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# Exchange Server 2013

## Upgrade, Migration and Coexistence

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# Agenda

- Deployment Fundamentals
- Upgrade and Coexistence
- Public Folder Migrations
- Managing Coexistence

# Deployment Fundamentals

# Exchange Server 2013 Prerequisites

- Supported coexistence scenarios
  - Exchange Server 2010 SP3
  - Exchange Server 2007 SP3 + RU10
- Supported client access methods
  - Microsoft Outlook:
    - Outlook Anywhere only: Outlook 2013, Outlook 2010, Outlook 2007
    - Outlook for Mac 2011
  - Entourage 2008 for Mac, Web Services Edition

# Exchange Server 2013 Prerequisites

- Active Directory
  - Windows Server 2003 forest functional level or higher
  - At least one Windows 2003 SP2 or later GC/DC in each site
  - No support for RODC or ROGC
  
- Namespaces
  - Contiguous
  - Non-contiguous
  - Single label domain
  - Disjoint

# Exchange Server 2013 Prerequisites

- Operating System
  - Windows Server 2008 R2 SP1 Standard or Enterprise
  - Windows Server 2012 Standard or Datacenter
  
- Other Components
  - IIS and OS components
  - .NET Framework 4.5
  - Windows Management Framework 3.0
  - Unified Communications Managed API (UCMA) 4.0

# Exchange Server 2013

- RTM as of 10/11/12 (15.000.516.32)
  - <http://aka.ms/E15RTM>
- GA as of 12/3/12
  - <http://aka.ms/E15GA>
- Downloadable WW
  - <http://aka.ms/E15DL>
- Service GA as of 2/27/13
  - <http://aka.ms/ServiceGA>
- CU1 due out in Q1



# Cumulative Updates

- Routine product updates will be distributed via quarterly Cumulative Updates (CU's)
  - The version of Exchange shipped to on-premises customers in each CU will be the same version we use to host Exchange Online in Office 365
  - Security updates will be delivered via independent packages that can be applied to a previously released CU or installed during the upgrade to the current CU
  - A CU will be supported for a period of 3 months after the release date of next CU

# Cumulative Updates

- Benefits of new model
  - Predictable release cadence (4x a year)
  - Dedicated security releases
  - Datacenter scale validation
  - Improved support for hybrid deployments
  - More rapid changes to language resources
- Differences between CUs and RUs
  - Larger update packages
  - Loss of server customization
  - Installation failure recovery
  - Server version number will be updated with CU install

# Cumulative Updates

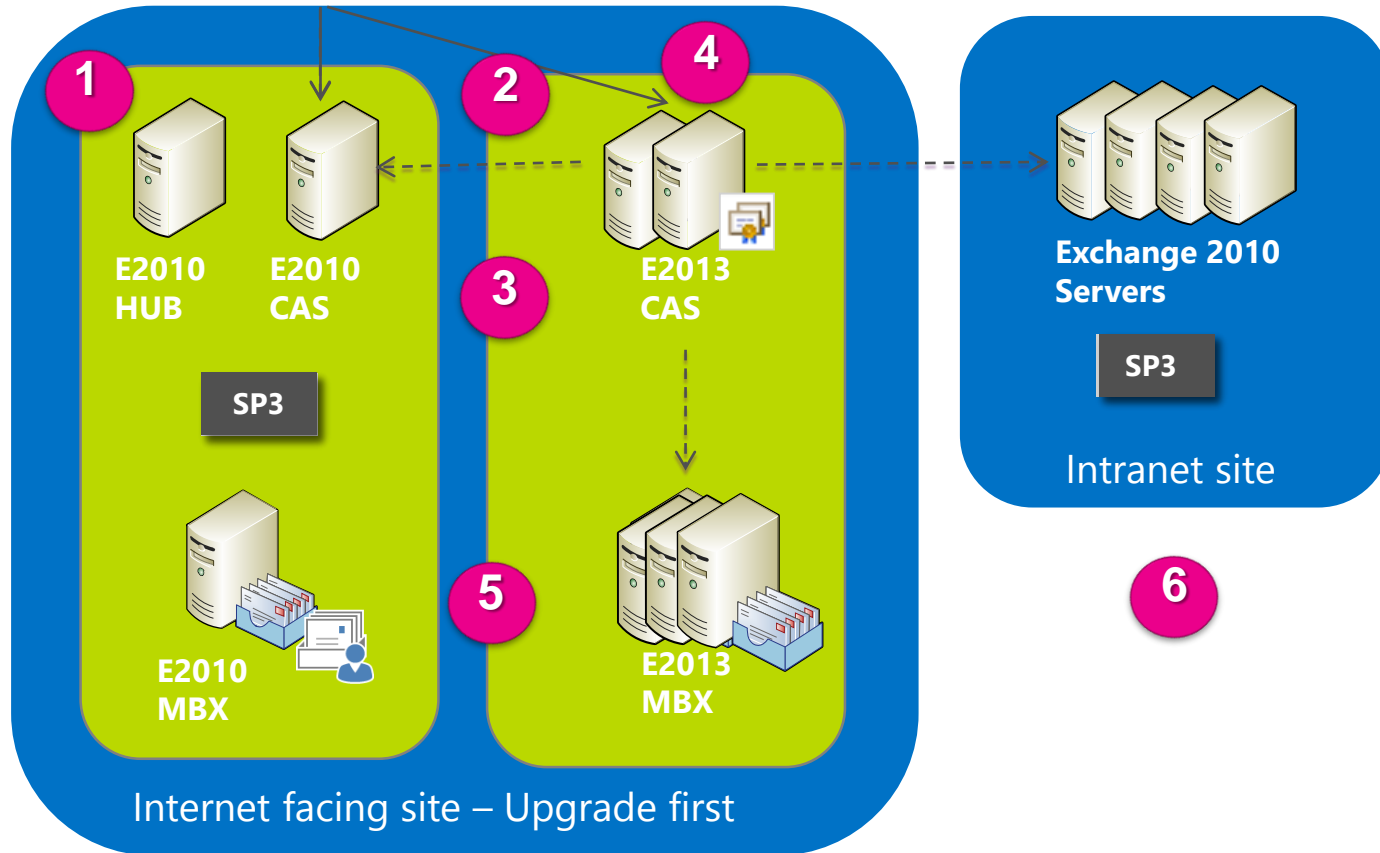
- CU1 is a full Exchange install
  - Full build uninstall/reinstall (just like Service Packs)
  - Customized per-server web.config settings overwritten; admins must reconfigure
- Required for coexistence with Exchange 2010/2007
- If CU1 install fails, you must use /RecoverServer

# Upgrade & Coexistence

# Upgrade from Exchange 2010 to Exchange 2013



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## 1. Prepare

- Install Exchange 2010 SP3 across the ORG
- Validate existing Client Access using MCA and ExRCA and built-in Test cmdlets
- Prepare AD with E2013 schema

## 2. Deploy Exchange 2013 servers

- Install both E2013 MBX and CAS servers

## 3. Obtain and Deploy Certificates

- Obtain and deploy certificates on E2013 Client Access Servers

## 4. Switch primary namespace to Exchange 2013 CAS

- E2013 fields all traffic, including traffic from Exchange 2010 users
- Validate using MCA and ExRCA

## 5. Move Mailboxes

- Build out DAG
- Move E2010 users to E2013 MBX

## 6. Repeat for additional sites

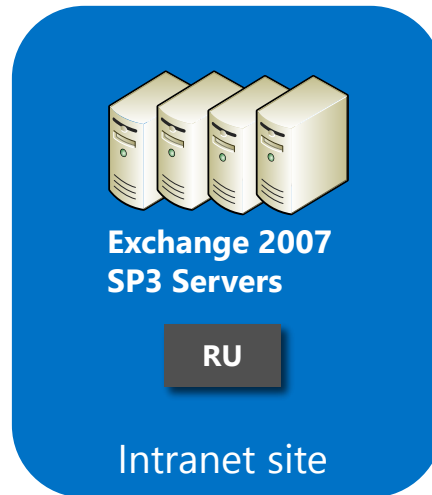
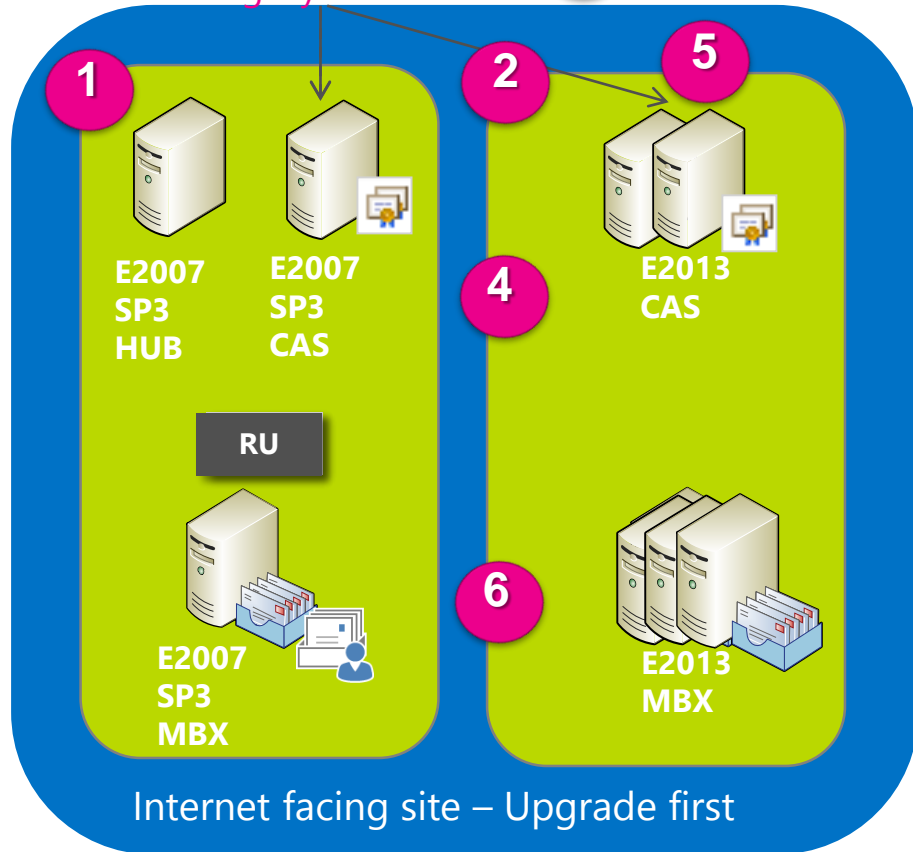
# Upgrade from Exchange 2007 to Exchange 2013



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## 1. Prepare

Install Exchange 2007 SP3 + RU across the ORG  
Prepare AD with E2013 schema and validate

## 2. Deploy Exchange 2013 servers

Install both E2013 MBX and CAS servers

## 3. Create Legacy namespace

Create DNS record to point to legacy E2007 CAS

## 4. Obtain and Deploy Certificates

Obtain and deploy certificates on E2013 Client Access Servers configured with legacy namespace, E2013 namespace and Autodiscover namespace  
Deploy certificates on Exchange 2007 CAS

## 5. Switch primary namespace to Exchange 2013 CAS

Validate using MCA and ExRCA

## 6. Move Mailboxes

Build out DAG

Move E2007 users to E2013 MBX

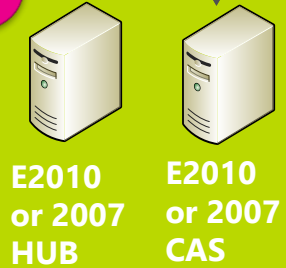
## 7. Repeat for additional sites

# Upgrade to Exchange Server 2013

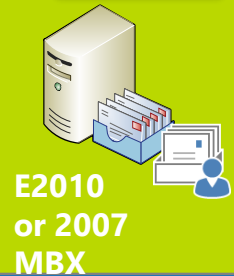


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SP/RU



Internet facing site – Upgrade first



Exchange 2010  
or 2007 Servers

SP/RU

Intranet site

1. Prepare  
Install Exchange SP and/or updates across the ORG  
Prepare AD with E2013 schema and validate
2. Deploy Exchange 2013 servers
3. Create Legacy namespace
4. Obtain and Deploy Certificates
5. Switch primary namespace to Exchange 2013 CAS
6. Move Mailboxes
7. Repeat for additional sites

# Prepare for Exchange Server 2013

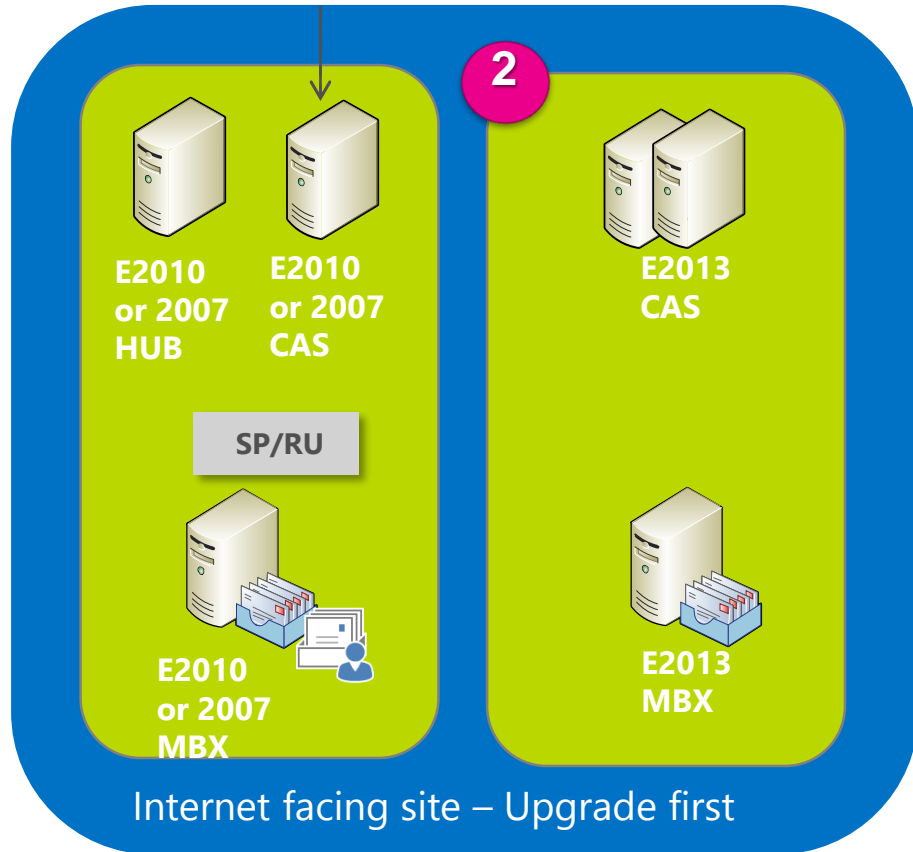
- Install coexistence update on all existing Exchange servers
  - For Exchange 2010, this would be SP3
  - For Exchange 2007, this would be SP3 RU10
- Prepare Active Directory with Exchange 2013 schema extensions
- Validate existing client access
  - Microsoft Connectivity Analyzer - <https://testconnectivity.microsoft.com/?tabid=client>
  - Remote Connectivity Analyzer - <http://www.exrca.com>
  - Built-in Test cmdlets



# Upgrade to Exchange Server 2013



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## 1. Prepare

Install Exchange SP and/or updates across the ORG  
Prepare AD with E2013 schema and validate

## 2. Deploy Exchange 2013 CU1 servers

Install both E2013 MBX and CAS servers

## 3. Create Legacy namespace

## 4. Obtain and Deploy Certificates

## 5. Switch primary namespace to Exchange 2013 CAS

## 6. Move Mailboxes

## 7. Repeat for additional sites

# Exchange Server 2013 Setup

```
Setup.exe /mode:install  
/roles:clientaccess
```

```
Setup.exe /mode:install  
/roles:mailbox
```

```
Setup.exe /mode:install  
/roles:ManagementTools
```

```
/IAcceptExchangeServerLicenseTerms
```

Install both MBX and CAS  
Servers

MBX performs PowerShell commands  
CAS is proxy only

## Exchange 2013 Setup

GUI or command line  
No in-place upgrade

## New Parameter

License terms acceptance

# Upgrade to Exchange Server 2013

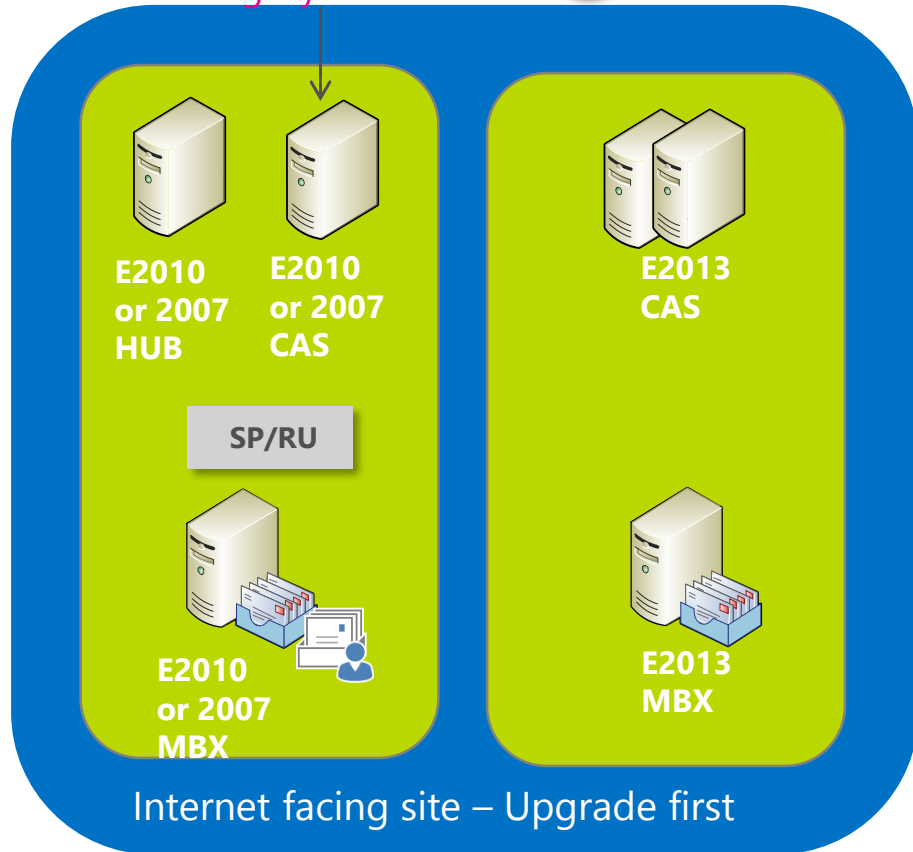


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## 1. Prepare

Install Exchange SP and/or updates across the ORG  
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## 2. Deploy Exchange 2013 servers

Install both E2013 MBX and CAS servers

## 3. Create Legacy namespace

## 4. Obtain and Deploy Certificates

## 5. Switch primary namespace to Exchange 2013 CAS

## 6. Move Mailboxes

## 7. Repeat for additional sites

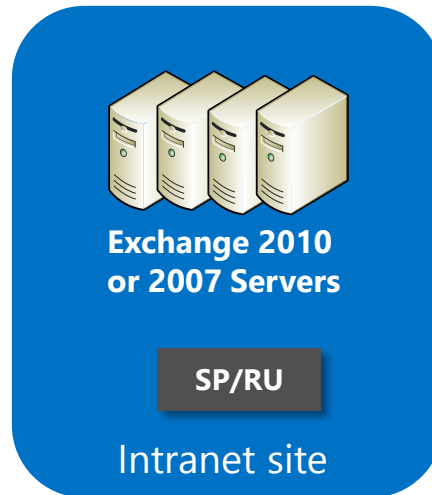
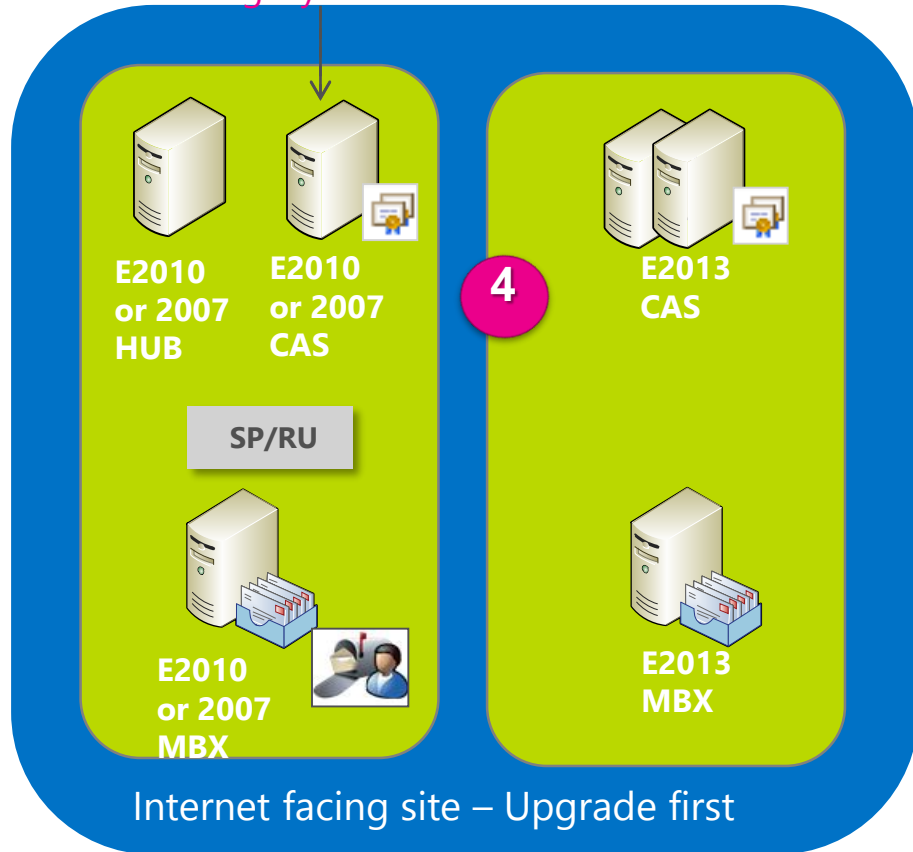
# Create Legacy Namespace

- Required for Exchange 2007 coexistence only
- Create DNS record in internal and external DNS for legacy namespace
- Validate legacy namespace using MCA, ExRCA and built-in Test cmdlets

# Upgrade to Exchange Server 2013



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Obtain and deploy certificates on E2013 Client Access Servers configured with legacy namespace, E2013 namespace and autodiscover namespace  
**Deploy certificates on Exchange 2007 CAS**

## 5. Switch primary namespace to Exchange 2013 CAS

## 6. Move Mailboxes

## 7. Repeat for additional sites

# Certificates

- Best Practices
  - Minimize the number of certificates
  - Minimize number of hostnames
    - Use split DNS for Exchange hostnames
    - Don't list machine hostnames in certificate hostname list
  - Use Subject Alternative Name (SAN) certificate
- End-to-End certificate wizard in the EAC
- EAC notifies you when a certificates is about to expire
  - 1st notification shown 30 days prior to expiration
  - Subsequent notifications provided daily

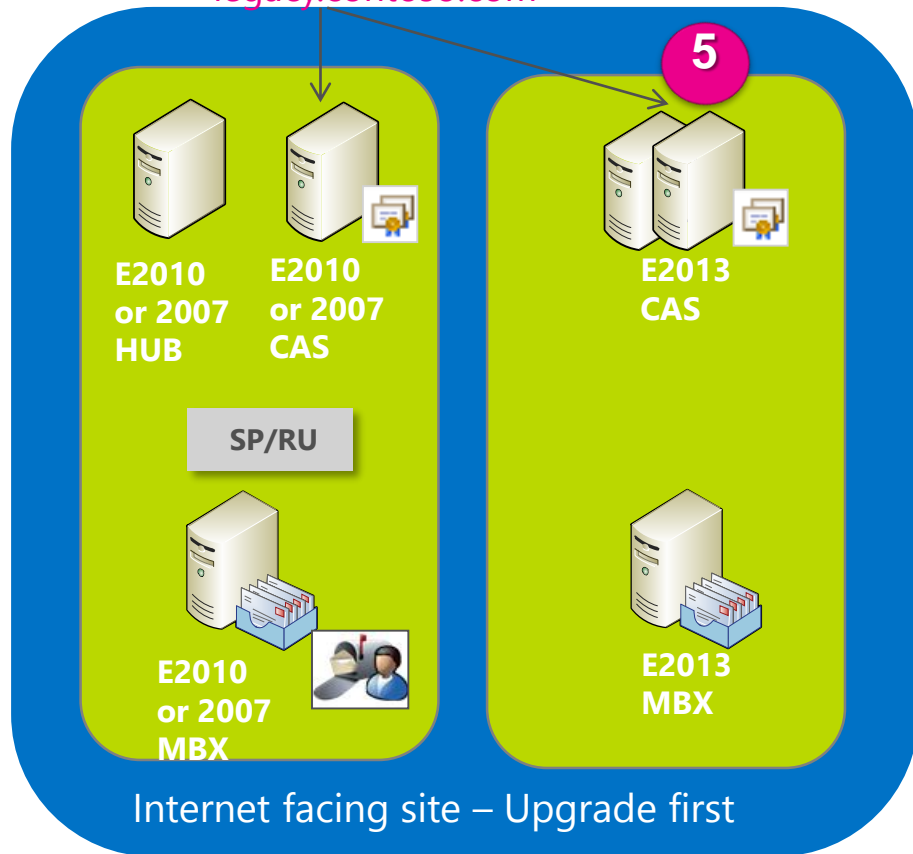
# Upgrade to Exchange Server 2013



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Obtain and deploy certificates on E2013 Client Access Servers configured with legacy namespace, E2013 namespace and Autodiscover namespace  
**Deploy certificates on Exchange 2007 CAS**

## 5. Switch primary namespace to Exchange 2013 CAS

Validate using MCA, ExRCA and Test cmdlets

## 6. Move Mailboxes

## 7. Repeat for additional sites

# Switch Primary Namespace

- Validate legacy namespace creation
- Configure Load balancing
  - Legacy namespace is separate VIP with Layer 7 load balancer
  - Configure `AutoDiscoverServiceInternalUri` on Exchange 2013 CAS to LB FQDN
  - Configure `AutoDiscoverSiteScope`
- Update DNS
  - Mail and Autodiscover namespaces should point to CAS 2013
- Update publishing rules for legacy namespace
  - Use Remote Connectivity Analyzer to test access to all CAS servers
  - Test both externally and internally



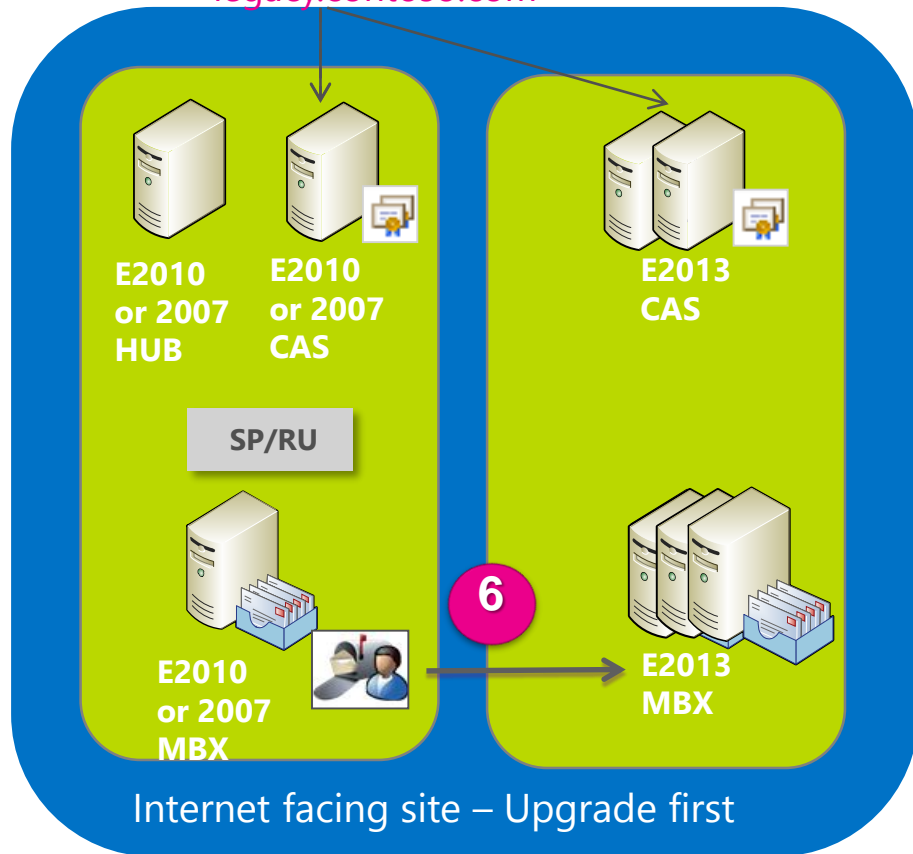
# Upgrade to Exchange Server 2013



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**Deploy certificates on Exchange 2007 CAS**

## 5. Switch primary namespace to Exchange 2013 CAS

Validate using MCA, ExRCA and Test cmdlets

## 6. Move Mailboxes

Build out DAG

Move users to E2013 MBX

## 7. Repeat for additional sites

# Moving Mailboxes

- New Migration Service
  - Provides functionality to orchestrate moves such as batch management
  - Provides migration reporting
  - Provides retry semantics
- New cmdlets
  - New-MigrationBatch
  - Get-MigrationUserStatistics
- Also available from EAC

# Public Folder Migrations

# Modern Public Folders

- Database-centered architecture replaced by mailbox
  - Existing public folders can be migrated to Exchange 2013
  - End user experience doesn't change
  - Public folder replication is removed
- Migrate Public Folder users before Public Folders
  - Exchange 2013 users can access Exchange 2010/2007 Public Folders
  - Exchange 2010/2007 users cannot access Exchange 2013 Public Folders
  - Migration of Public Folders is a cut-over migration
  - Similar to online mailbox moves

# Public Folder Migration Process

- Analyze existing Public Folders
  - Tool available to analyze existing Public Folder hierarchy to determine how many Exchange 2013 Public Folder mailboxes are recommended
- Copy Public Folder data
  - Users access existing Public Folder deployment while data is copied
  - Data migration happens in the background
- Switch clients to Exchange 2013 Public Folders
  - There will be a short downtime while the migration is finalized  
Once migration completes, everyone switches at the same time
  - Can switch back, but any post migration Public Folder changes are lost

# Public Folder Migrations

- Mail-enabled public folders
  - Legacy and Modern Public Folders cannot coexist; messages routed to one place
  - Public Folders locked for last phase of migration
    - Messages sent while locked get stuck in queue with an error message: *Failed to process message due to a transient exception with message Cannot open mailbox*
  - Forcing connection/message retry won't fix this
- After migration is complete, restart Transport service on servers with stuck messages
  - Messages will be redirected to modern PFs
  - Subsequent messages sent to legacy folders will be redirected to modern PFs
  - In both cases, redirect event logged in message tracking

# Managing Coexistence

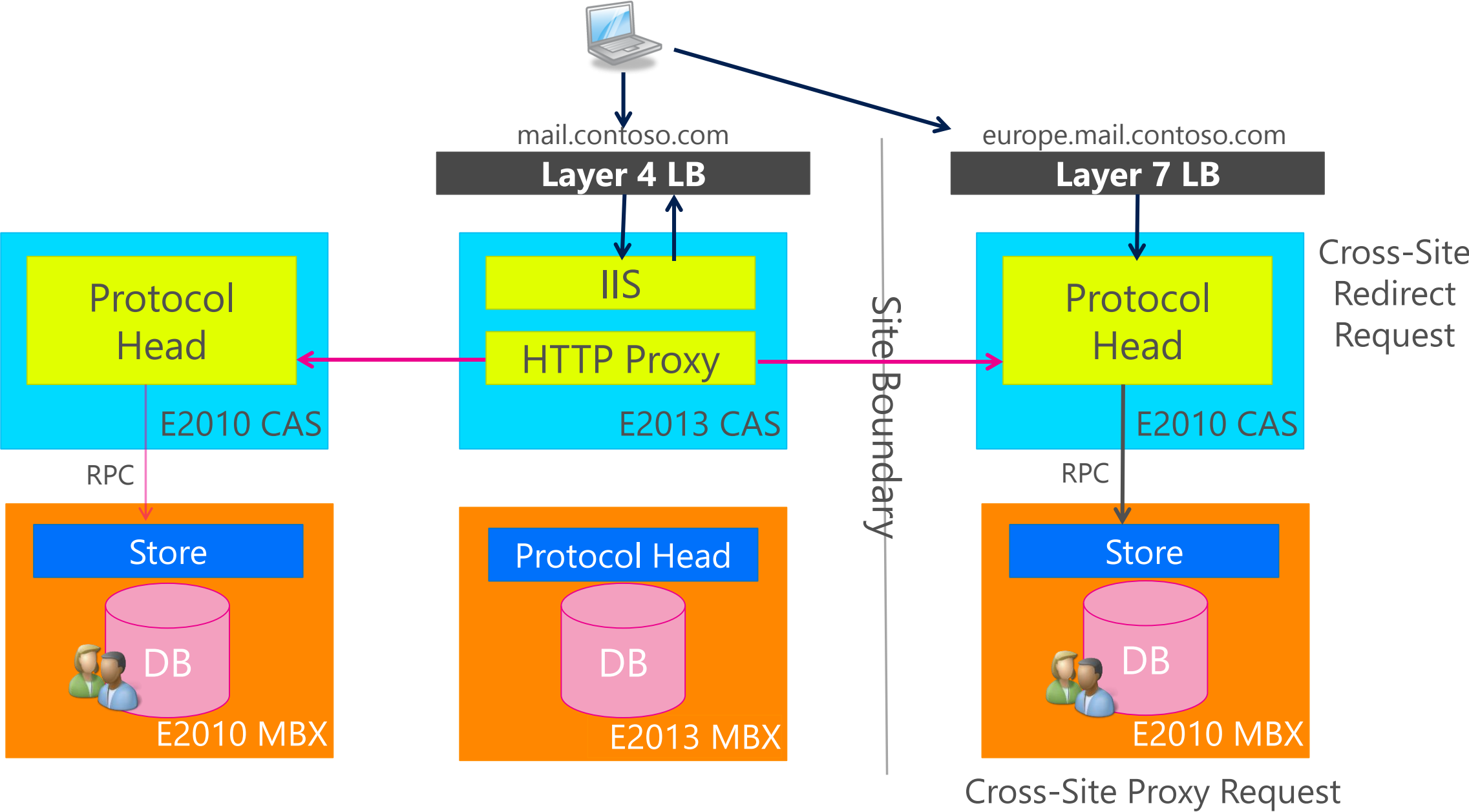
# Management Tools Coexistence

- Use the Exchange Administration Center (EAC) to:
  - Manage Exchange 2013 mailboxes
  - View and update Exchange 2010/2007 mailboxes and properties (with a few limitations)
- Use Exchange Management Console (EMC) to:
  - Create mailboxes
  - Perform new operations on those versions

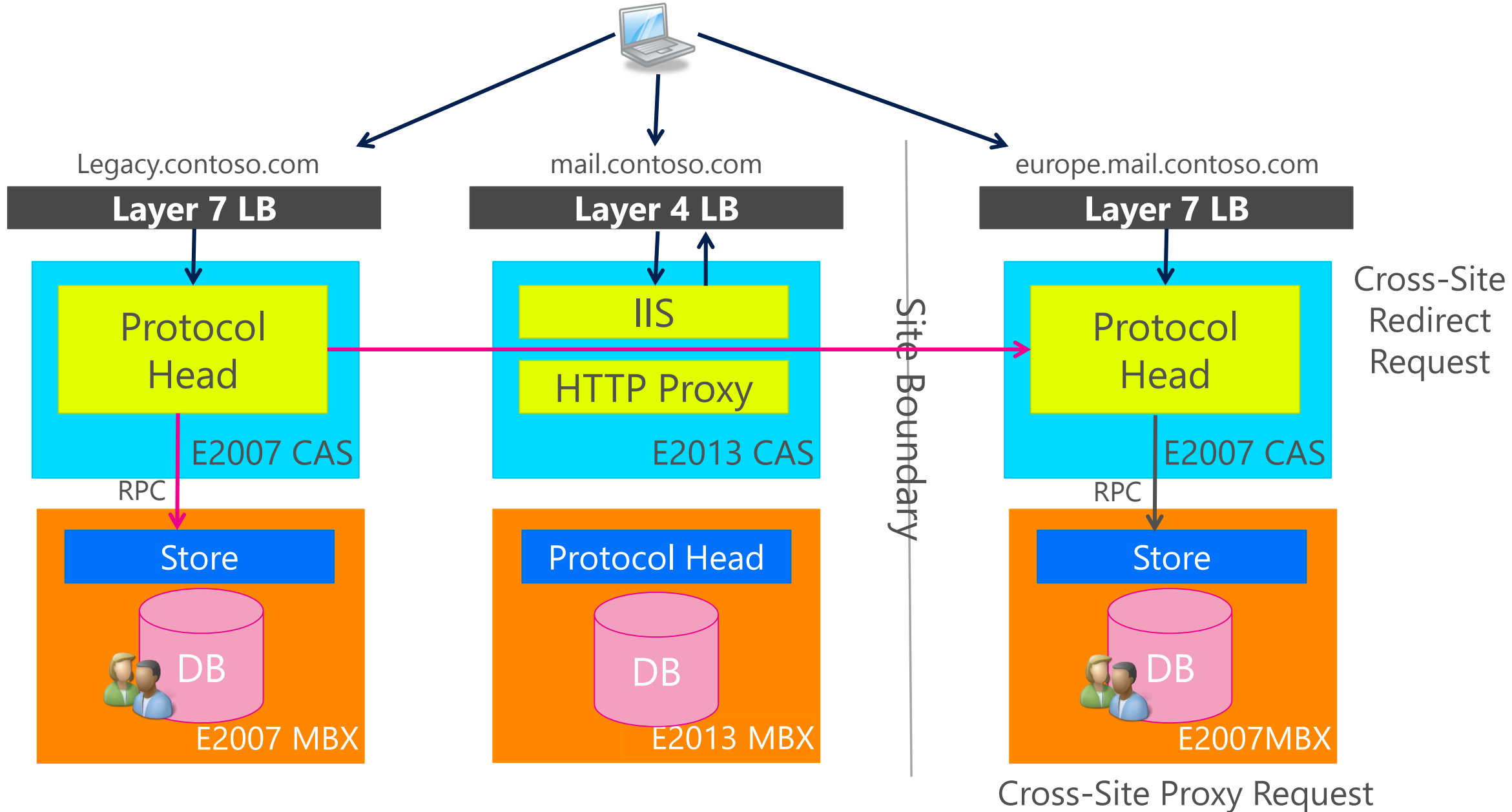


# Client Connectivity Flow

# OWA Client Connectivity Flow - Exchange 2010 Coexistence



# OWA Client Connectivity Flow - Exchange 2007 Coexistence



# Client Connectivity Flow

Protocol	Exchange 2007 user / Exchange 2013 namespace	Exchange 2010 user / Exchange 2013 namespace
Requires	Legacy Namespace	No additional namespaces
OWA	Non-silent redirect (not SSO) to CAS2007 externally facing URL	<ul style="list-style-type: none"> <li>•Proxy to CAS2010</li> <li>•Cross-site silent redirect (not SSO) which may redirect to CAS2010 or CAS2013</li> </ul>
EAS	Proxy to MBX2013	Proxy to CAS2010
Outlook Anywhere	Proxy to CAS2007	Proxy to CAS2010
Autodiscover	Redirect to CAS2007 externally facing URL	Proxy to CAS2010
EWS	Autodiscover	Proxy to CAS2010
POP/IMAP	Proxy to CAS2007	Proxy to CAS2010
OAB	Proxy to CAS2007	Proxy to CAS2010
RPS	n/a	Proxy to CAS2010
ECP	n/a	<ul style="list-style-type: none"> <li>•Proxy to CAS2010</li> <li>•Cross-site redirect which may redirect to CAS2010 or CAS2013</li> </ul>

# Summary

# Summary

- Updates are required for coexistence
- Exchange 2007 requires a legacy namespace
- Certificate management is improved
- Public Folder migration is cutover process

Thank You!



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