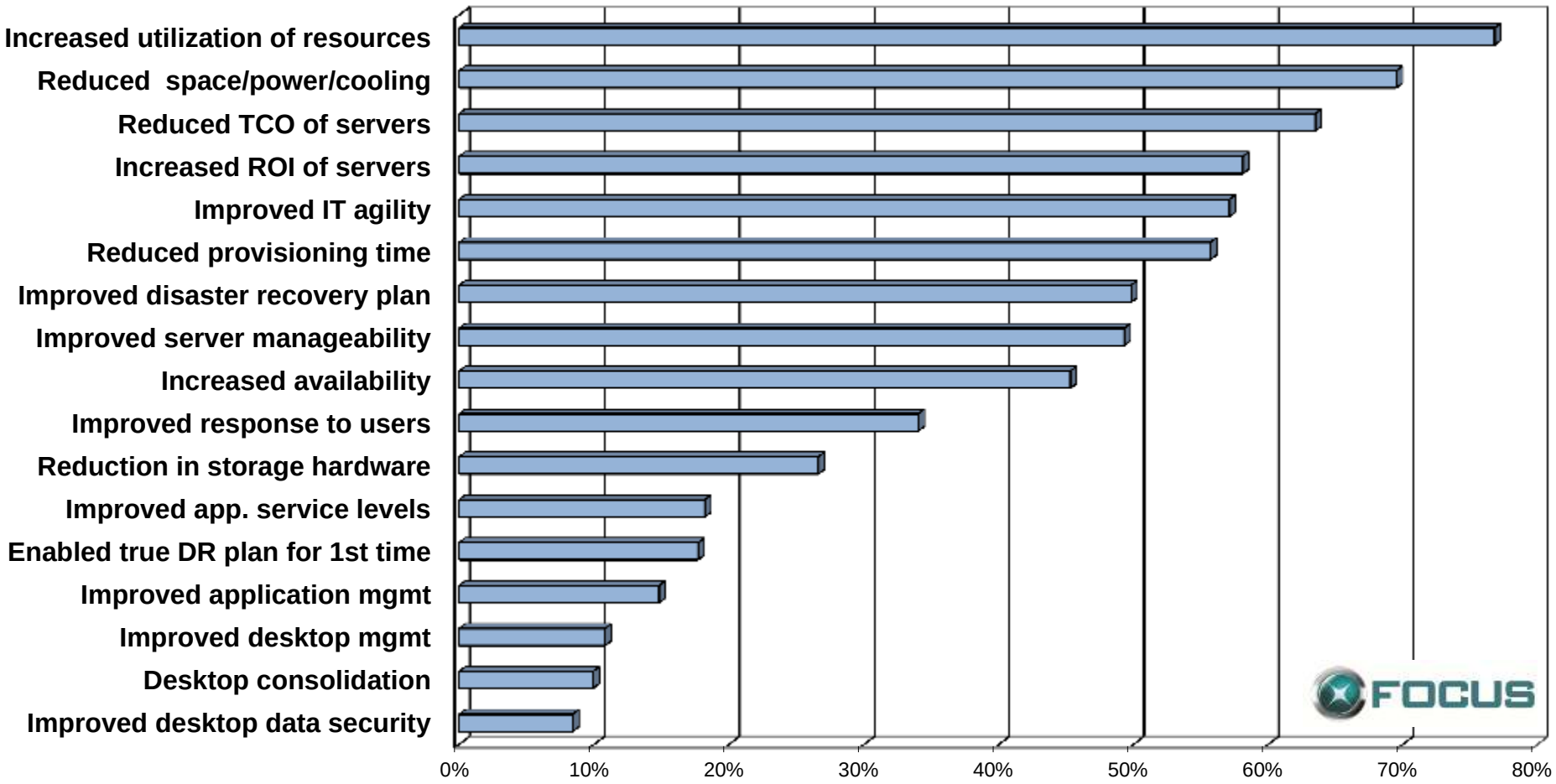
Source: FOCUS Interop Survey Sept 2011 (companies >100 employees)

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Actual Benefits Achieved

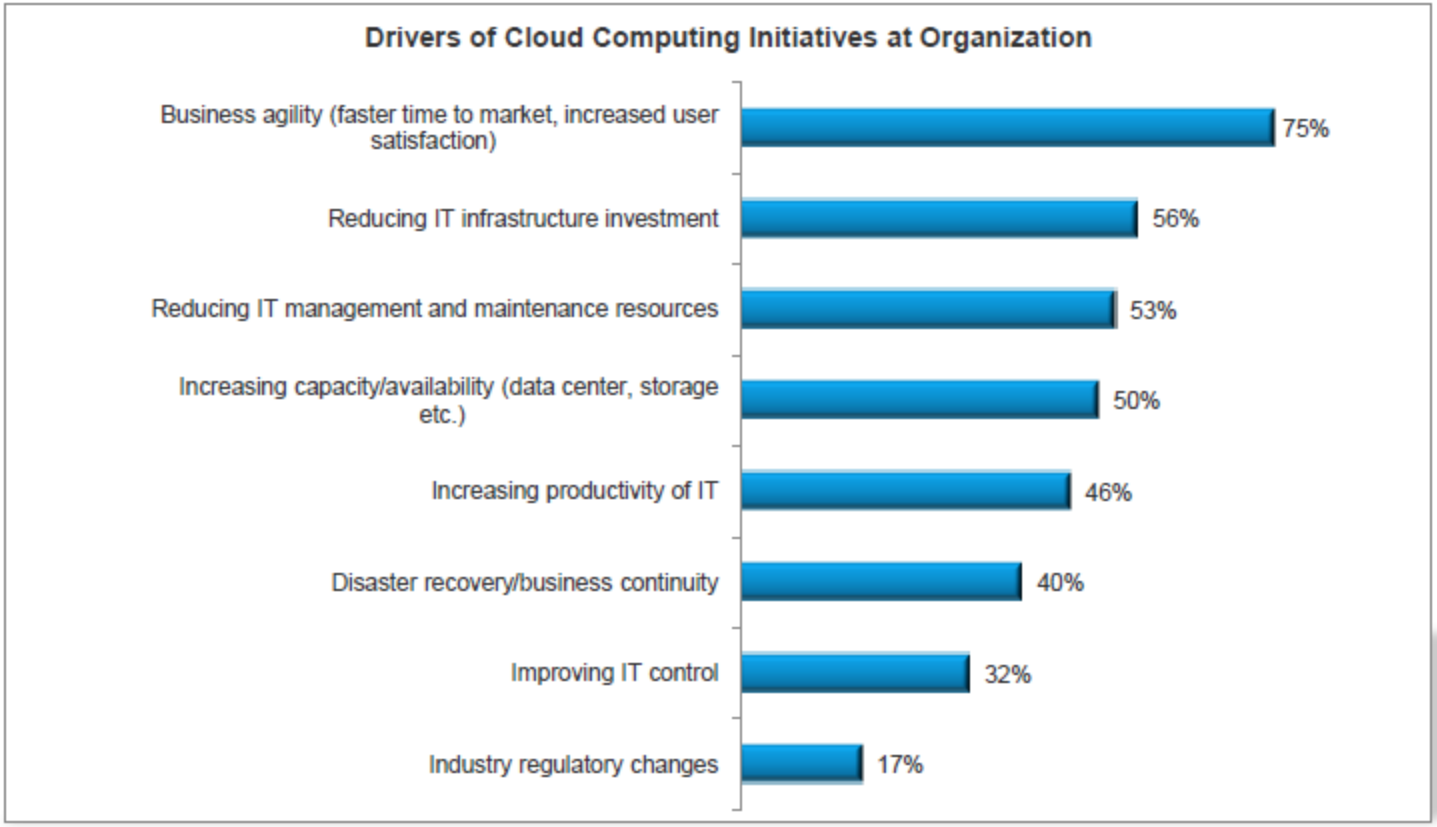


Source: FOCUS Research Series – Managing the Virtual Environment

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Cloudify to Reach the Next Level



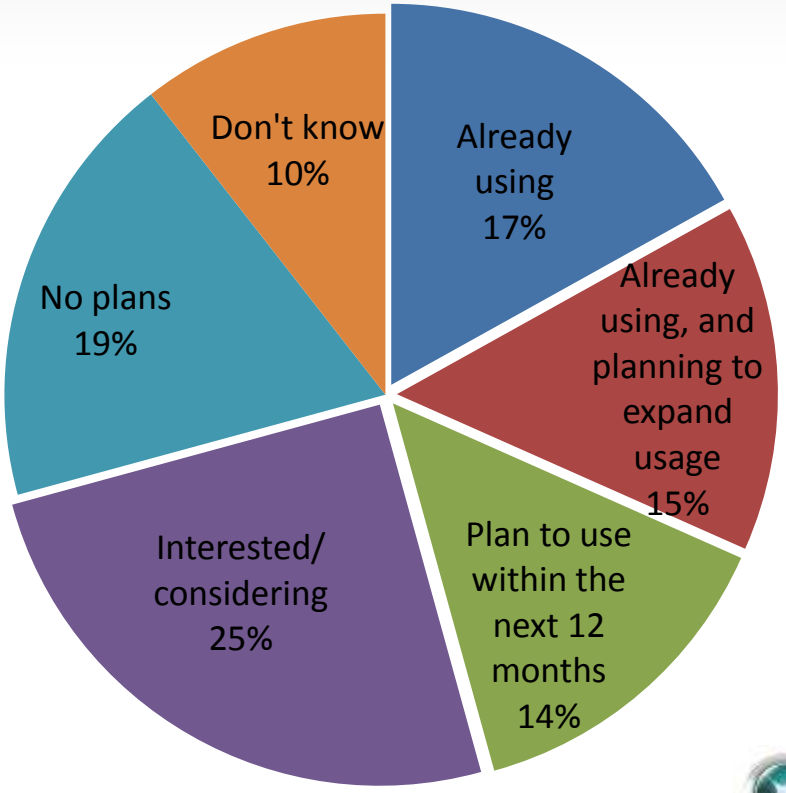
Base: 636 Total respondents; 234 US respondents; 202EMEA respondents; 200 APAC respondents

Source: CIO Global Cloud Computing Adoption Survey January 2011

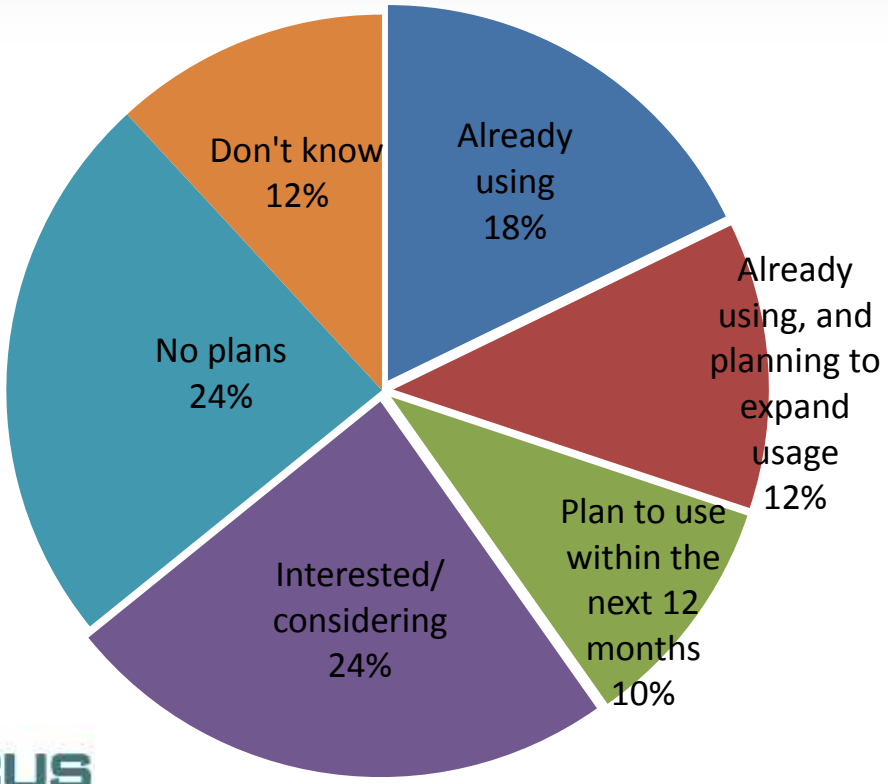
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Cloud Plans

Private Cloud Plans



Public Cloud Plans



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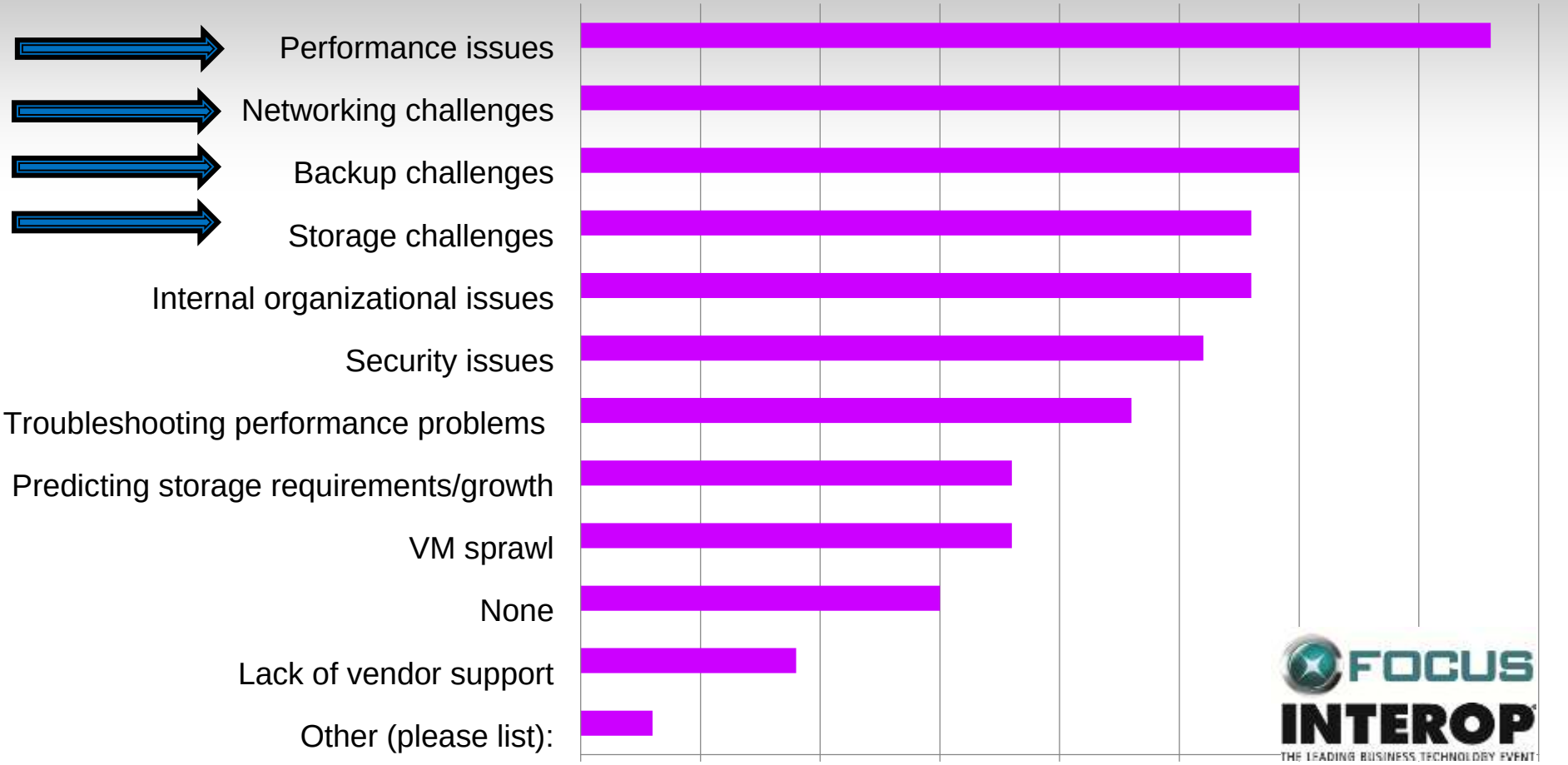
State of the Industry: Virtualization -> Cloud

- Cloud fever/cloud washing
- Still confusion about virtualization vs cloud
- Virtualization success to-date = economics of consolidation
- Cloud drivers are agility, economics, and optimization
- Virtualization + optimization + agility = cloud

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Virtualization Expansion Pain Points

Virtualization Pain Points 2011



Source: FOCUS Interop Survey Sept 2011

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The Road from Virtualization to Private Cloud



From Virtualization to Private Cloud

Virtualized Infrastructure
Storage and networking optimized for virtualization
Automated, policy-based dynamic resource management
Usage based cost visibility – chargeback/showback
Self-service provisioning
Service Catalog

Source: FOCUS, LLC

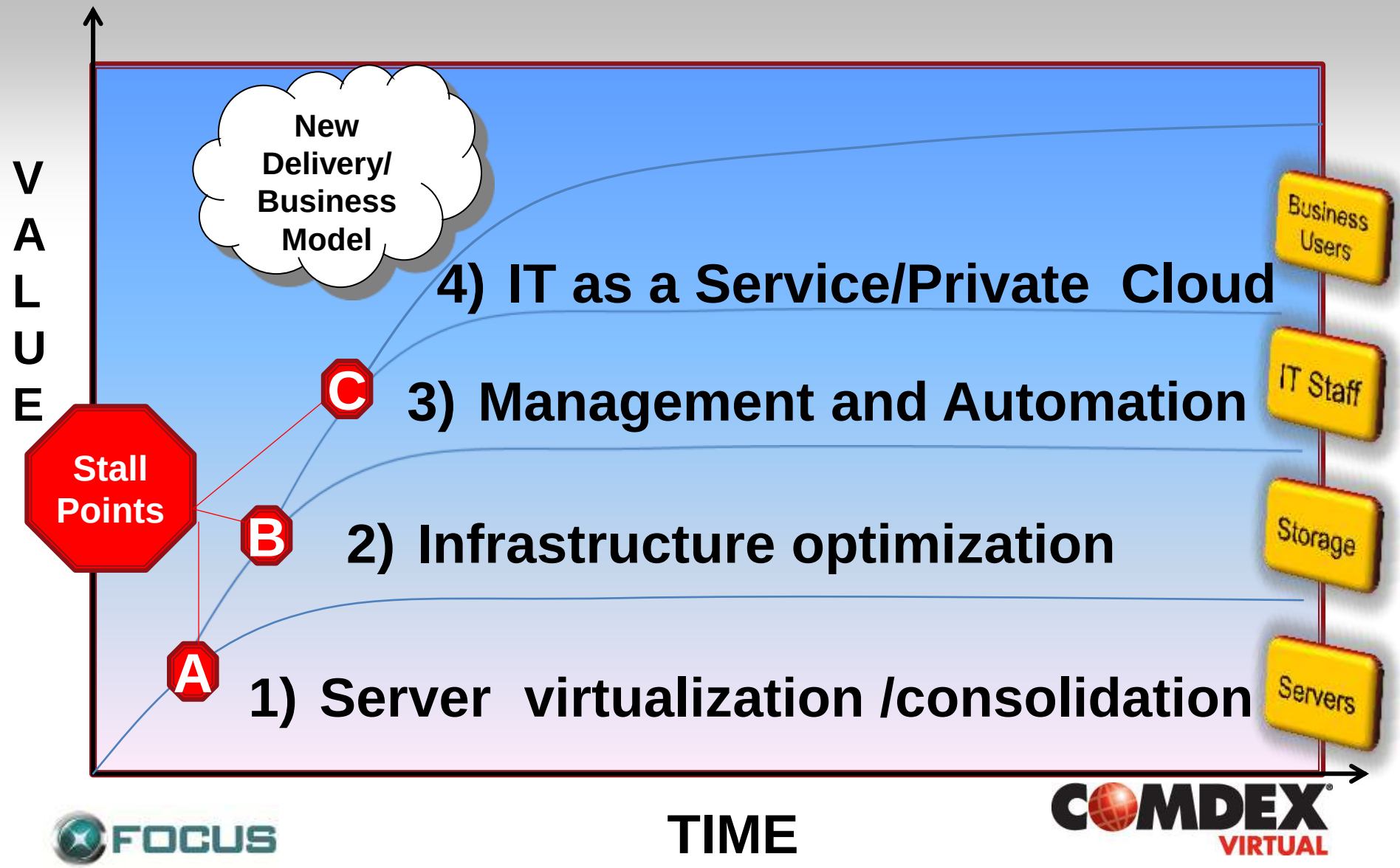


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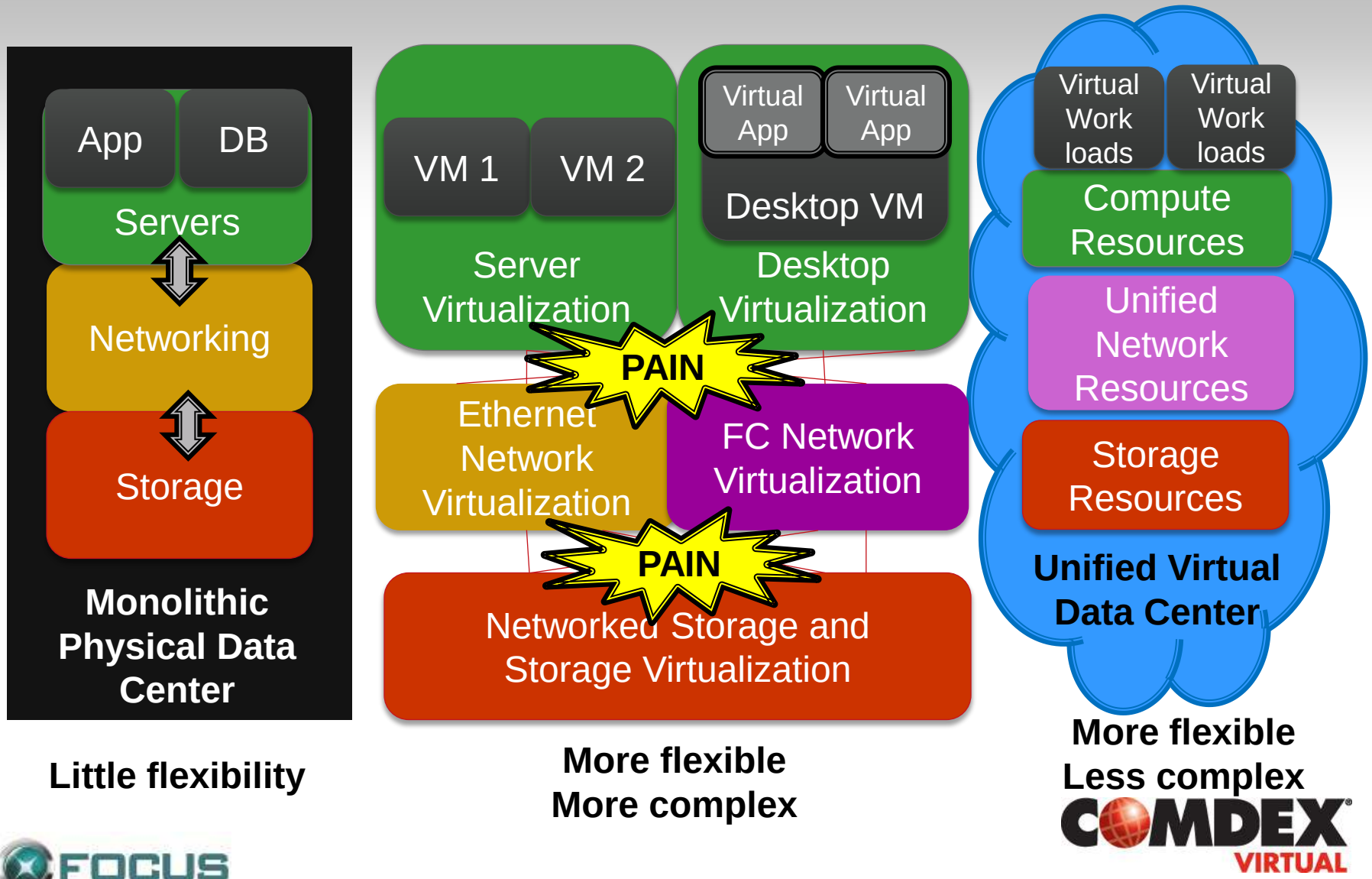
Virtualization Phases



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Data Center Transformation:
Increased Flexibility without Increased Complexity



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Public Lessons for Private Cloud

- Focus on delivering services to business users
- IT as a service provider, users as service consumers
- Must be easy to consume or users go public
- Define a service once (apps, drivers, hw, tools, mgmt and policies), then deploy whenever/wherever
- Standardization, automation are key

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Desktop Transformation



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The New “Desktop”



Everything we have today PLUS
Client hypervisors
Mobile hypervisors
Apps within a “modern” browser
Data in the cloud
Encrypted local data
Windows as a Service
Portable apps
???

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Consumerization of IT (CoIT)

User influence and expectations

- Devices – tablets, mobile devices/smartphones
- User preferences
- Instant on, access, response, real time info
- IT underestimated the number of workers using consumer devices for work by 50%
- 67% of employees under 30 feel they have better technology at home than at work (Forrester)
- Born digital vs taught digital
- Shift from desktop with apps to apps on desktops, laptops, tablets, phones and kiosks

Unmet expectations=circumvention

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Desktop and Application Trends

Endpoint devices

- BYOPC – BYOC - BYOD – laptops, tablets, mobile
- 1.4 B user devices by 2012; average user has 3
- Clients - zero is the new thin, client hypervisors are the new cool
- Average corporation has over 1M unique user configurations

Desktop OS

- Win 7 upgrade, Windows 8 Preview

Desktop/app/user virtualization

- More reasonable VDI CapEx - storage $30-50 user, <$500 per DT
- Shared non-persistent - been too hard
- VDI – A solution not THE solution
- App virtualization & user virtualization/personalization helping Win 7 migrations and key to long term success

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Virtual Desktop Infrastructure

Virtual Desktops (VMs)

App 1 App 2 Guest OS

App 1 App 2 Guest OS

App 1 App 2 Guest OS

Hypervisor

Server

User Access Devices

PC

Thin Client

Laptop

Hosted Apps/Published Desktop

PC

Thin Client

Laptop

App 1 App 2

App 1 App 2

App 1 App 2

App 1 App 2

Windows (TS/RDS)

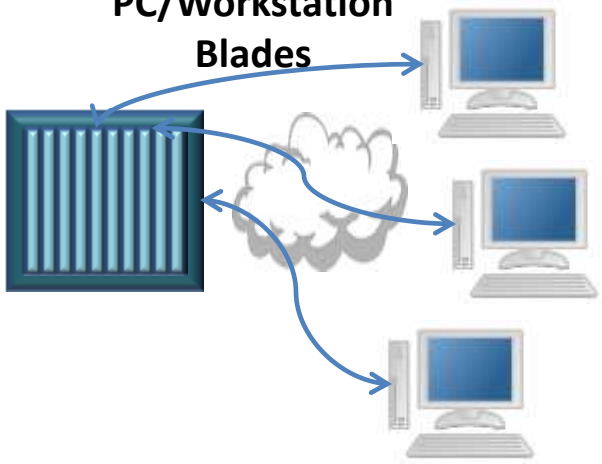
Server

XenApp/TS/RDS

Server Hosted

Client Hosted

Traditional PC or PC/Workstation Blades



HP, IBM, Dell

Locally Managed Virtual Desktop

Win 7 XP

Mac OS

Win 7 Linux

Microsoft Virtual PC, Windows Virtual PC
Parallels Desktop, Oracle VirtualBox
VMware WorkStation, Player, Fusion,
Xen Client, View Local

Managed Remote Virtual Desktop

Secured/Managed Virtual Desktop

Unmanaged Personal/ Home /Contractor Desktop

MED-V (Kidaro),
VMware ACE
XenClient, View Local

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The New Desktop is more than VDI

Desktops

- Server Hosted: VDI and TS/RDS/XenApp
- Client Hosted: PCs, locally managed, centrally managed

Applications

- Application virtualization - isolation/sandboxing
- Application streaming
- App stores/catalogs

Web Apps, SaaS apps, Mobile apps

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Highlights: Latest and Greatest

Citrix

- XD 5.5 – RingCube personal vDisk, 150 HDX enhancements, XC 2
- XD 5 – simpler install, improved consoles, concurrent licensing option, XenClient updates, Intellicache, Receiver/Dazzle integration, more App-V integration
- CloudStack from Cloud.com acquisition. Cloud Gateway– SSO, web apps, cloud apps, NetScaler/Cloud Bridge private to public(back end)

VMware

- View 5 –persona mgmt (RTO), PCoIP enhancements, unified comms
- Horizon App Manager–app catalog, self-service portal, SaaS apps and now Windows via ThinApp capabilities – beta 2011 YE and Horizon Mobile hypervisor
- Preview - project AppBlast – HTML 5 and Octopus – data sync

MS

- RemoteFX, dynamic memory
- Systems Center 2012 and App Controller
- Win 8 dev preview, including Hyper-V client hypervisor

Ecosystem

- Growth in management tools for desktop and app virtualization
- User personalization/virtualization partners
- Transformation tools and services

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