![Avaya - The Power of We™]

Avaya Aura® Virtualized Environment
Avaya Aura® on VMware

Customer Presentation

Virtualization Among CIO's Top Priorities

42%

OF COMPANIES ARE VIRTUALIZING OR PLANNING TO VIRTUALIZE THEIR UC APPLICATIONS

Nemertes Research March 2012

Why Virtualization for Unified Communications?
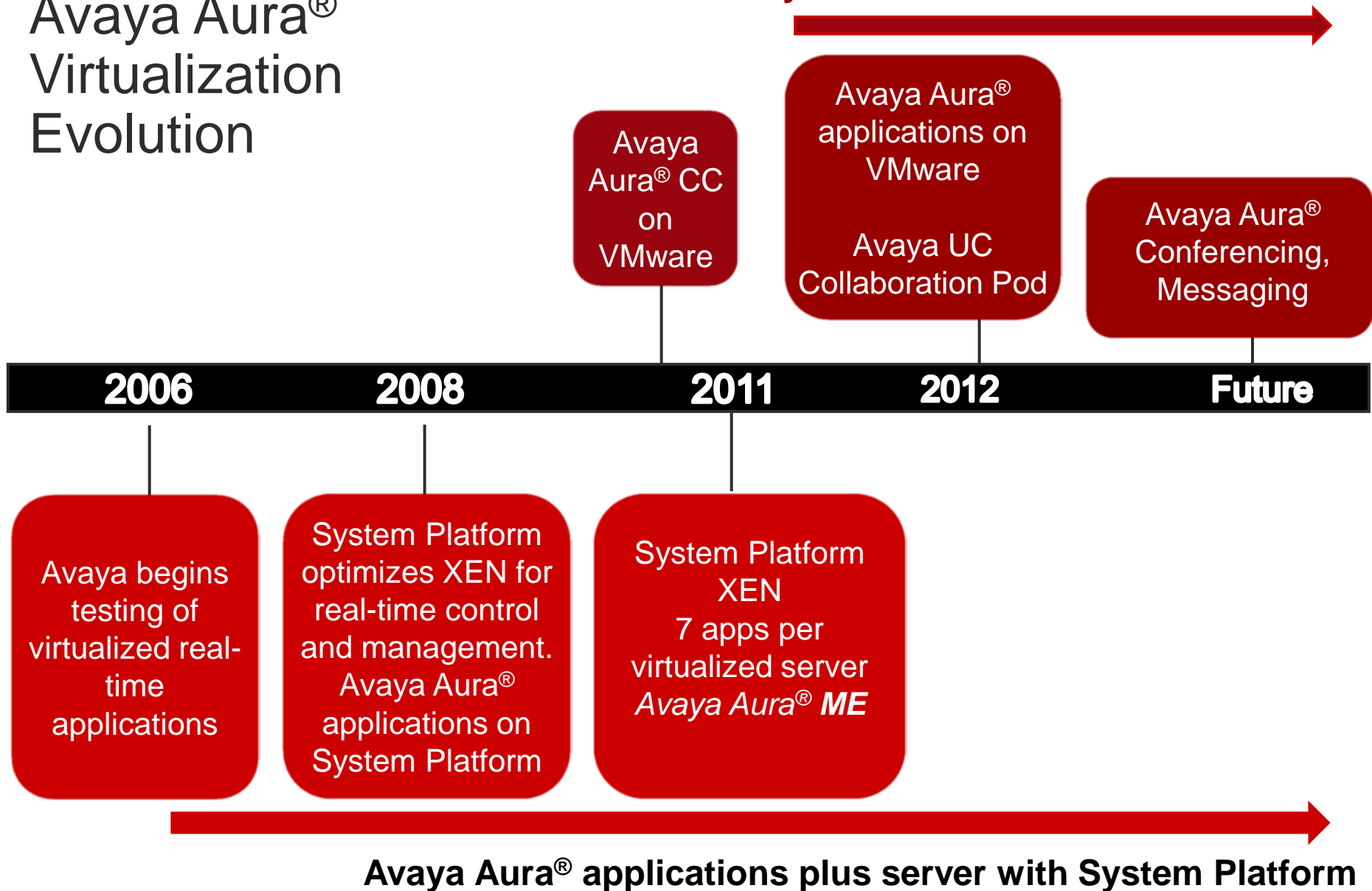
▶ **Server infrastructure consolidation**

▶ **Reduced cost of installs and upgrades**

▶ **Faster adoption of collaboration capabilities**

▶ **Enablement of hosted UC services**

AVAYA

Avaya Aura® Virtualization Evolution

Avaya Aura® Virtualized Environment

Avaya Aura® CC on VMware

Avaya Aura® applications on VMware

Avaya UC Collaboration Pod

Avaya Aura® Conferencing, Messaging

2006	2008	2011	2012	Future

Avaya begins testing of virtualized real-time applications

System Platform optimizes XEN for real-time control and management. Avaya Aura® applications on System Platform

System Platform XEN 7 apps per virtualized server *Avaya Aura® ME*

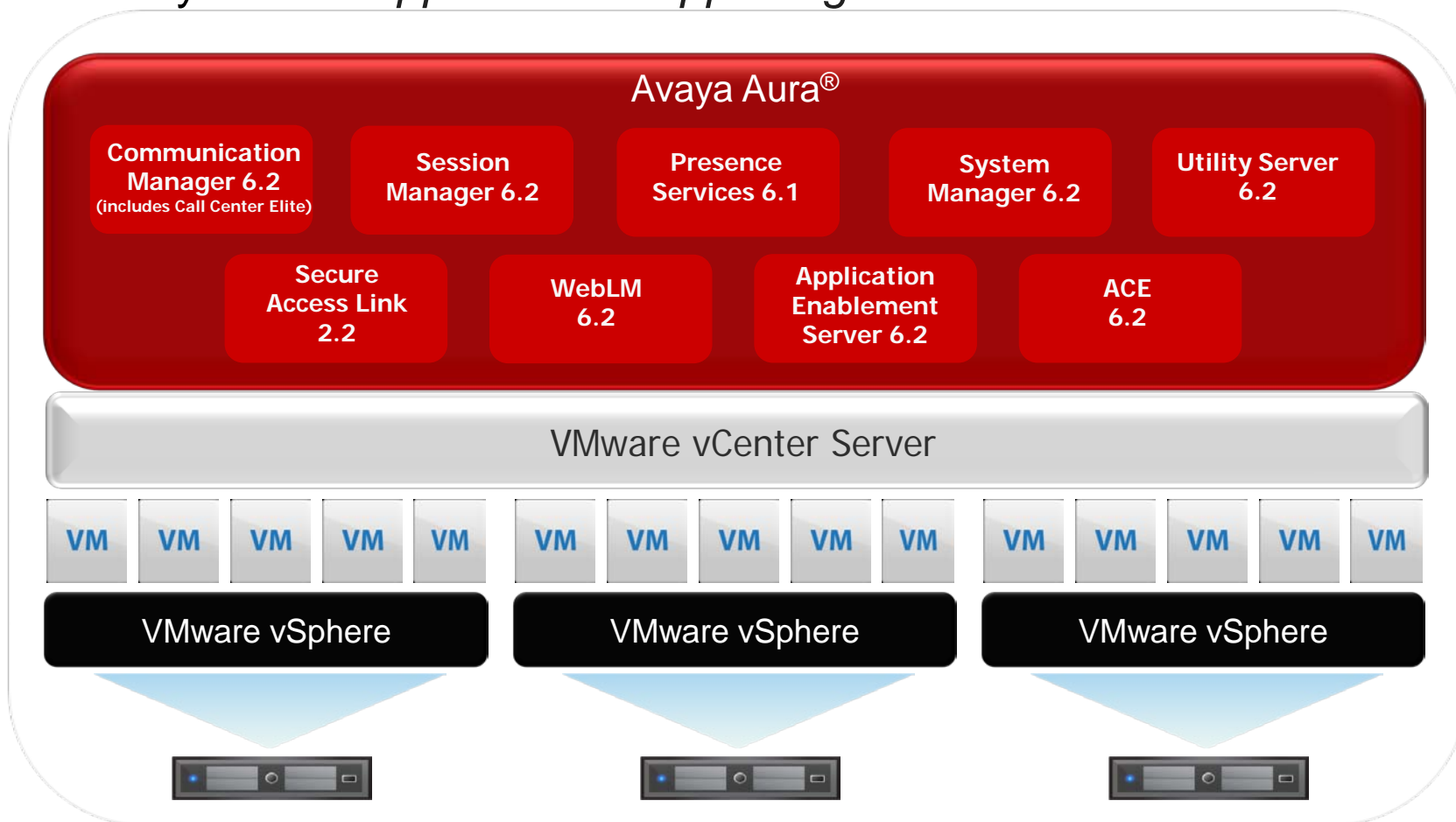**Avaya Aura® applications plus server with System Platform**

Introducing Avaya Aura® Virtualized Environment

▸ **Full Avaya Aura® collaboration features on VMware**

  – Accelerates growth in expanded collaboration features

  – Adds VMware vCenter tools to Avaya Aura reliability

  – UC collaboration made available for any VMware customer

  – Includes CC Elite virtualized

– **Now** - Three flexible deployment options to meet every need

  – Software-only (VMware vAppliance)

  – Server plus Avaya Aura® application supported by System Platform

  – Turnkey UC Collaboration Pod (VMware and virtualized Avaya Aura® applications pre-installed, networking, storage)

Avaya Aura® Virtualized Environment

Avaya Aura® *applications supporting virtualization with VMware**

Avaya Aura®

Communication Manager 6.2 (includes Call Center Elite)	Session Manager 6.2	Presence Services 6.1	System Manager 6.2	Utility Server 6.2
	Secure Access Link 2.2	WebLM 6.2	Application Enablement Server 6.2	ACE 6.2

VMware vCenter Server

VM VM VM VM VM   VM VM VM VM VM   VM VM VM VM VM

VMware vSphere	VMware vSphere	VMware vSphere

*Additional applications planned for future

Avaya Aura® Virtualized Environment

vCPU = virtual machine CPU

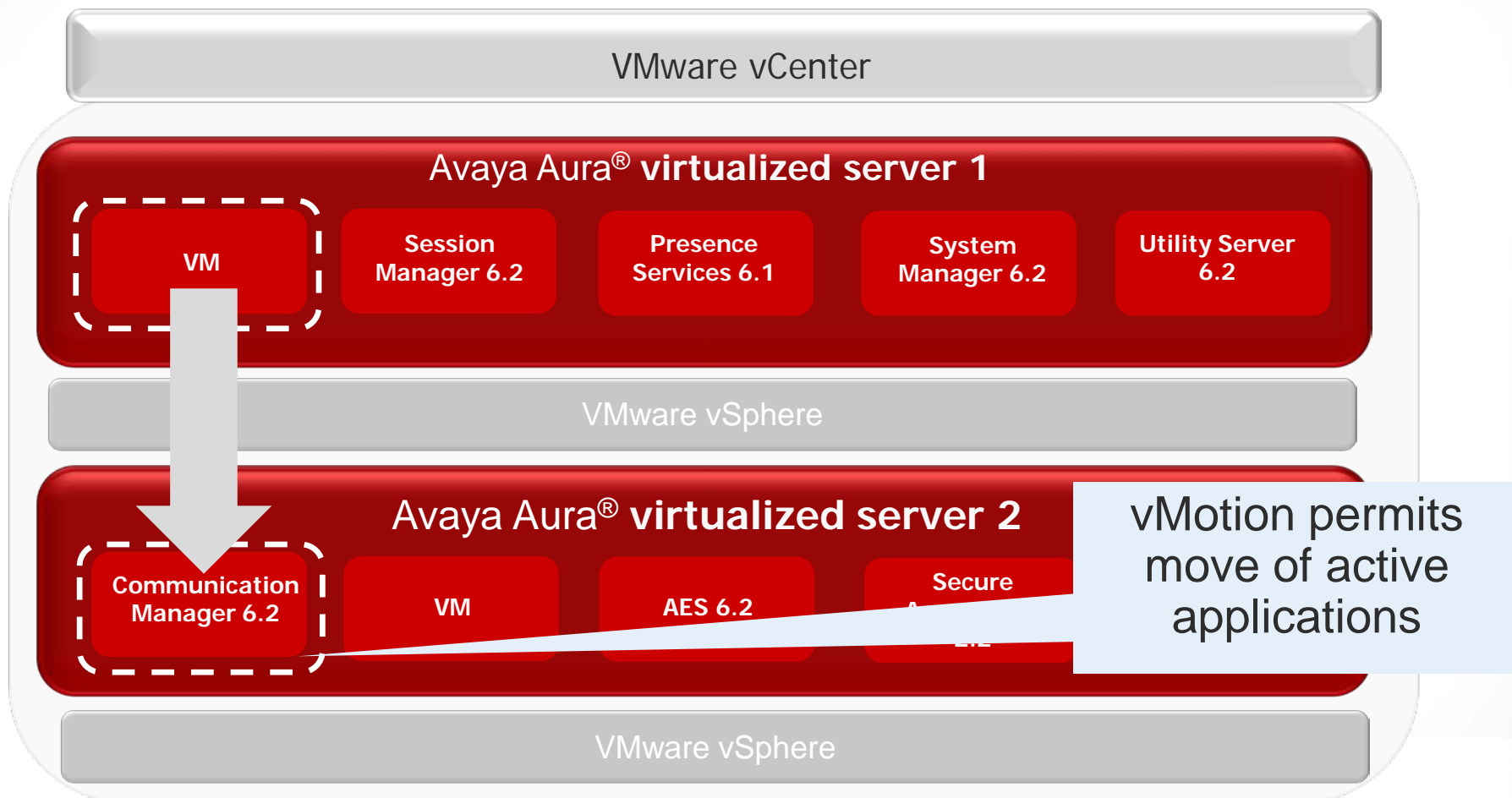| Avaya Aura on VMware	Rel	Capacity (users)	vCPU (virtual CPU)	Virtual Memory (GB)	Virtual Storage (GB)
Communication Manager (Includes CC Elite)	6.2	36K	1	4	30
Communication Manager Software Duplication (Includes CC Elite)	6.2	36K	3	5	30
Application Enablement Services	6.2	20K (simultaneous MOC/LCS users)	4	4	20
Session Manager	6.2	6K	8	12	150
Presence	6.1	2.5K	8	8	80
Utility Services	6.2	Support 5k IP Endpoints	1	1	20
System Manager	6.2	250K (50 simultaneous sessions)	4	6	70
Web LM	6.2	5K request simultaneous	1	1	10
ACE	6.2	4K	4	12	150
SAL	2.2	500 Elements	2	2	40

Avaya Aura® Virtualized Environment

Application	CPU floating cores	vCPU Reservation	CPU Speed (minimum) Or Equivalent	Memory Reservation (GB)	Storage Reservation (GB)	vNIC(s) GigE
CM Simplex	1	2.4 GHz	2.4GHz Xeon E5620	4	30	1
CM Duplex	3	8.7 GHz	2.9GHz Xeon x5670	5	30	2
SM	8	19.2GHz = 8x2.4GHz	2.4GHz Xeon E5620	12	150	4
AES	4	9.6GHz = 4x2.4GHz	2.4GHz Xeon E5620	4	20	1 or 2
US	1	N/A	2.4GHz Xeon E5620	1	20	1
PS	8	19.2GHz = 8x2.4GHz	2.4GHz Xeon E5620	8	82	1

Move Avaya Aura® apps using vCenter Tools

VMware vCenter

Avaya Aura® **virtualized server 1**

Communication Manager 6.2

Session Manager 6.2

Presence Services 6.1

System

Communication Manager is installed as virtual machine

VMware vSphere

Avaya Aura® **virtualized server 2**

VM

VM

AES 6.2

Secure Access Link 2.2

WebLM 6.2

VMware vSphere

Move Avaya Aura® apps using vCenter Tools

VMware vCenter

Avaya Aura® virtualized server 1

| VM | Session Manager 6.2 | Presence Services 6.1 | System Manager 6.2 | Utility Server 6.2 |

VMware vSphere

Avaya Aura® virtualized server 2

| Communication Manager 6.2 | VM | AES 6.2 | Secure |

vMotion permits move of active applications

VMware vSphere

NO LOSS OF CALLS DURING AVAYA AURA® APPLICATION MOVE TO NEW SERVER

Delivering Reliability and Resiliency
Avaya Aura® Virtualized Environment

Avaya Aura®

Avaya application level availability
- Communication Manager:
    - Software Duplication for failover
    - Survivable Core and Survivable Remote Geo redundancy
- Session Manager:
    - Active-active clustering, N+M routing

VMware

Avaya Aura VE is tested with VMware availability features
- vMotion
- vMotion Storage
- VMware High Availability
- VMware Snapshot

Avaya Aura + VMware = Enhanced capabilities for resiliency and survivability

Virtualization Enables New UC Opportunities for existing and new UC customers

Upgrade Avaya Aura® **to latest release w/o new hardware**

Avaya Aura® Rel 4.x, 5.x, 6.0

Move to full UC collaboration on virtualized servers

Avaya Aura® 6.2 on VMware
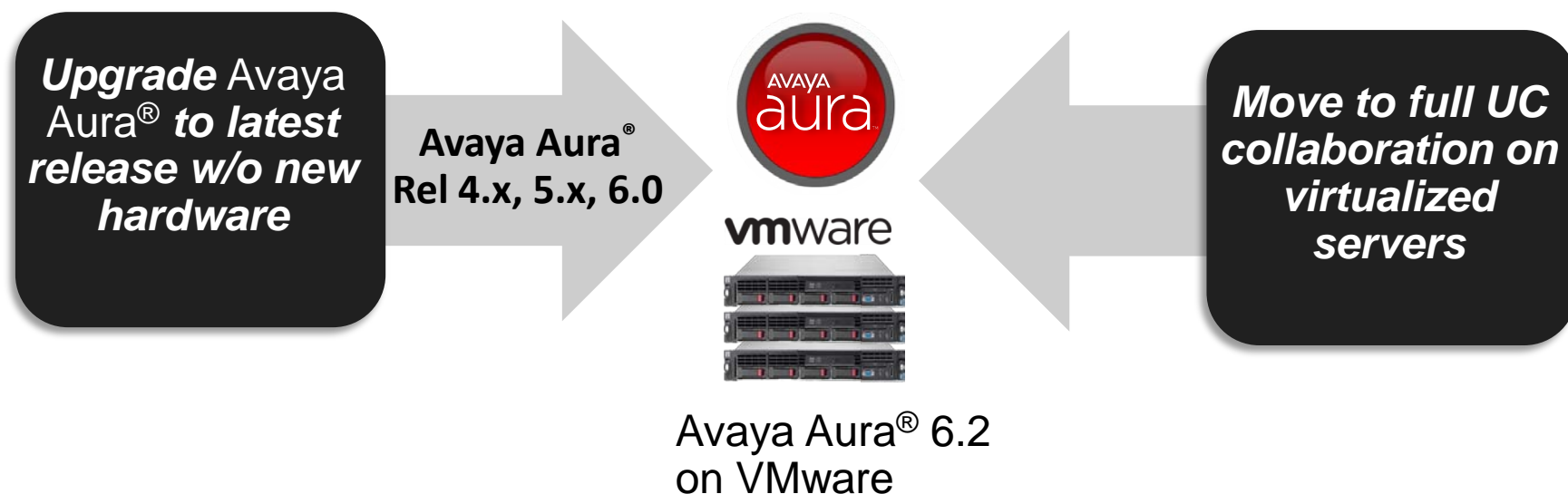
▸ **Reduced upgrade cost, time**

▸ **Accelerated adoption of new collaboration features**

Virtualization Enables New UC Deployment Opportunities

## Why Avaya Aura 6.2

SIP core for UC

Advanced business collaboration

- Ease of management
- Centralized trunking
- Network normalization
- Open standard

AVAYA aura™

- Flare Experience
- Conferencing 7
- Mobility
- Radvision
- Lync Integration

Virtualization Enables New Deployment Options
Turn Key UC Collaboration Pod

Avaya Networking

Integrated
Management
and support

EMC Storage

Avaya Aura VE running on VMware virtualization
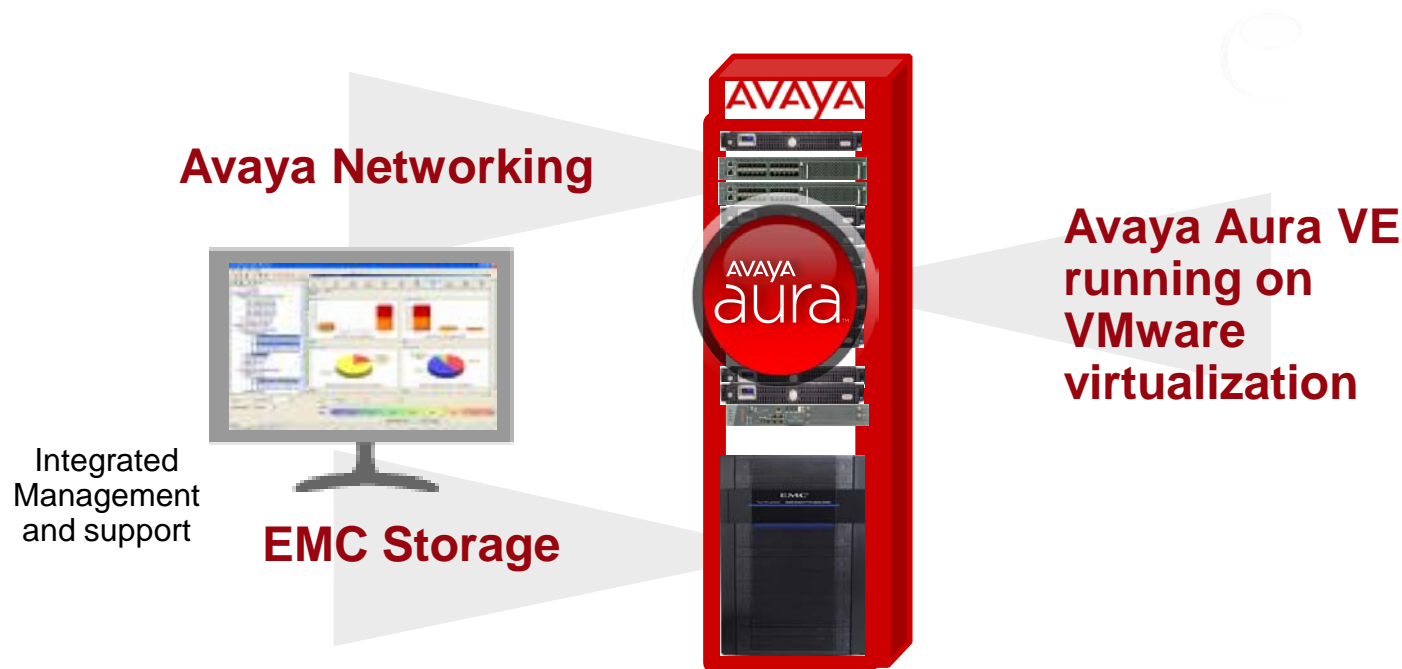
▸ **Virtualized server with UC installed**

▸ **Pre-configured, tested for rapid deployment**

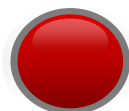▸ **Single solution with virtualization power + turnkey simplicity**

Advantages
Avaya Aura® Virtualized Environment

UC server infrastructure consolidation with virtualization
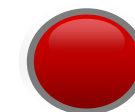
Powerful availability and fast track deployment options

Flexible deployment options; software, appliance or turnkey

Expansion to next generation collaboration capabilities

Avaya Aura® Virtualized Environment Packaging and Availability

▶ **Availability**

- Avaya Aura® Virtualized Environment was demonstrated at VMworld 2012 as part of the Avaya Collaboration Pod solution

- Avaya Aura® Virtualized Environment is planned for General Availability in 4QCY12 (Controlled Introduction to ensure customer network is ready and customer is successful)

▶ **Licensing**

- Standard Avaya Aura application user licensing will apply

- Current licenses are transferrable

Avaya Aura Virtualized Environment Packaging and Availability

▸ **Requirements**

- Avaya Aura® VE requires customer provided VMware licenses and VMware certified hardware
  - Initial support for VMware ESXi 5*
- Customer has VMware certified personnel trained staff
- Customer must purchase the VMware Standard, Enterprise or Enterprise Plus licenses

▸ **Implementation options**

- Experienced customers can use VMware vCenter to download OVA files directly

- Avaya UC Collaboration Pod pre-installed with Avaya Aura VE for turn key install

*According to VMware, 75% of the customer base has not yet moved to version 5,
Avaya chose to implement in the latest version for performance of real time communications
**Nominal charges may apply

Avaya Virtualization for Unified Communications

▶ **Avaya Aura as software application**

▶ **Feature upgrade on virtualized architecture**

▶ **UC for any VMware user**

▶ **Business acceleration virtually anywhere**