Netz-Weise
Lernen von den Besten.

Exchange Server 2013

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Wer bin ich?

- Marc Grote
- Seit 1989 hauptberuflich ITler
- Seit 1995 Selbststaendig
- Microsoft MVP
- Microsoft MCT/MCSE Private Cloud /MCLC /MCITP /MCSA /MC*
- Buchautor und Autor fuer Fachzeitschriften
- Schwerpunkte:
  - Windows Server Clustering/Virtualisierung/PKI
  - Forefront TMG/UAG/SCEP
  - Exchange Server seit Version 5.0

Agenda

- Neuerungen in Exchange Server 2013
- Exchange Server Komponenten im Zusammenspiel
- Exchange Administration
- Exchange Anbindungen für mobilen Zugriff
- Migration von Exchange Server 2010 zu 2013

Neuerungen?

Was ist denn neu?

Zwei Rollen (CAS/MBX)
EAC
Kein CAS Array
Antimalware
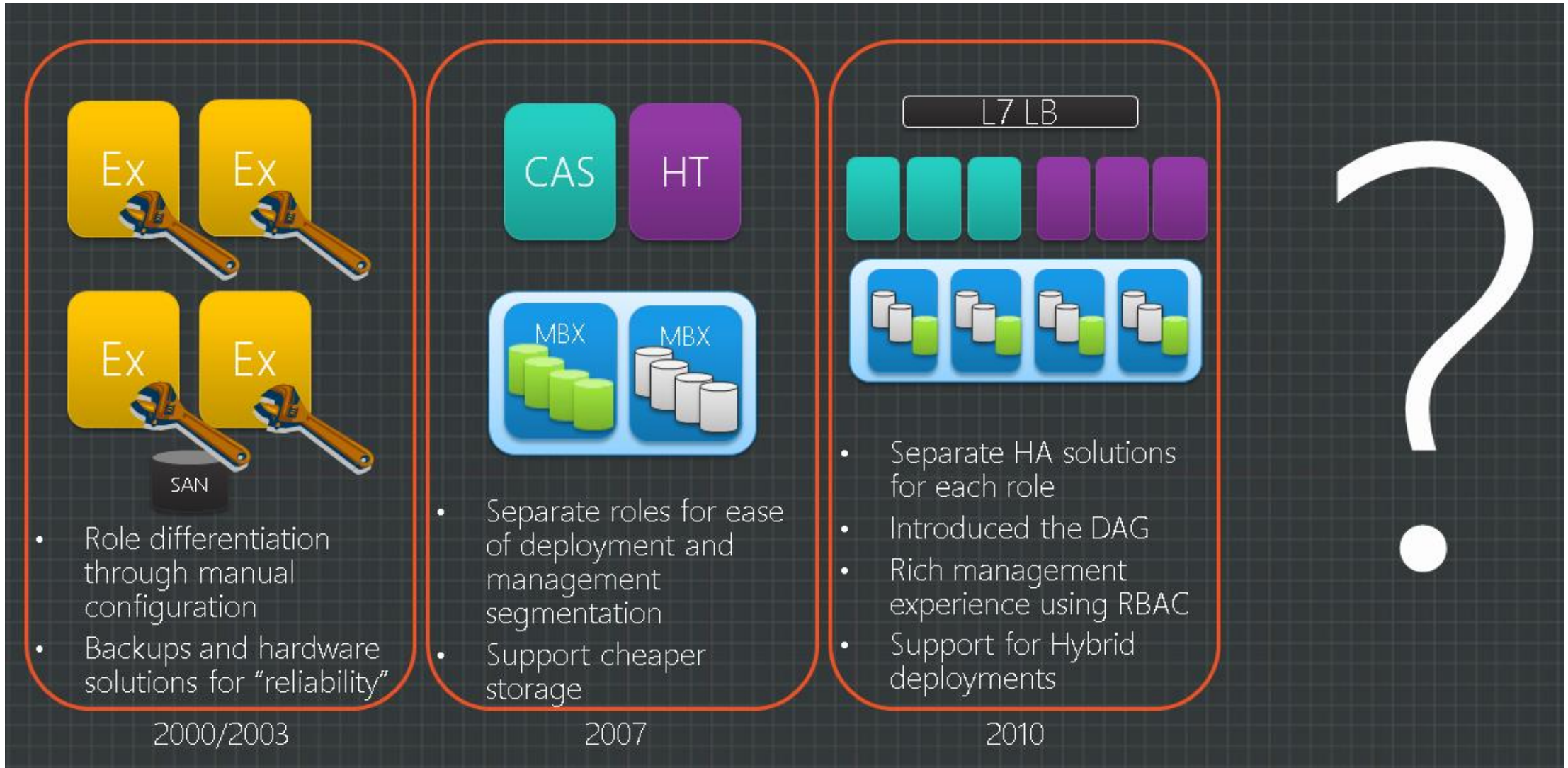Mehr Compliance
OWA Offline
Und vieles mehr

Infrastruktur

- EX2013-2 – Exchange Server 2013
- MSX2010-EN – Exchange Server 2010
- W2K8R2-EN – Domain Controller
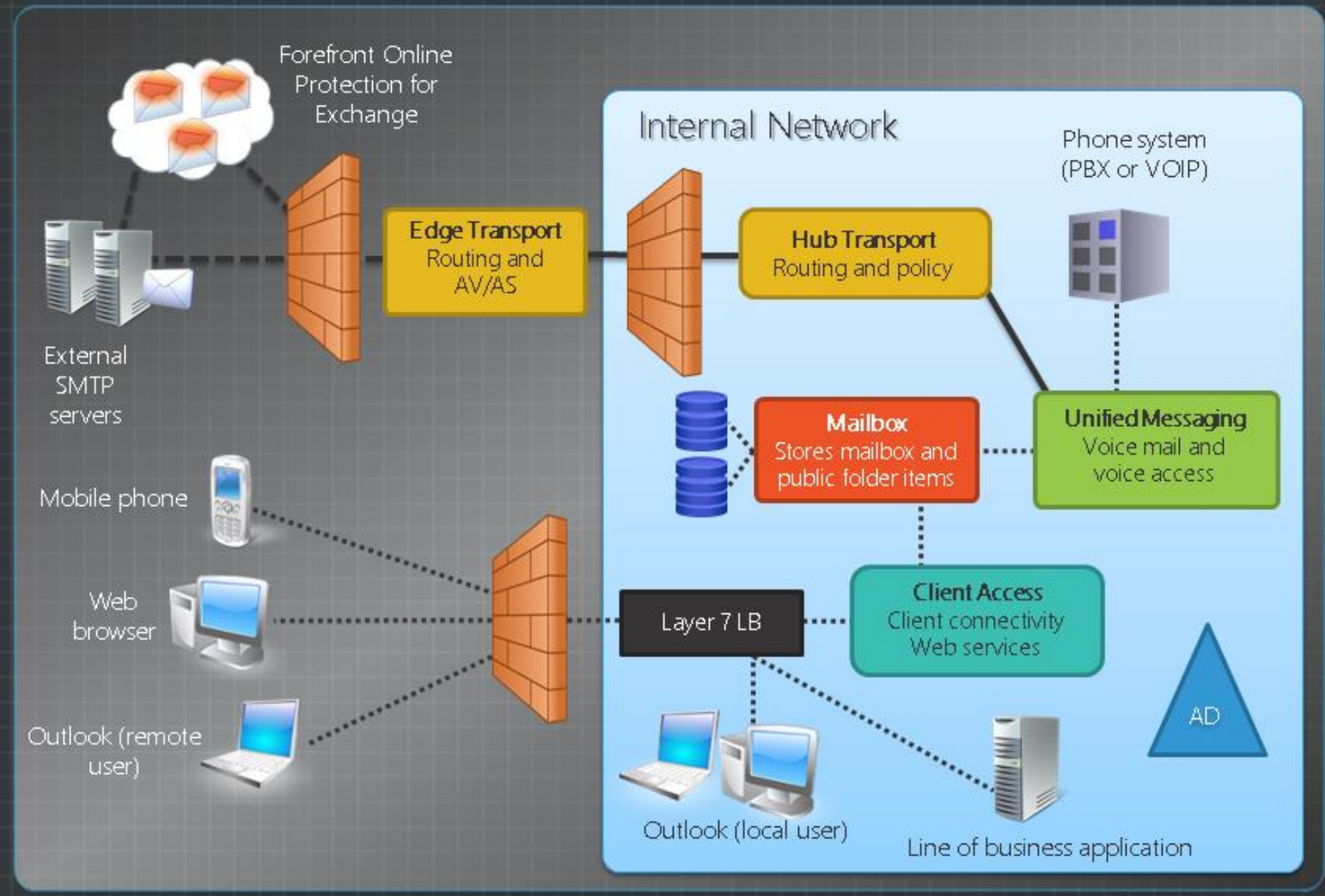- WIN8CL – Windows 8 Client / Office 2013

Evolution

2000/2003
- Role differentiation through manual configuration
- Backups and hardware solutions for "reliability"

2007
- Separate roles for ease of deployment and management segmentation
- Support cheaper storage

2010
- Separate HA solutions for each role
- Introduced the DAG
- Rich management experience using RBAC
- Support for Hybrid deployments

Source: TechED Australia 2012 – EXL311 – Scott Schnoll

Exchange 2010 Rollen

- 5 server roles

- Tightly-coupled in terms of
  - versioning
  - functionality
  - user partitioning
  - geo-affinity

Microsoft®
TechEd
Australia 2012

Forefront Online Protection for Exchange

Internal Network

Phone system (PBX or VOIP)

Edge Transport Routing and AV/AS

Hub Transport Routing and policy

External SMTP servers

Mailbox Stores mailbox and public folder items

Unified Messaging Voice mail and voice access

Mobile phone

Web browser

Layer 7 LB

Client Access Client connectivity Web services

AD

Outlook (remote user)

Outlook (local user)

Line of business application
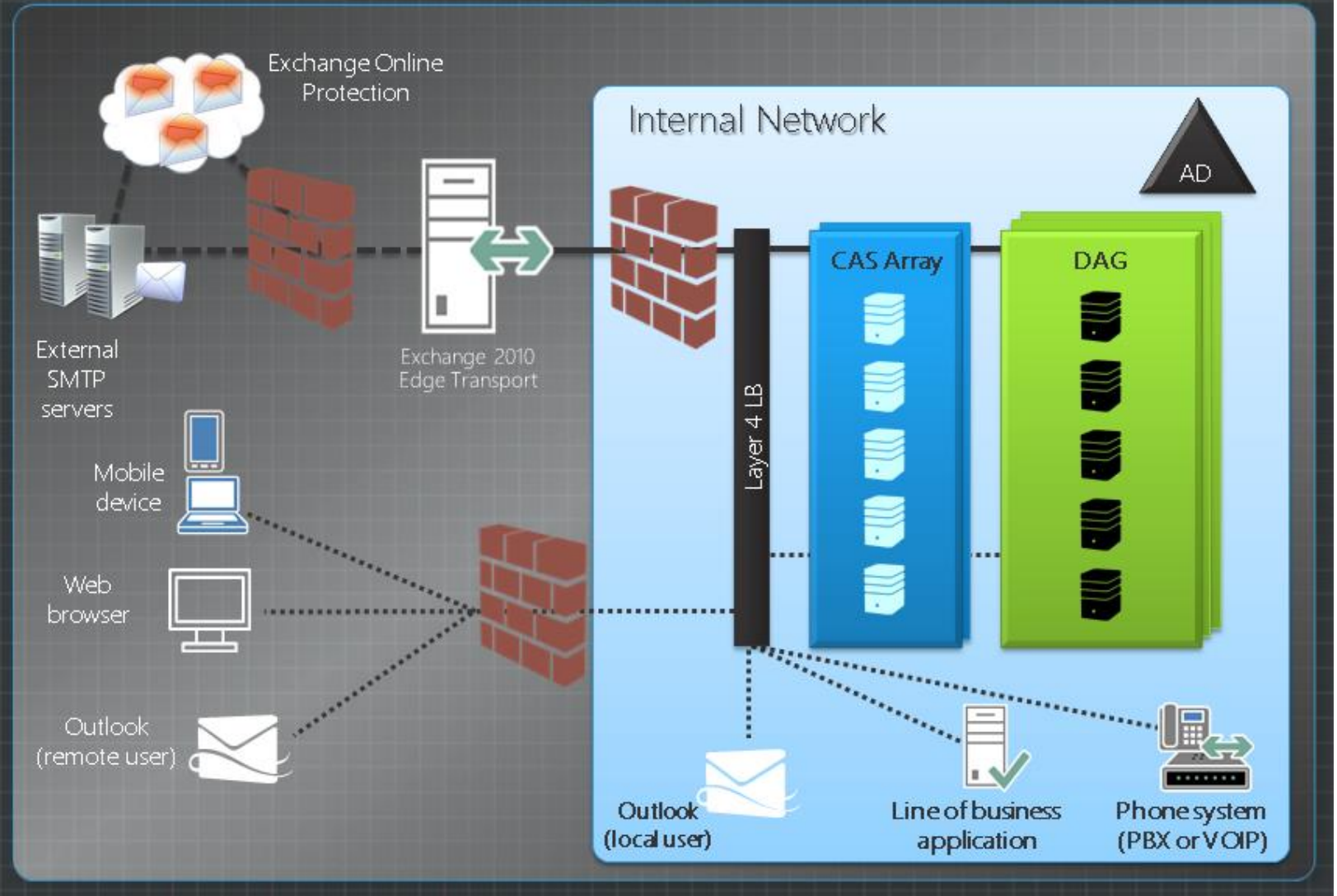
Exchange 2013 Rollen

Building Blocks

Client Access server
- CAS Array

Mailbox server
- DAG

Loosely-coupled
- Functionality
- Versioning
- User partitioning
- Geo-affinity

Labels within diagram:
- Exchange Online Protection
- Internal Network
- AD
- External SMTP servers
- Exchange 2010 Edge Transport
- CAS Array
- DAG
- Layer 4 LB
- Mobile device
- Web browser
- Outlook (remote user)
- Outlook (local user)
- Line of business application
- Phone system (PBX or VOIP)

Exchange CAS 2013

Domain-joined machine in the internal Active Directory forest
- Thin, stateless (protocol session) server

Comprised of three components:
- Client access protocols (HTTP, IMAP, POP)
- SMTP
- UM Call Router

Exchange-aware proxy server
- Understands requests from different protocols (OWA, EWS, etc.)
- Supports proxy and redirection logic for client protocols
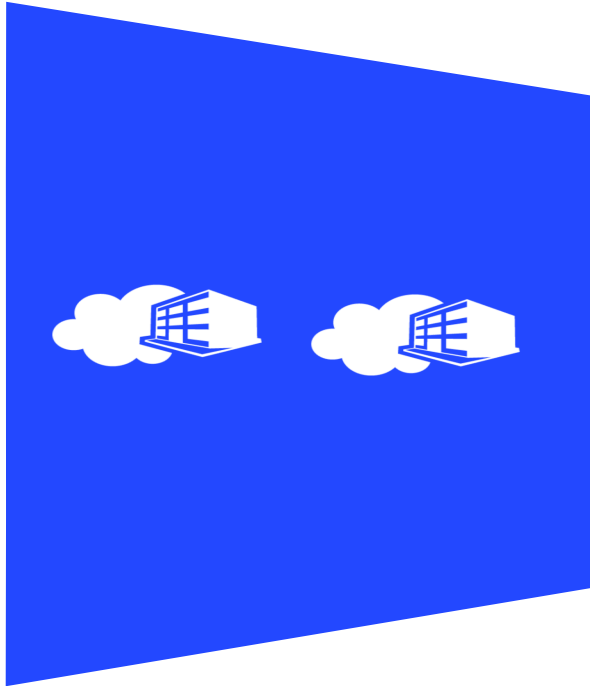- Capable of supporting legacy servers with redirect or proxy logic
- Contains logic to route specific protocol requests to their destination end-point
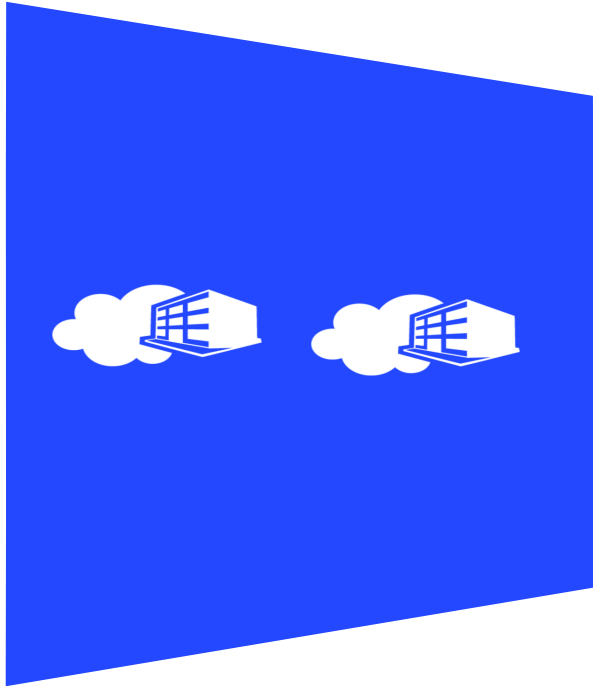
Exchange CAS 2013 Protokolle
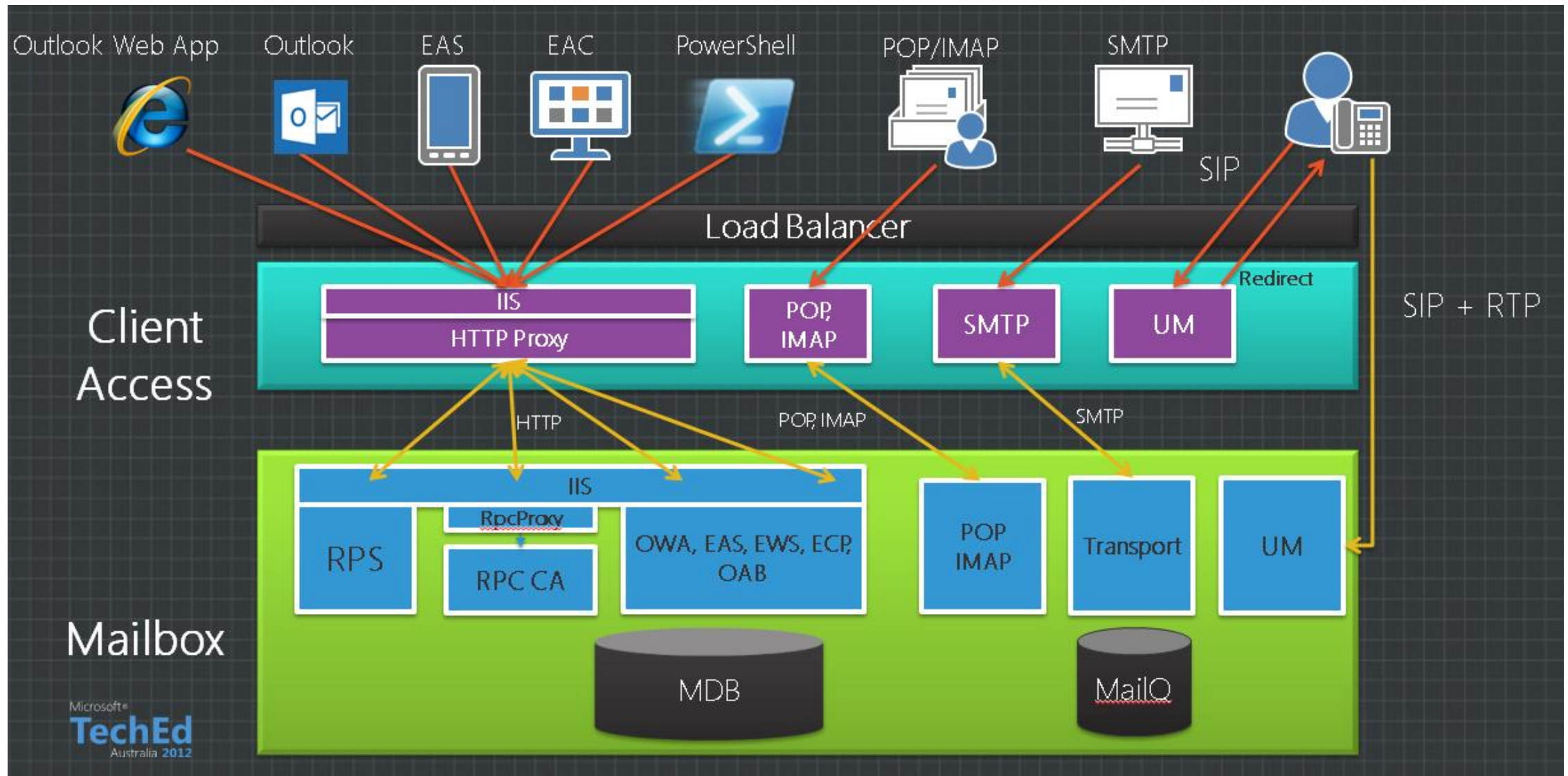
Demo

FrontEnd Transport Service

- Handles all inbound and outbound external SMTP traffic for the organization
- Does not queue mail locally and is stateless
- Functions as a layer 7 proxy and has full access to protocol conversation
- Listens on TCP25 and TCP587

Mailbox Server Rolle

Server that hosts the components that process, render and store Exchange data
- Includes components previously found in separate roles

Only Client Access servers connect directly to the Mailbox server
- Clients connect to Client Access servers
- Connectivity to a mailbox is always provided by the protocol instance local to the active database copy

Managed Store – Good by MSEXCHANGEIS
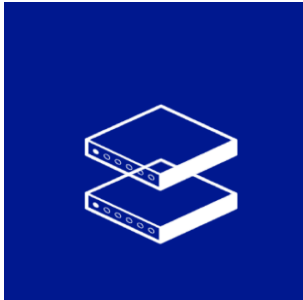
Store service process (Microsoft.Exchange.Store.Service.exe)
- Manages worker process lifetime based on mount/dismount
- Logs failure item when store worker process problems detected
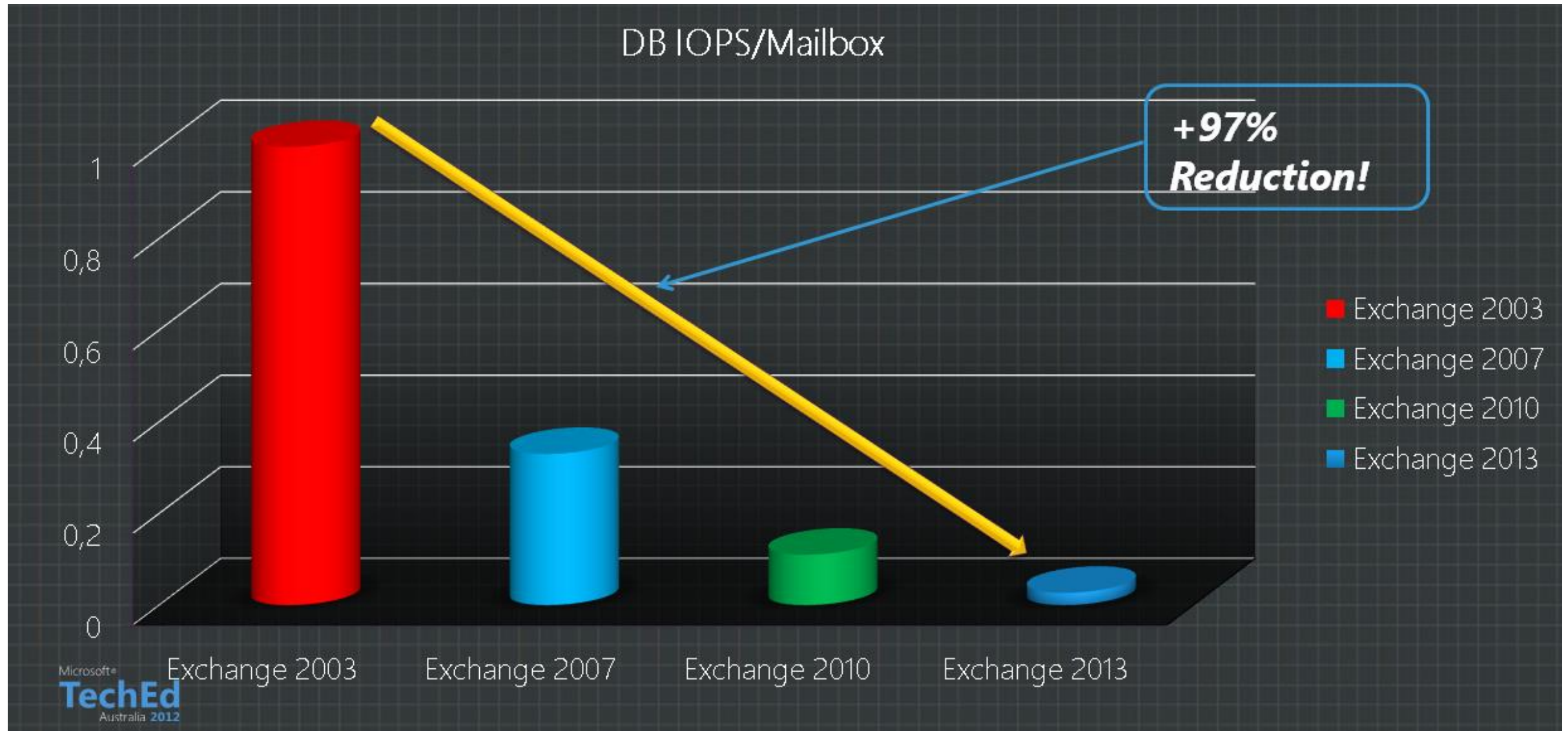- Terminates store worker process in response to "dirty" dismount during failover

Store worker process (Microsoft.Exchange.Store.Worker.exe)
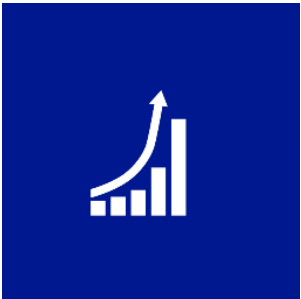- One process per database, RPC endpoint instance is database GUID
- Responsible for block-mode replication for passive databases
- Fast transition to active when mounted
- Transition from passive ➔ active increases ESE cache size 5X

IOPS Reduzierung

DB IOPS/Mailbox

- Exchange 2003
- Exchange 2007
- Exchange 2010
- Exchange 2013

+97% Reduction!

Source: TechED Australia 2012 – EXL311 – Scott Schnoll

Public Folder – doch noch da!

Public folders based on the mailbox architecture
Single-master model
- Hierarchy is stored in a PF mailbox (one writeable)
- Content can be broken up and placed in multiple mailboxes
- The hierarchy folder points to the target content mailbox

Because it's a mailbox, it's in a mailbox database...thus,
- High availability achieved through continuous replication
- No separate replication mechanism

Similar administrative features to current PFs
- No end-user changes

Modern Public Folders

- 1 - User connects to their home Public Folder mailbox first, which should be located near their primary mailbox.

- 2- Folder contents live in one specific mailbox for that folder. All content operations are redirected to the mailbox for that folder

- 3 – Folder hierarchy changes are intercepted and written to writeable copy of Public Folder hierarchy

- 4 – All Public Folder mailboxes listen for hierarchy changes and update similar to Outlook clients

- 5 - When a Public Folder mailbox gets full, move some folders to a new mailbox
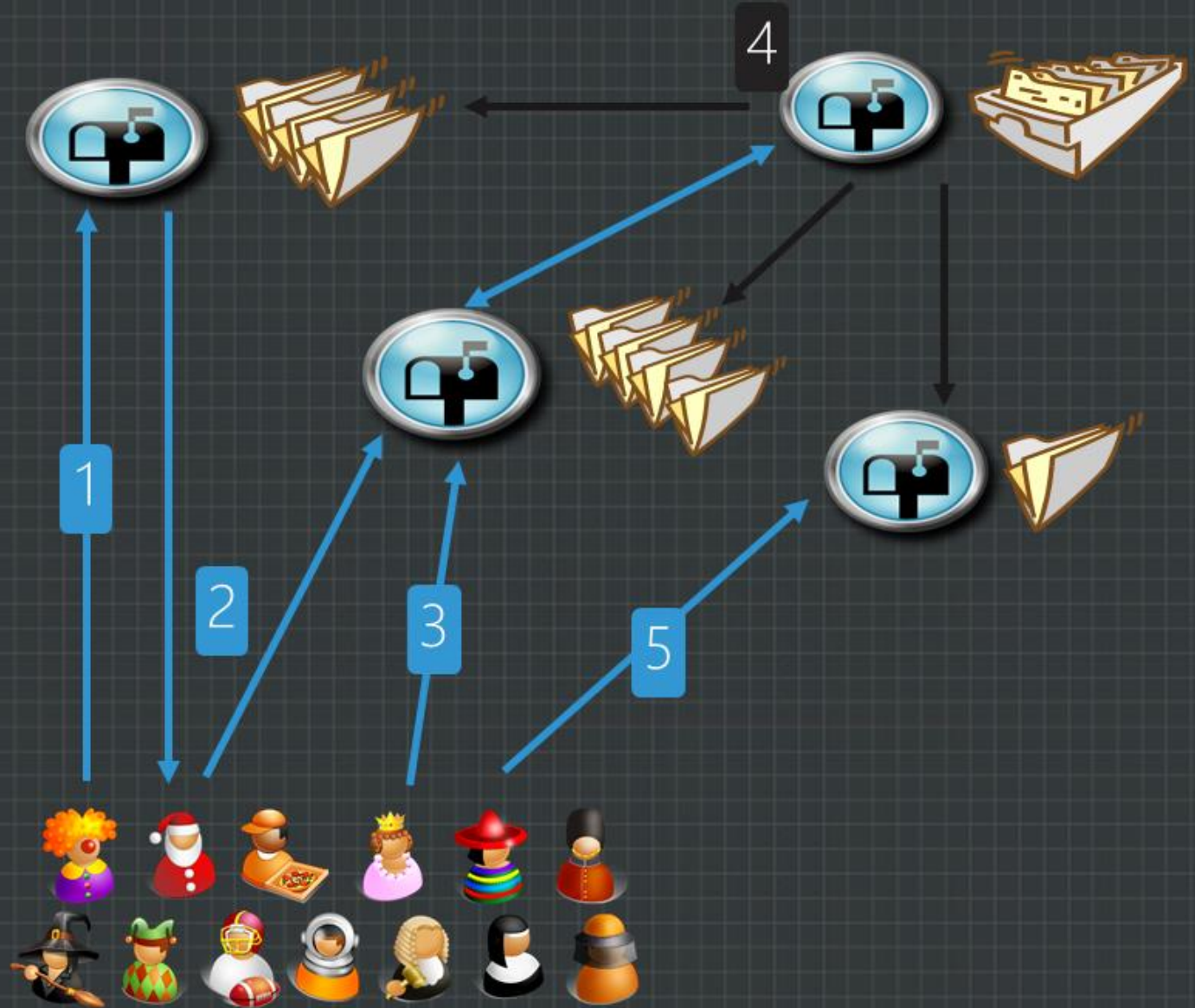
Demo

Transport Erweiterungen
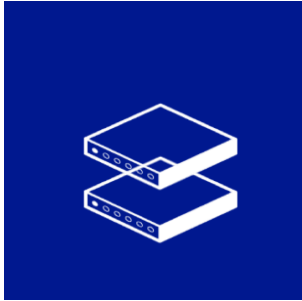
Transport on Mailbox server has three services

Microsoft Exchange Transport - Stateful and handles SMTP mail flow for the organization and performs content inspection

Microsoft Exchange Mailbox Transport Delivery - Receives mail from the Transport service and deliveries to the mailbox database

Microsoft Exchange Mailbox Transport Submission - Takes mail from the mailbox databases and submits to the Transport service

Transport has the following responsibilities

Receives all inbound mail to the organization
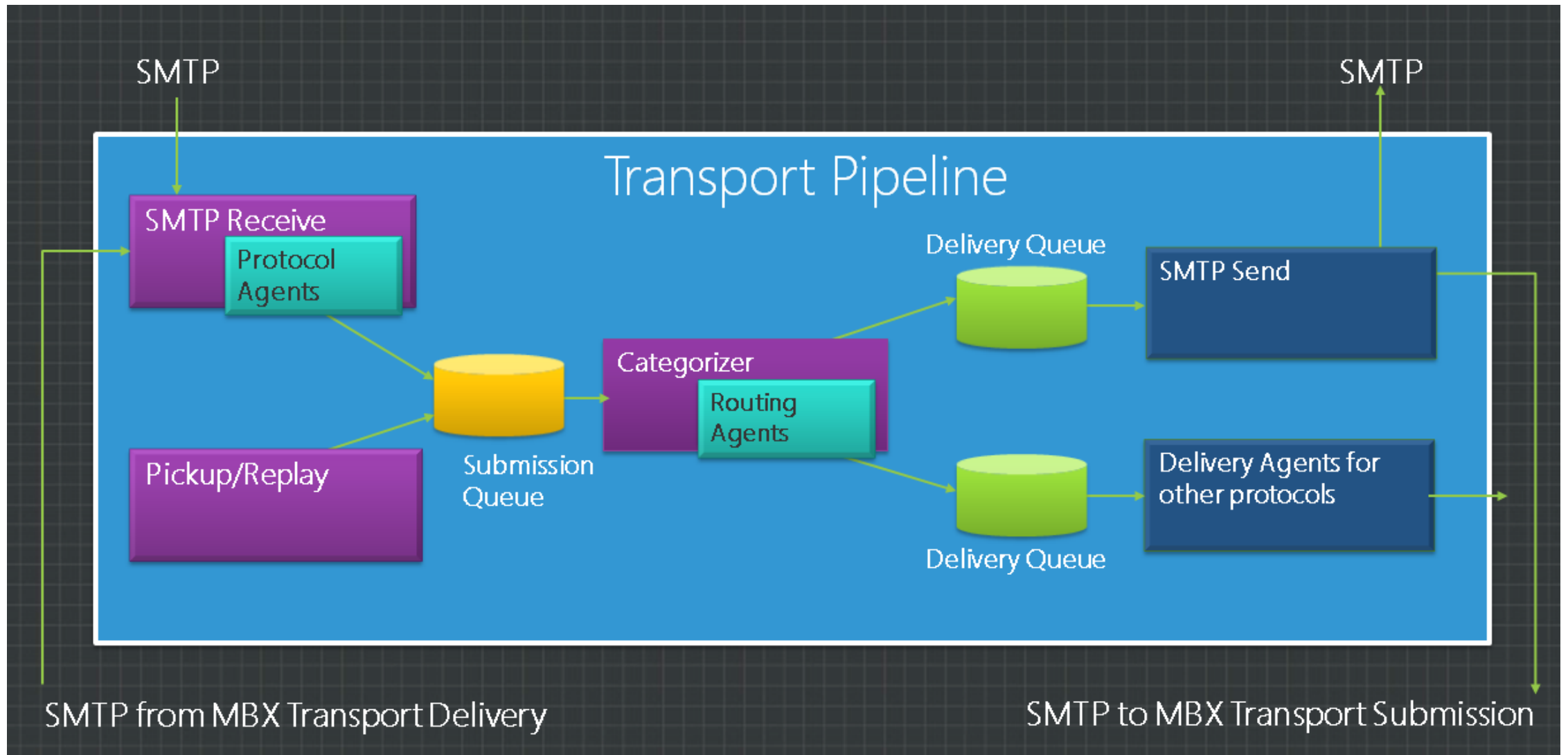
Submits all outbound mail from the organization

Handles all internal message processing such as transport rules, content filtering, and antivirus
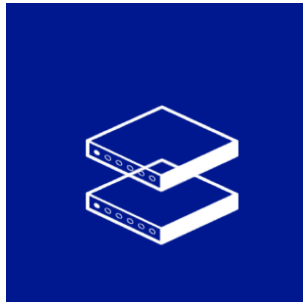
Performs mail flow routing

Queue messages

Supports SMTP extensibility

Transport Service

Source: TechED Australia 2012 – EXL311 – Scott Schnoll

Exchange Koexistenz

Supported coexistence scenarios
    Exchange Server 2010 SP3
    Exchange Server 2007 SP3 (+ coexistence RU)

Supported client access methods
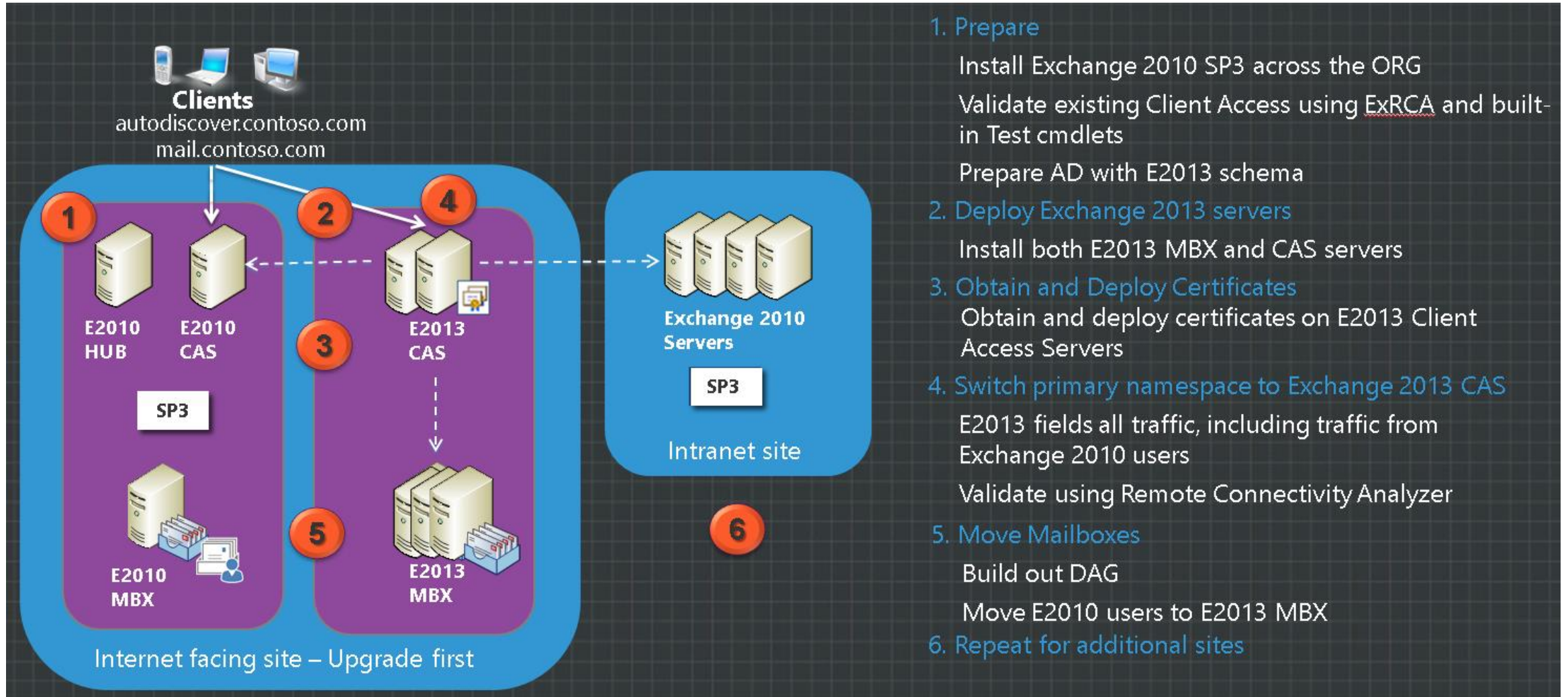   Outlook 2013, Outlook 2010, Outlook 2007
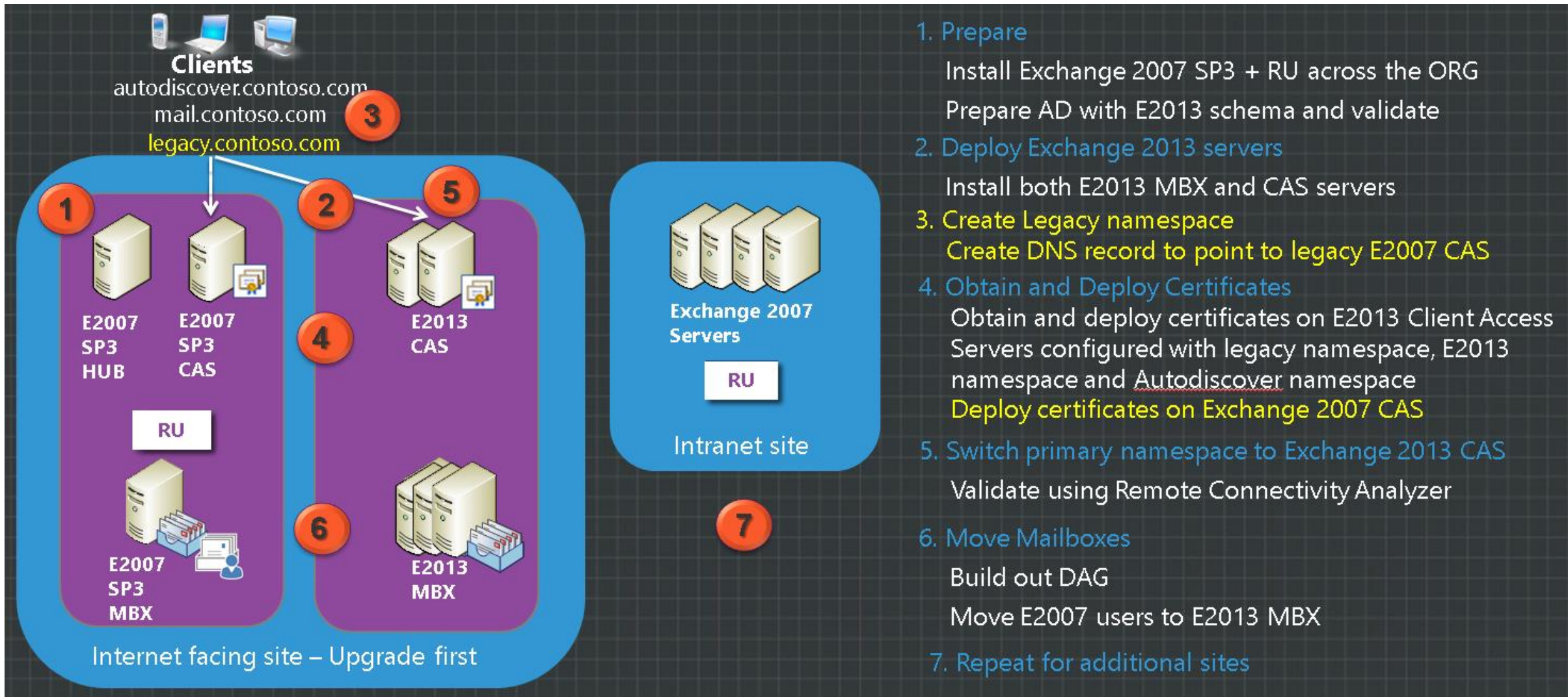   RPC over HTTP is only method of connectivity
    for Outlook clients
    Entourage 2008 for Mac, Web Services Edition
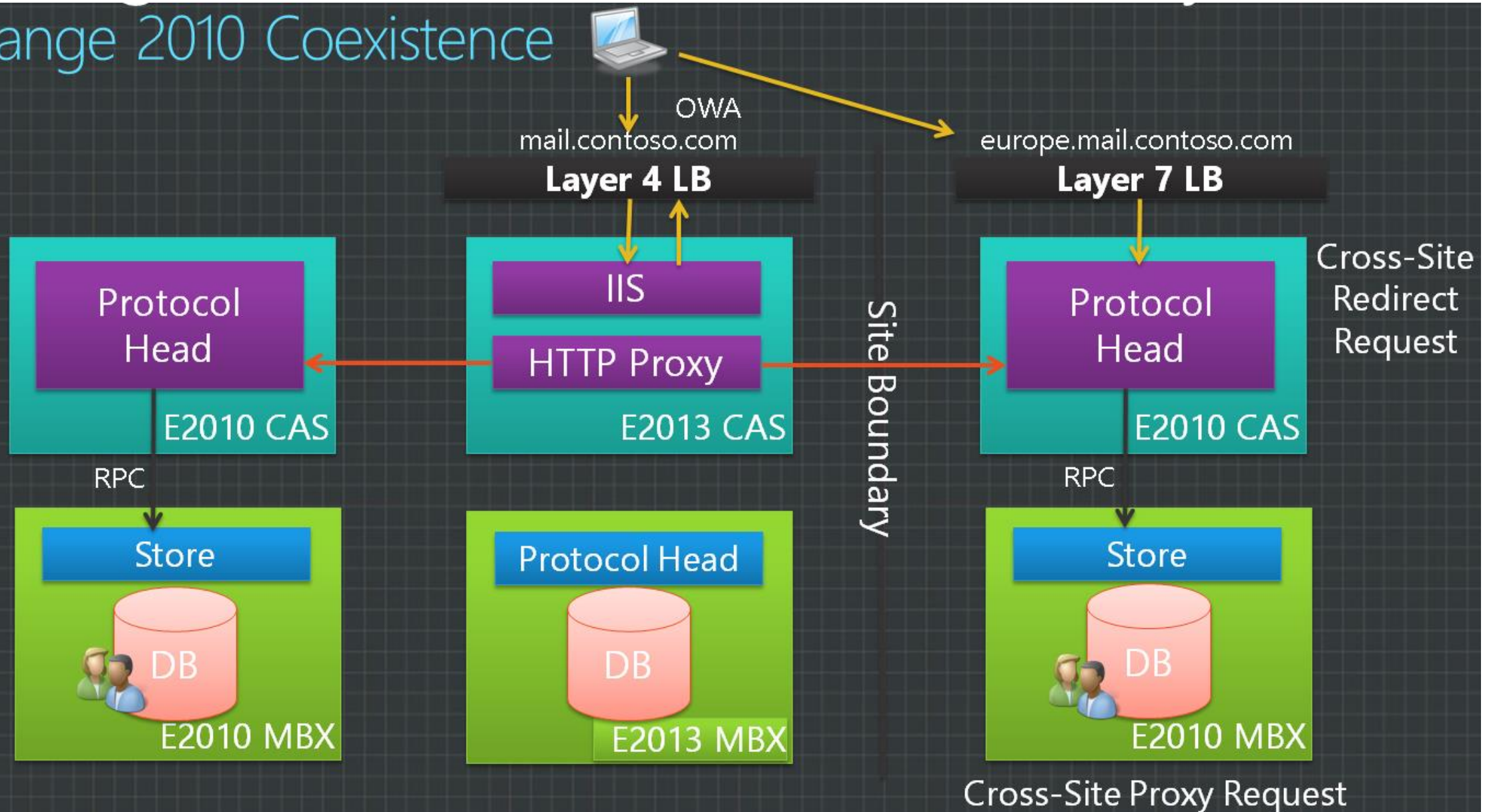   Outlook for Mac 2011

Upgrade zu Exchange 2013 von 2010

Source: TechED Australia 2012 – EXL311 – Scott Schnoll

Upgrade zu Exchange 2013 von 2007

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

Source: TechED Australia 2012 – EXL311 – Scott Schnoll

Exchange 2010 Coexistence

OWA
mail.contoso.com

europe.mail.contoso.com

Layer 4 LB

Layer 7 LB

Cross-Site
Redirect
Request

Protocol Head

E2010 CAS

IIS

HTTP Proxy

E2013 CAS

Site Boundary

Protocol Head

E2010 CAS

RPC

RPC

Store

DB

E2010 MBX

Protocol Head

DB

E2013 MBX

Store

DB

E2010 MBX

Cross-Site Proxy Request

Source: TechED Australia 2012 – EXL311 – Scott Schnoll

Legacy Coexistence

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	• 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

Source: TechED Australia 2012 – EXL311 – Scott Schnoll

Exchange 2013 Public Folder Migration

Database-centered architecture replaced by mailbox
  Existing Public Folders can be migrated to Exchange 2013
  Public Folder Replication is removed
  End user experience doesn't change
Public Folders are supported in Exchange 2013 CU1 OWA as Favorites
Migrate Public Folder users before Public Folders
  Exchange 2013 users can access Exchange 2010/Exchange 2007 Public Folders
  Exchange 2010/Exchange 2007 users cannot access Exchange 2013 Public Folders
  Migration of Public Folders is a cut-over migration
  Similar to online mailbox moves

Exchange 2013 Public Folder Migration

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 continue to 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

Fragen?

Kontakt

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