Exchange Server 2013
Upgrade and Coexistence
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Agenda

• Fundamentals of Deployment
• Upgrade and Coexistence
• Public Folder Migrations
• Managing Coexistence
FUNDAMENTALS OF DEPLOYMENT
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
UPGRADE AND COEXISTENCE
Functional Differences

Exchange 2010 Architecture

- L7 LB
  - AuthN, Proxy, Re-direct
  - Protocols, API, Biz-logic
  - Assistants, Store, CI

Exchange 2013 Architecture

- L4 LB
  - AuthN, Proxy, Re-direct

Client Access

Mailbox

- Hub Transport, Unified Messaging
- Mailbox
- Store, CI
- Protocols, Assistants, API, Biz-logic
Upgrade from Exchange 2010 to Exchange 2013

1. **Prepare**
   - Install Exchange 2010 SP3 across the ORG
   - Validate existing Client Access using 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 Remote Connectivity Analyzer

5. **Move Mailboxes**
   - Build out DAG
   - Move E2010 users to E2013 MBX

6. **Repeat for additional sites**

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**Internet facing site – Upgrade first**

- autodiscover.contoso.com
- mail.contoso.com

**Intranet site**
Upgrade from Exchange 2007 to Exchange 2013

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 Remote Connectivity Analyzer

6. Move Mailboxes
   Build out DAG
   Move E2007 users to E2013 MBX

7. Repeat for additional sites
Upgrade to Exchange Server 2013

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

Internet facing site – Upgrade first

Intranet site

- E2010 or 2007 HUB
- E2010 or 2007 CAS
- E2010 or 2007 MBX

autodiscover.contoso.com
mail.contoso.com

SP/RU

Exchange 2010 or 2007 Servers

- SP/RU

Clients

1. Prepare SP/RU

E2010 or 2007

HUB

CAS

MBX
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
  – Remote Connectivity Analyzer (http://www.exrca.com) and Test cmdlets
Upgrade to Exchange Server 2013

1. Prepare
   - Install Exchange SP and/or updates 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

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

• Install both MBX and CAS Servers
  – MBX performs PowerShell commands
  – CAS is proxy only

• Setup provides GUI or command line
  – No in-place upgrade

• New parameter for license terms acceptance

Setup.exe /mode:install /roles:C,M /IAcceptExchangeServerLicenseTerms
Upgrade to Exchange Server 2013

1. Prepare
   - Install Exchange SP and/or updates 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

4. Obtain and Deploy Certificates

5. Switch primary namespace to Exchange 2013 CAS

6. Move Mailboxes

7. Repeat for additional sites

Internet facing site – Upgrade first

Intranet site

autodiscover.contoso.com
mail.contoso.com
legacy.contoso.com
Create Legacy Namespace

• Required only for Exchange 2007 coexistence

• Create DNS record in internal and external DNS for legacy namespace

• Validate legacy namespace using ExRCA
Upgrade to Exchange Server 2013

1. Prepare
   - Install Exchange SP and/or updates 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

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

6. Move Mailboxes

7. Repeat for additional sites
Certificate Best Practices for Exchange 2013

• 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
Certificate Management in Exchange 2013

• End to End certificate wizard in the EAC
• EAC notifies you when a certificate is about to expire
  – 1st notification shown 30 days prior to expiration
  – Subsequent notifications provided daily
Exchange Server 2013
CERTIFICATE MANAGEMENT
Upgrade to Exchange Server 2013

1. Prepare
   - Install Exchange SP and/or updates 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

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 Remote Connectivity Analyzer

6. Move Mailboxes

7. Repeat for additional sites
Switch Primary Namespace

• Validate legacy namespace creation
• Configure Load balancing
  – Layer 7 load balancers no longer required for primary namespace
  – Layer 4 is supported and recommended
  – Legacy namespace is separate VIP with Layer 7 load balancer
  – Configure AutoDiscoverServiceInternalUri on Exchange 2013 CAS to LB value
  – Configure AutoDiscoverSiteScope
Switch Primary Namespace

• Update DNS to point Mail and Autodiscover to CAS 2013
  – Update both internal and external DNS

• 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

1. Prepare
   - Install Exchange SP and/or updates 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
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 Remote Connectivity Analyzer
6. Move Mailboxes
   - Build out DAG
   - Move users to E2013 MBX
7. Repeat for additional sites

Internet facing site – Upgrade first
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
Exchange Server 2013 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
  – 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
MANAGING COEXISTENCE
Coexistence Object Management

• Use Exchange Administration Center to:
  – Manage Exchange 2013 mailboxes
  – View and update Exchange 2010/2007 mailboxes and properties (with a few limitations)

• Use Exchange Management Console to:
  – Create mailboxes
  – Perform new operations on those versions
CLIENT ACCESS FLOW
OWA Client Connectivity – Exchange 2010

Layer 4 LB

Layer 7 LB

Protocol Head
E2010 CAS

HTTP Proxy
E2013 CAS

IIS

Store
DB
E2010 MBX

Store
DB
E2013 MBX

Protocol Head
E2010 CAS

Cross-Site Redirrect Request

Cross-Site Proxy Request

europe.mail.contoso.com

europe.mail.contoso.com

mail.contoso.com
## Client Protocol Connectivity – Coexistence

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<tbody>
<tr>
<td>Requires</td>
<td>Legacy Namespace</td>
<td>No additional namespaces</td>
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</table>
| OWA              | Non-silent redirect (not SSO) to CAS2007 externally facing URL | • Proxy to CAS2010  
|                  |                                               | • Cross-site silent redirect (not SSO) which may redirect to CAS2010 or CAS2013 |
| 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                                           | • Proxy to CAS2010  
|                  |                                               | • Cross-site redirect which may redirect to CAS2010 or CAS2013 |
SUMMARY
Summary

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

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