Arquitecture, Implementing and Migrating to Office Communications Server 2007 R2

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Session Objectives and Takeaways

- Session Objectives
    - OCS 2007 R2 Topology
    - OCS 2007 R2 Hardware and Software requirements
    - Deployment of OCS 2007 R2
    - Migration from OCS 2007 and LCS 2005 SP1
- Takeaways
    - What are the available R2 Topology options?
    - What has changed from OCS 2007 topology and why?
    - How do I deploy R2?
   - What are migration options from existing OCS 2007 deployments to R2?

R2 Topology changes

Scenario	Server Roles Needed	Changes from OCS 2007?
Pilot or small deployments (without high availability)	Standard Edition	None
IM /Presence	Front-end server role Back-end server role	None
Conferencing	Web Conferencing Server Role Audio/Video Server Role Web Components Server Role	None
Voice	Audio/Video Server Role Mediation Server Role	None
External Access	Director (optional) Consolidated Edge Server	Director unchanged (optional) R2 Edge combines multiple OCS 2007 roles on single server: -Access Edge Server Role -A/V Edge Server Role -Web Conferencing Server Role
Monitoring	Monitoring Server	R2 role combines CDR (call detail records) and voice quality data in one warehouse

R2 Topology changes

| Scenario	Server Roles Needed	Changes from OCS 2007?
Archiving	Archive Server Role Archive Database	Only archives IM messages (2 way, group). Call detail records (CDRs) moved to Monitoring Server role.
Web Access	Communicator Web Access (CWA)	Newly added cross-platform support (Firefox, Safari) etc.
Application sharing	App Sharing Server Role CWA for cross-platform support	New in R2
Group chat	Group Chat Database Channel Server Role Lookup Server Role	New in R2
Unified Communications Applications Server Role (UCAS)	**Available Applications:** Response Group Service Conferencing Auto Attendant Conference Announcement Mobile Communicator Express	New in R2

OCS 2007 R2 Architecture
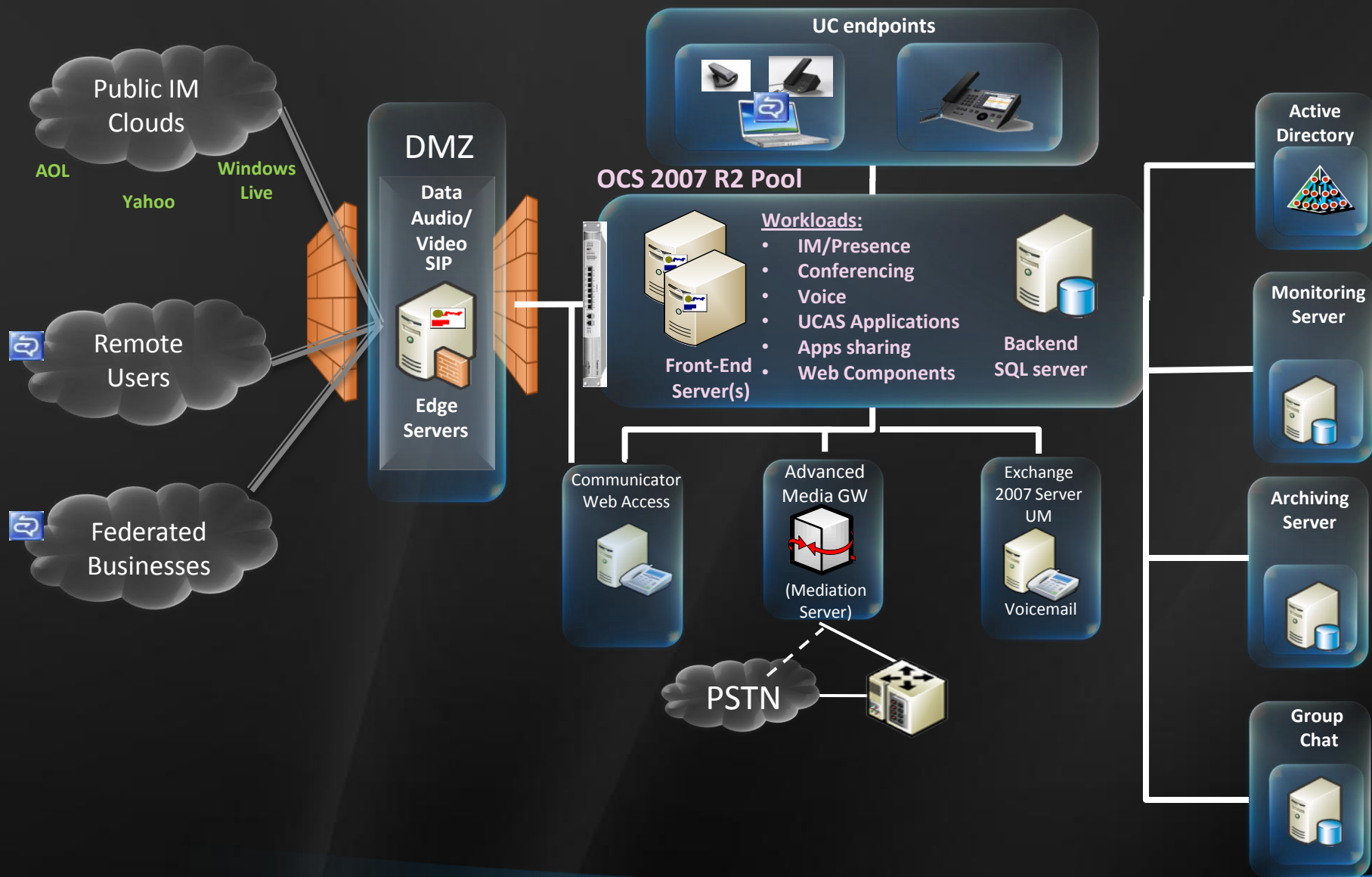
Recommended R2 Topology

- Enterprise Consolidated topology
  - Primary supported topology
  - Consolidated Edge Server
  - New Monitoring Server (CDR and QoE)
  - Dedicated Archiving Server
- Motivation for Consolidated topology
  - Simplify OCS deployment
  - Fewer, more powerful systems (64 bit)
  - Co-locate server roles
  - Requirements for CDR, Archiving, and QoE
  - Maintain flexibility

R2 Enterprise Consolidated Topology
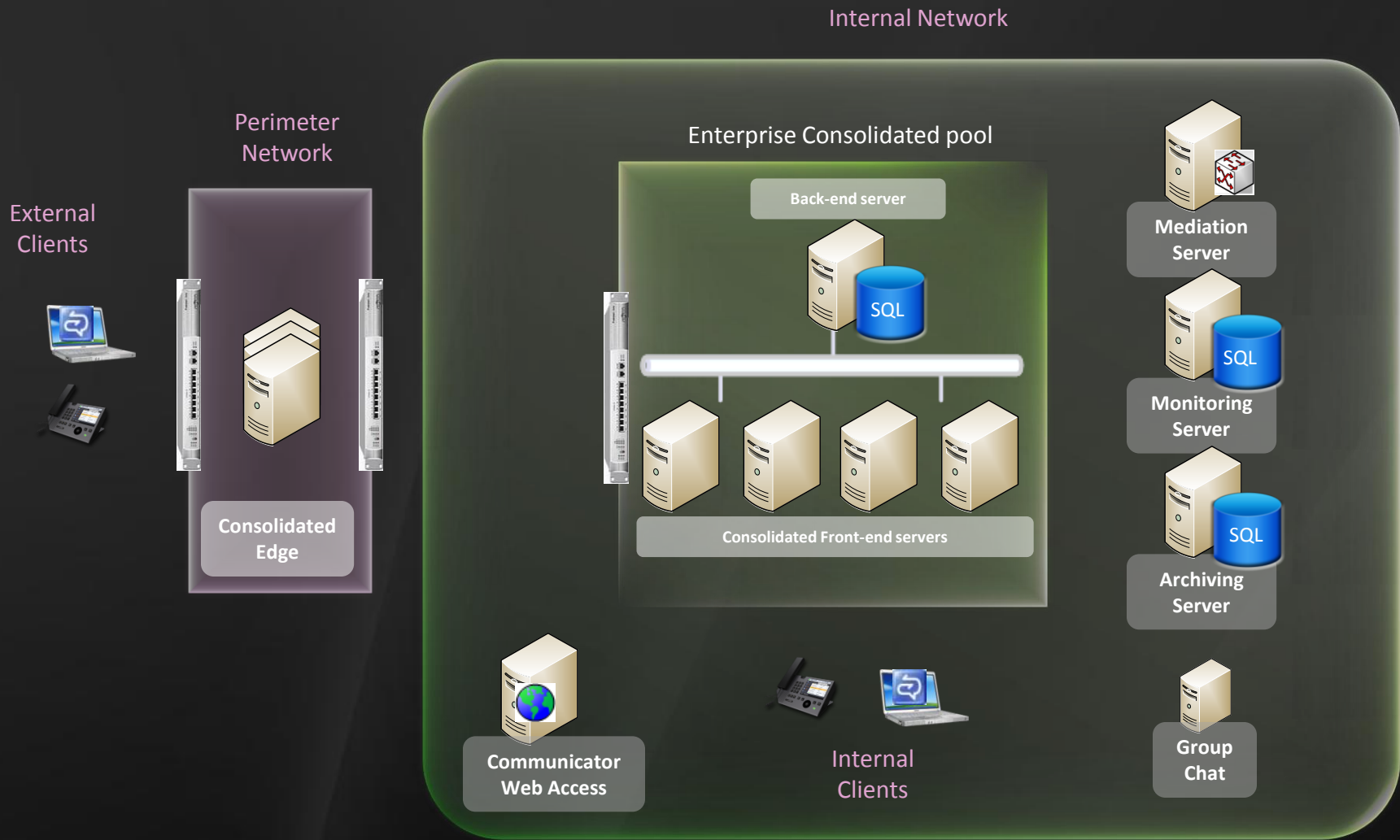
Secondary Topologies

- Standard Edition (single server)
  - Bundled with SQL Express 2005 SP2 (SP3)
- Expanded Enterprise Edition
  - Supported - Command line only setup

Software Requirements

- OS - x64 only
  - Windows Server 2003 x64 SP2
  - Windows Server 2008 x64

- SQL 2005 SP2 (SP3) and SQL 2008

- AD Forest/Domain level:
  Windows Server 2003 and 2008

- Exchange UM: Exchange 2007 SP1
  or the next version of Exchange

- Virtualization support – limited support (post RTM)
  - Hyper-V on Windows Server 2008

Hardware Recommendations
for enterprise edition

- Front-end server
  - x64 Dual Quad-Core CPU, or 4 way Dual-Core CPU
  - 8 GB Memory
  - 10K rpm disk drives
- Back-end SQL server
  - x64 Dual Quad-Core CPU, or 4 way Dual-Core CPU
  - 16 GB Memory
  - 10K or 15K RPM disk drives (multiple spindles)
- Other servers
  - use Front-end or Back-end spec as appropriate

Impact of R2 Changes

- x64 capable hardware required
- x64 OS required
- Migration options
  - Side-by-Side migration
  - Export data – new install option
- Existing Expanded topology deployments may want to migrate to consolidated topology
- Exchange UM: Exchange 2007 SP1 required
- Deployments on Windows 2000 AD forest/domain to move to Windows 2003 minimum level

Choosing R2 Topology

Topology Choice	Users	High Availability	Comments
R2 Standard Edition	Up to 5,000	No	Simplest deployment, lacks HA*
R2 Enterprise Edition Consolidated	*Up to 100,000*	Yes	Recommended topology, simplified deployment (from OCS 2007), HA*, Scale.
R2 Enterprise Edition Expanded	Up to 125,000	Yes	Special situations only: Examples: - Lots of web conf, no A/V

* High Availability

Deployment
Planning

- Features required
  - IM/Presence, Peer-to-peer audio/video, HD Video
  - Group chat
  - Enterprise Voice (Standalone or Co-existence), Response Group Service, Delegation, Attendant Console
  - Conferencing, Dial-out PSTN Conferencing, Reach Application Sharing
  - External Access (Edge)
  - Compliance requirements for IM and Conferencing
  - Voice/Media quality monitoring

Deployment
Planning

- Site Analysis
  - How many sites?
  - How many users in each site?
  - What features are needed per site?
  - What is the usage model for features at a site?
  - Do you require High Availability?
  - Compliance requirements for IM and Conferencing
  - What is the bandwidth available at each site?
- Deployment Path
  - Migration or new deployment? Which version LCS 2005 SP1 or OCS 2007?

OCS 2007 R2 Planning Tool

demo

OCS 2007 R2 - available since RTM
OCS 2007

Migrating to OCS 2007 R2

Primary Migration Option

- Side-by-Side migration
  - Deploy R2 Pool in parallel to existing OCS 2007 deployment
  - Move users gradually to R2 pool
  - Validate R2 deployment
  - Decommission OCS 2007 servers
- Minimal Service outage
- Additional hardware required
- Recommended for Enterprise deployments

Primary Migration Option (cont)

- Phase 1: Plan Your Migration
- Phase 2: Premigration Preparation (System vs Configuration containers)
  - After upgrade the AD Schema to R2, you cannot use Global Settings Migration Tool
- Phase 3: Install a Pool
- Phase 4: Deploy Archiving Server and Monitoring Server
- Phase 5: Move Production Users
- Phase 6: Migrate Communicator Web Access
- Phase 7: Upgrade Directors and Edge Servers
- Phase 8: Upgrade Enterprise Voice
- Phase 9: Migrate to Device Update Service
- Phase 10: Update Client Software
- Phase 11: Deprecate Servers

Primary Migration Option (cont)

- ## Required Operating System Updates (on all OCS Servers, except Back-End)

  - KB article 958561 - Communications Server 2007 R2 remote users cannot make public switched telephone network (PSTN) calls when Communications Server 2007 servers or proxies are in the call path.

  - KB article 958560 - When a Communicator 2007 user calls a Conference Auto Attendant access number, the call always uses Mediation Server instead of going to the Conference Auto Attendant directly.

  - KB article 953582 - You May be unable to install a program that tries to register extensions under the IQueryForm registry entry in Windows Server 2008 or Windows Vista

  - KB article 953990 - This update applies only to Windows Server 2003 SP2 and Windows Server 2008.

Alternate Migration Option

- Export data – new install option
  - Export user's buddy list data with DBImpExp.exe utility
  - Deploy OCS 2007 R2
  - Import buddy list back in with DBImpExp.exe utility
- Service outage
- May not require additional hardware
- Existing hardware to meet recommended minimum
- Recommended if no additional hardware is available, or service outage is acceptable

Client Migration
Overview

- "Migrate" OCS servers first
- Client Migration overview
  - Older clients work with newer server (N-1 Client support)
  - All existing client features will work with upgraded server
  - New features (for example Attendant Console) require client and server to be upgraded
- Client migration strategy
  - Migrate server components first
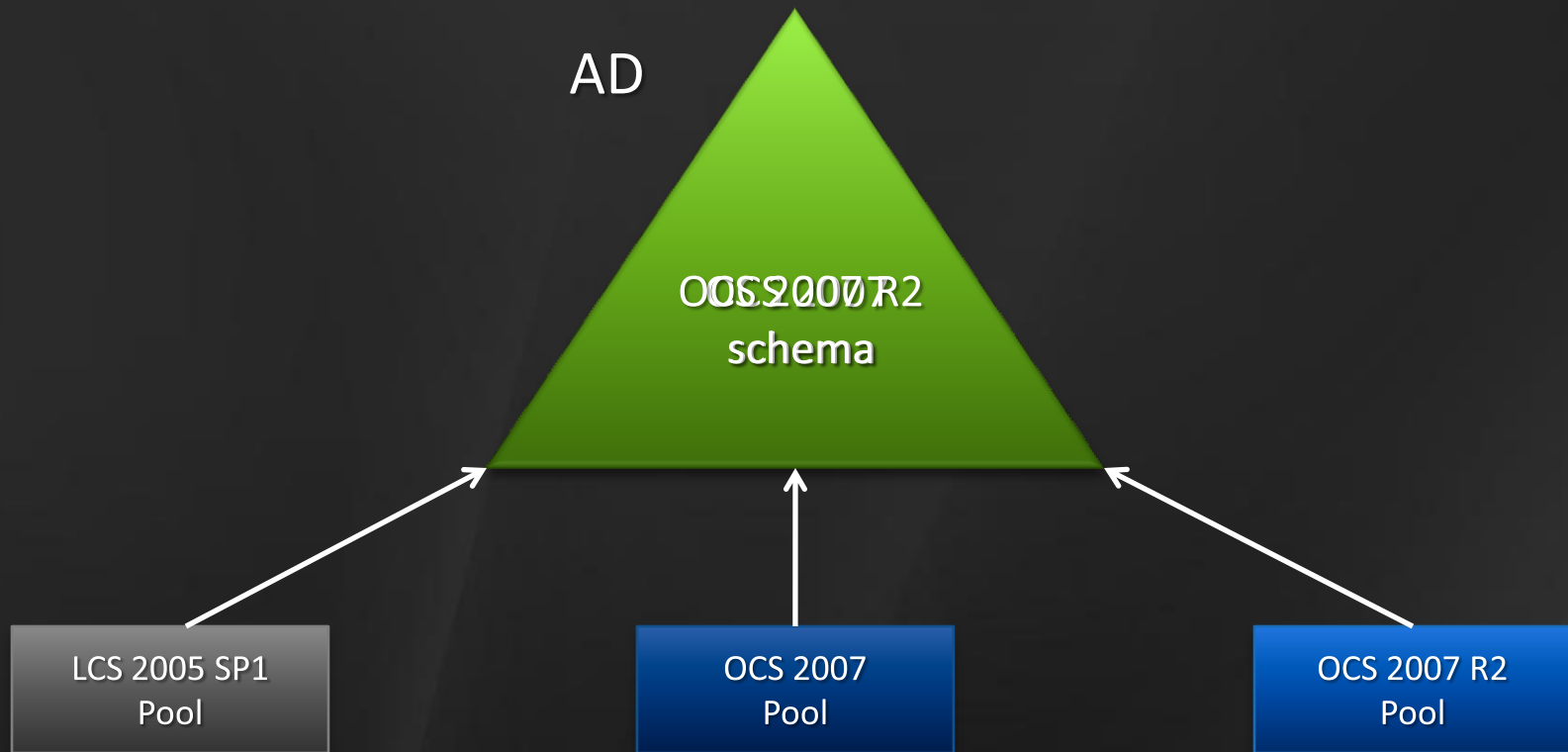 - Move users to R2 pool
  - Migrate clients

Client Migration
Additional considerations

- **Internal and external users**
  - User may have older clients one notebooks, or on home PCs

- **Multiple-Points of Presence (MPOP)**
  - Migrate all clients and enforce client version on server

- **Special scenarios**
  - Special cases and interoperability restriction may apply
  - Full client and MPOP matrix will be available
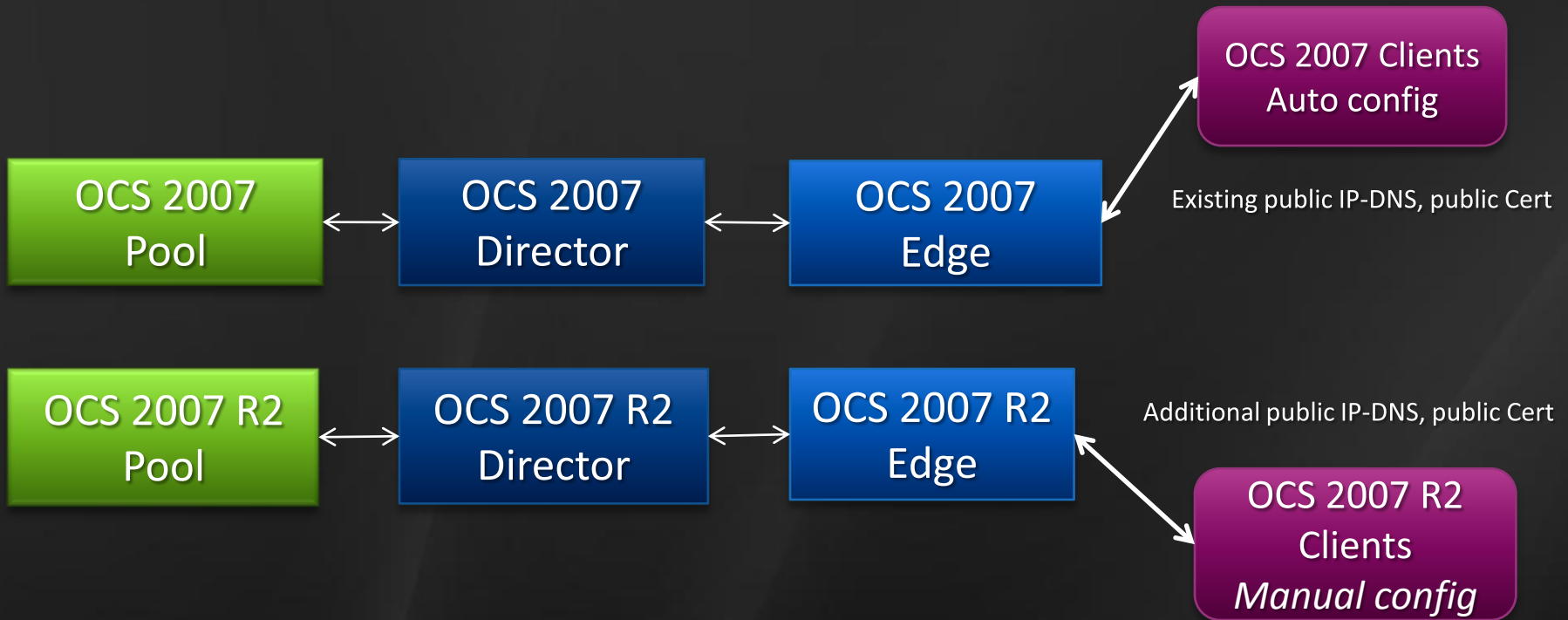 - New features for external users require upgraded Edge and Director

LCS 2005 SP1 Migration

- LCS 2005 SP1 can coexist with OCS 2007 R2

- Outside-In migration
  - OCS 2007 R2 Edge compatible with LCS 2005 SP1 pool

- Move-User to migrate users
  - Migrate clients (Multiple Points of Presence restrictions)
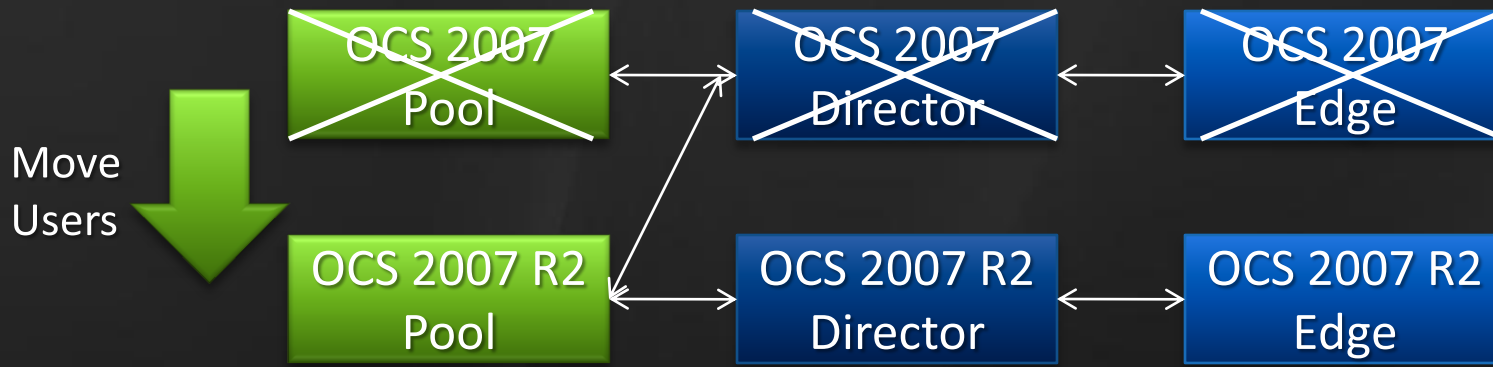
Active Directory Schema Changes

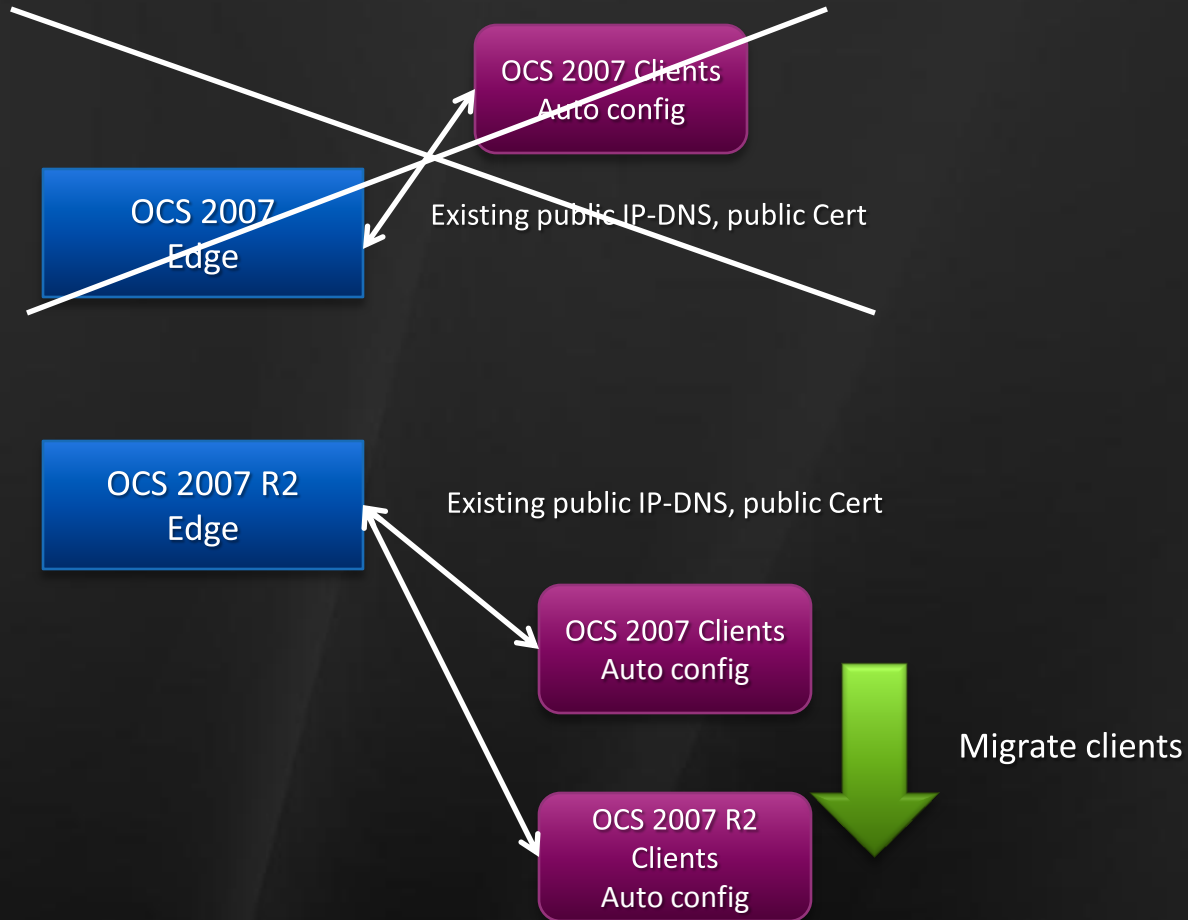# Side-by-Side Migration
Full side-by-side

OCS 2007 Clients
Auto config

OCS 2007
Pool ↔ OCS 2007
Director ↔ OCS 2007
Edge

Existing public IP-DNS, public Cert

Additional public IP-DNS, public Cert

OCS 2007 R2
Pool ↔ OCS 2007 R2
Director ↔ OCS 2007 R2
Edge

OCS 2007 R2
Clients
Manual config

Side-by-Side Migration
Inside-out migration

Side-by-Side Migration
Migrate edge

OCS 2007 Clients
Auto config

OCS 2007
Edge

Existing public IP-DNS, public Cert

OCS 2007 R2
Edge

Existing public IP-DNS, public Cert

OCS 2007 Clients
Auto config

OCS 2007 R2
Clients
Auto config

Migrate clients

R2 Migration of other components
OCS Components outside the pool

- Mediation Server
  - R2 Pool and Edge compatible with OCS 2007 Mediation Server
  - R2 Mediation Server compatible with OCS 2007 Pool and Edge
- Communicator Web Access (CWA)
  - Side-by-side migration only (from CWA 2007, CWA 2005)
  - OCS 2007 users must use CWA 2007 browser URL. R2 users must use CWA R2 URL.
  - URL Redirection for 2007 or 2005 users hitting R2 URL
- Archiving/CDR/QoE
  - R2 split roles into Archiving and Monitoring (CDR/QoE)
  - Changed schema does not allow data migration

Mediation Server migration

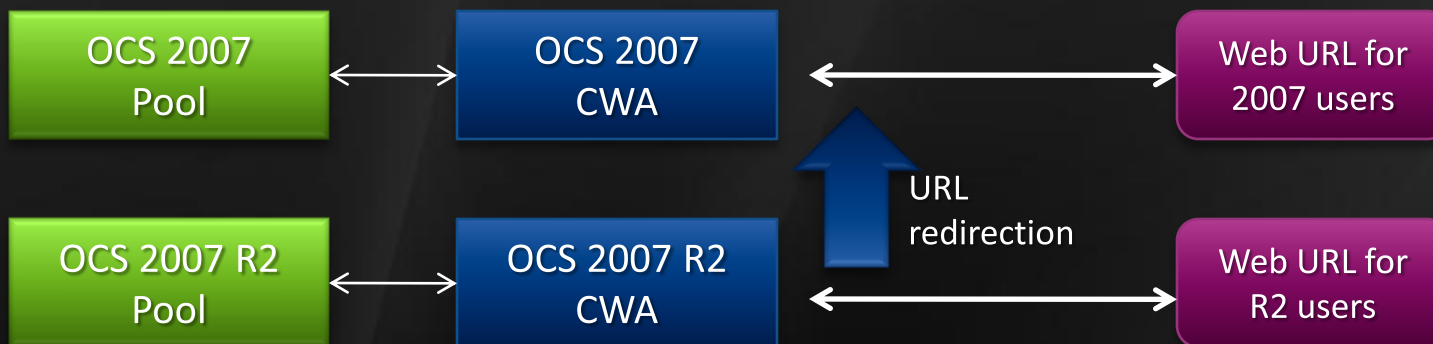Anytime after OCS pool migration is complete
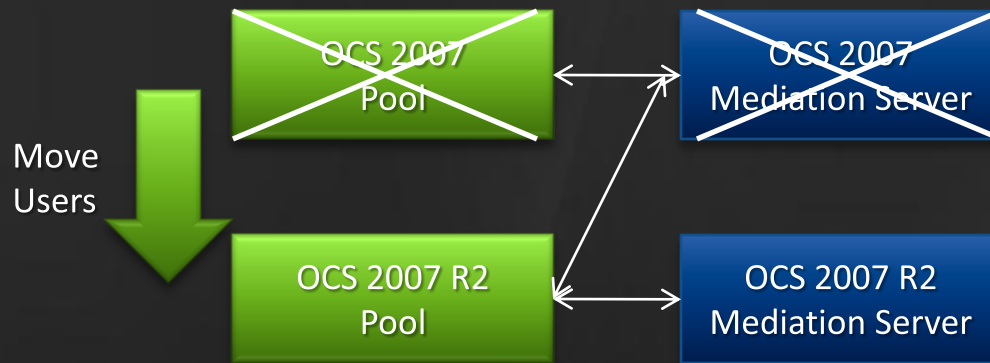
CWA server migration

Inside-out Migration: (recommended)
After OCS pool <u>and</u> Edge migration is complete

Move Users →

OCS 2007 Pool ✗ OCS 2007 Director + Edge ✗ OCS 2007 CWA ✗

OCS 2007 R2 Pool   OCS 2007 R2 Director + Edge   OCS 2007 R2 CWA
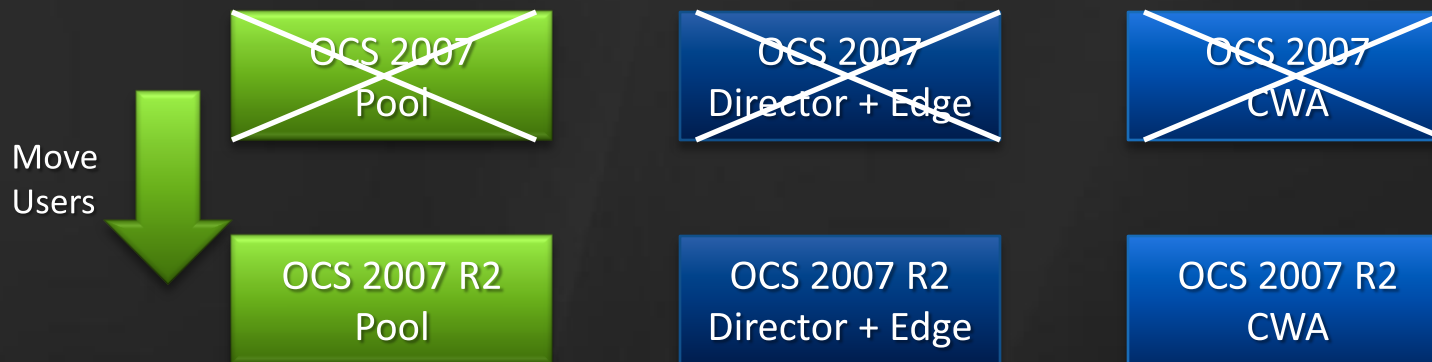
Full side-by-side Migration:
Parallel CWA setup with URL redirection

OCS 2007 Pool ↔ OCS 2007 CWA ↔ Web URL for 2007 users

URL redirection

OCS 2007 R2 Pool ↔ OCS 2007 R2 CWA ↔ Web URL for R2 users

Takeaways
OCS 2007 R2

- New server roles
- Available Topologies
- Hardware and Software requirements
- Planning and Deployment
- Migration strategies

Q & A

Resources for Audience

http://communicationsserverteam.com/

http://communicatorteam.com/

http://www.microsoft.com/portugal/uc/

http://blog.nunovelho.eu