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**15** From the Desktop to the Cloud
**Years of Turning Vision into Value**

Microsoft SQL Server 2012

Microsoft System Center 2012

Microsoft Exchange | Microsoft Lync | Office | Microsoft Visual Studio | Windows 7 | Windows Internet Explorer | Windows Phone (Put people first.) | Windows Azure | Microsoft SQL Azure

# Configuring Hybrid the easy way

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Microsoft HK Ltd.

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# Session Objectives and Takeaways

- Session Objective(s):
  - Understand how the Hybrid Configuration Engine works
  - Understand the common pitfalls customers hit when they're configuring hybrid, and how to avoid them

# Agenda

- Hybrid overview
- Manually configured hybrid review
- The new SP2 deployment process
- How does the Hybrid Configuration Wizard work?
- Common deployment pitfalls

# Office 365 Migration Options

## Choices to fit your organization

**Migration**

### IMAP migration

- Supports wide range of e-mail platforms
- E-mail only (no calendar, contacts, or tasks)

### Cutover Exchange migration (CEM)

- Good for fast, cutover migrations
- No server required on-premises

### Staged Exchange migration (SEM)

- No server required on-premises
- Identity federation with on-premises directory

**Hybrid**

### Hybrid deployment

- Manage users on-premises and online
- Enables cross-premises calendaring, smooth migration, and easy off-boarding

| | IMAP migration | Cutover migration | Staged migration | Hybrid |
|---|---|---|---|---|
| Exchange 5.5 | X | | | |
| Exchange 2000 | X | | | |
| Exchange 2003 | X | X | X | X |
| Exchange 2007 | X | X | X | X |
| Exchange 2010 | X | X | | X |
| Notes/Domino | X | | | |
| GroupWise | X | | | |
| Other | X | | | |

* Additional options available with tools from migration partners

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# Hybrid

## Staged Exchange Migration vs Hybrid Feature-set

| Feature | Staged | Hybrid |
|---|---|---|
| Mail routing between on-premises and cloud (recipients on either side) | ● | ● |
| Mail routing with **shared namespace** (if desired) - @company.com on both sides | ● | ● |
| **Unified GAL** | ● | ● |
| **Free/Busy** and calendar sharing cross-premises | | ● |
| **Mailtips**, **messaging tracking,** and **mailbox search** work cross-premises | | ● |
| **OWA Redirection** cross-premise (single OWA URL for both on-premises and cloud) | | ● |
| **Exchange Online Archive** | | ● |
| **Exchange Management Console** used to manage cross-prem relationship & mailbox migrations | | ● |
| **Native mailbox move** supports both onboarding and offboarding | | ● |
| No outlook reconfiguration or OST resync required after mailbox migration | | ● |
| **Online Mailbox Move** allows users to start logged into their mailbox while it is being moved to the cloud | | ● |
| **Secure Mail** ensure emails cross-premises are encrypted, and the internal auth headers are preserved | | ● |
| **Centralized mailflow control**, ensures that all email routes inbound/outbound via On Premises | | ● |

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# How to pick an Exchange migration solution?

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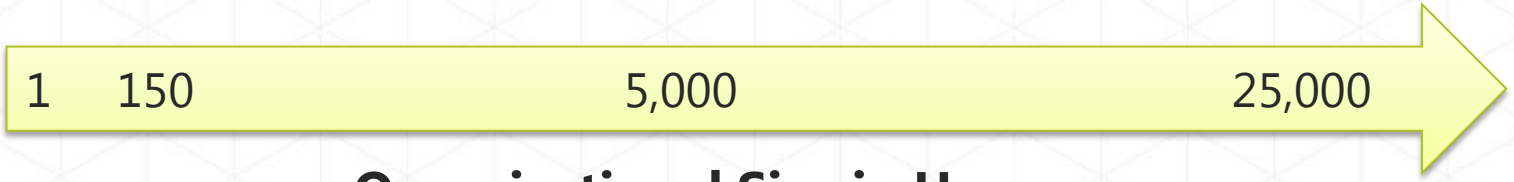


**Organizational Size in Users**

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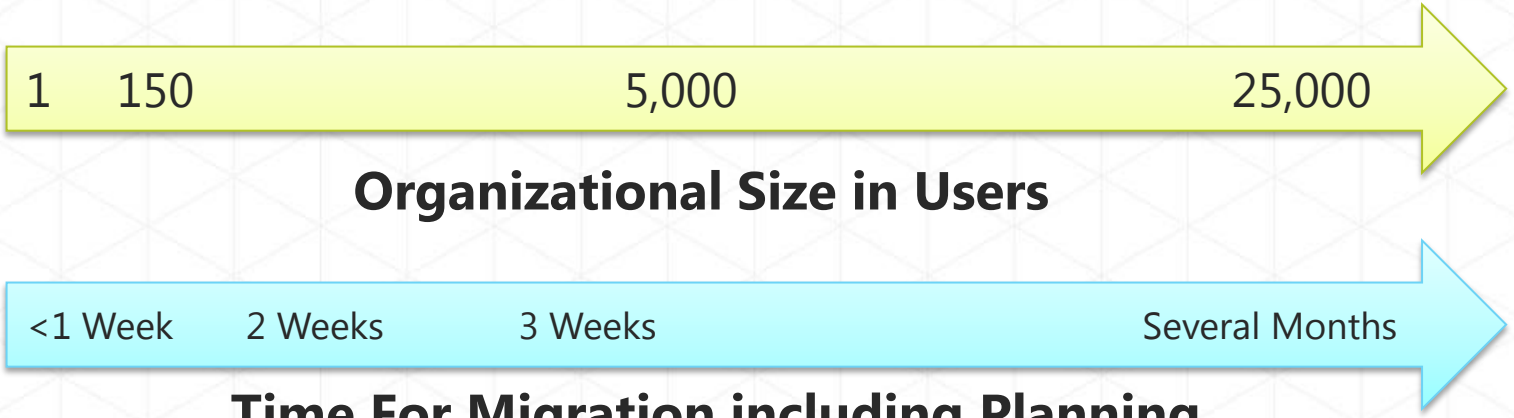

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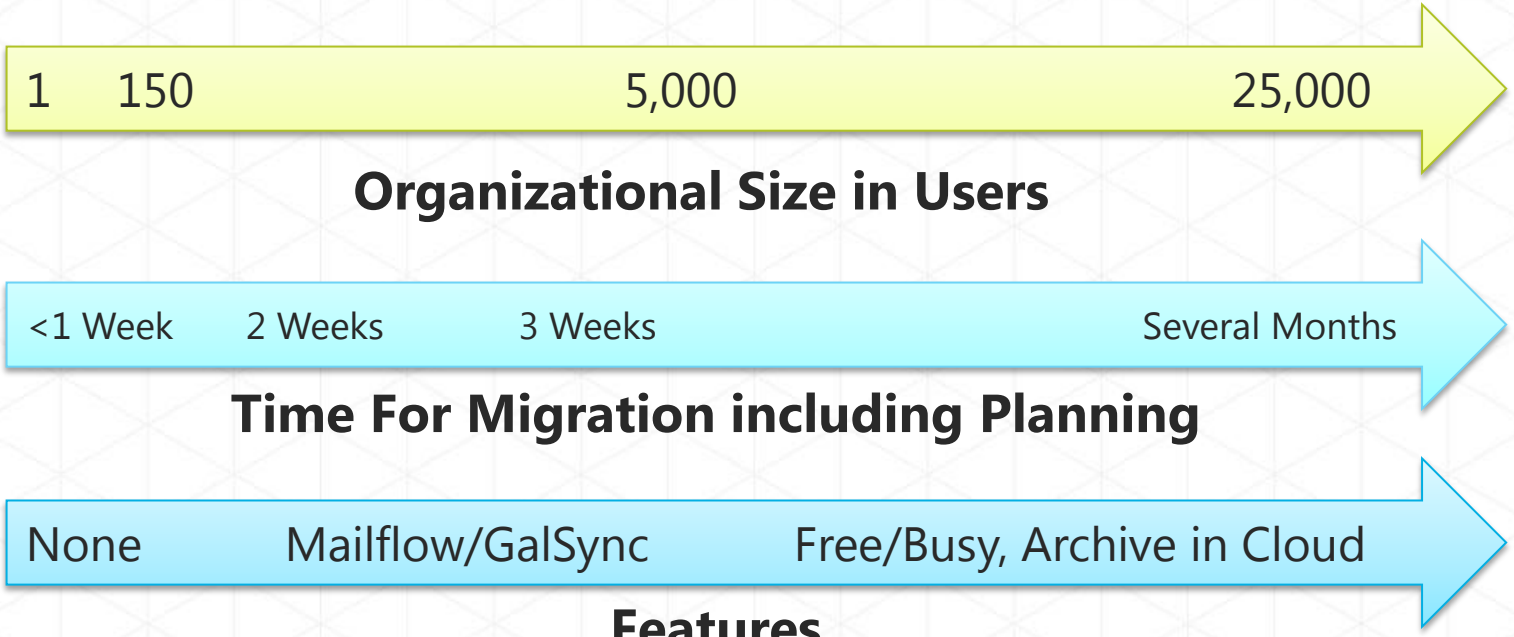

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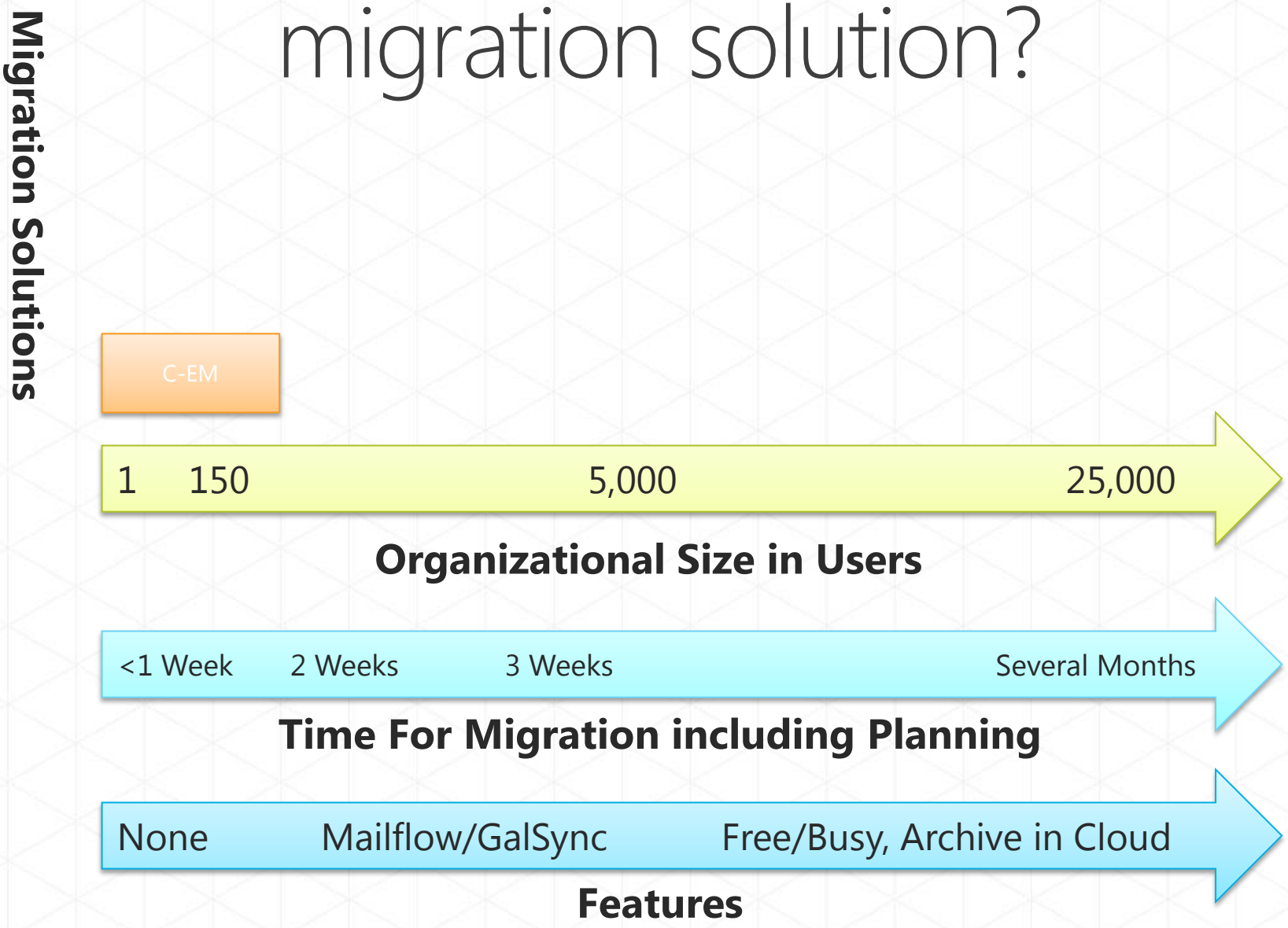

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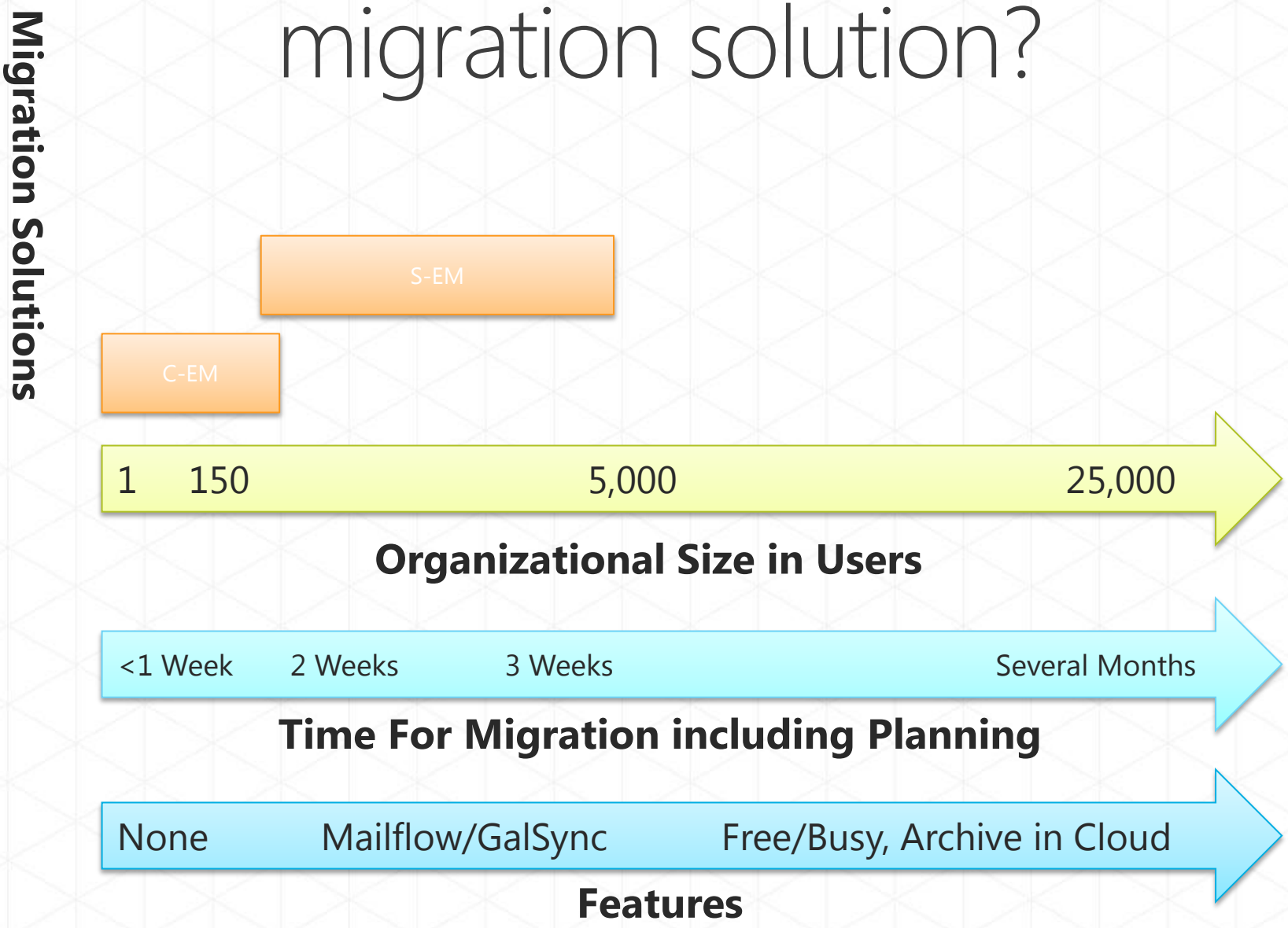

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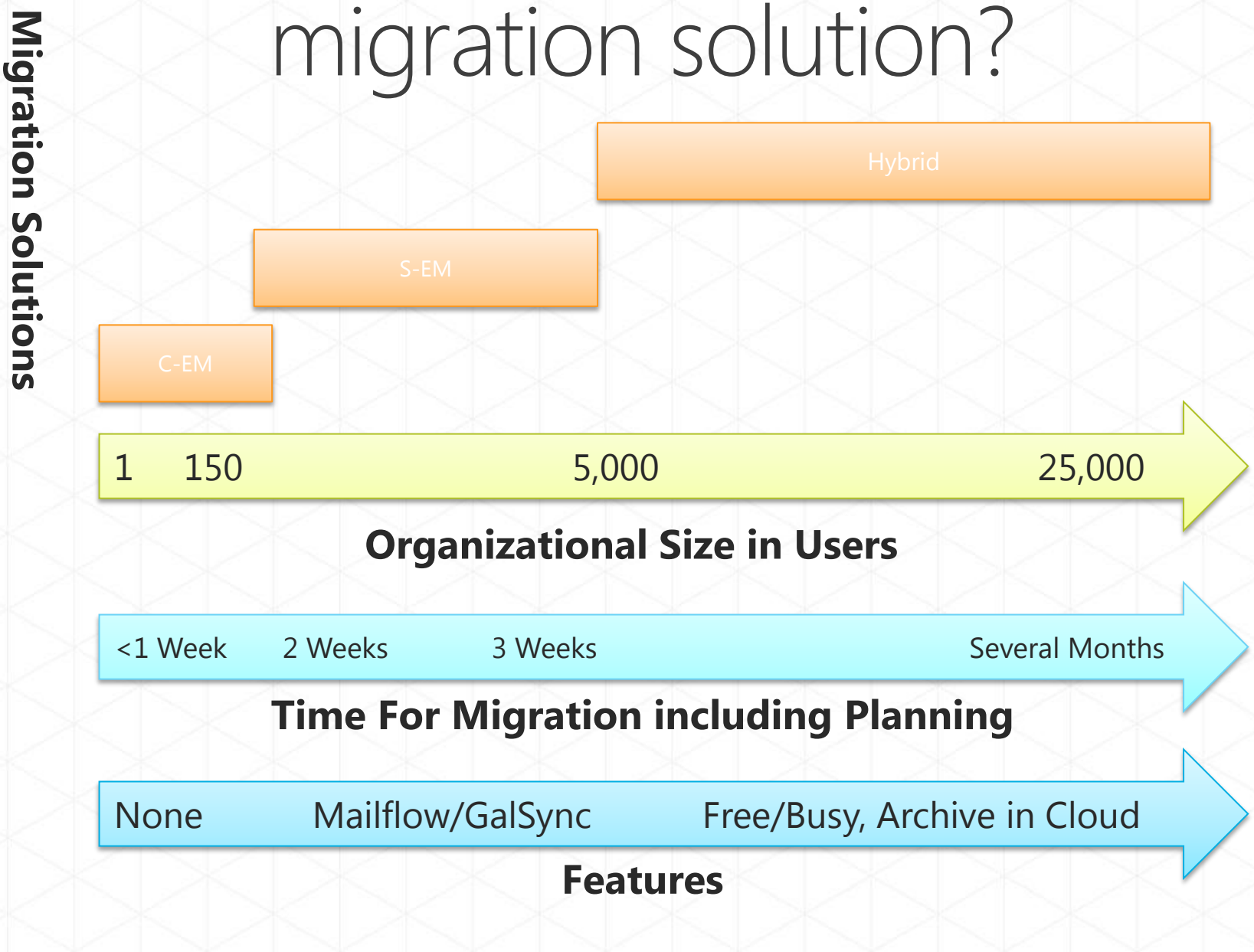

# Hybrid
## Feature summary

**Makes your on-premises organization and cloud organization work together like a single, seamless organization**

- Offers near-parity of features/experience on-premises and in the cloud
- Seamless interactions between on-premises and cloud mailboxes
- Migrations in and out of the cloud transparent to end-user

**Features not supported:**

- Coexistence of mailbox permissions –Permissions are migrated, but do not work when Delegator and Delegate are split between on-prem & cloud
- Migration of Send As for non mailbox recipients
- Multi-forest – Only single forest source environments
- Public Folders
- Address Book Policies

Demo

# Configure hybrid manually – review

## Using Exchange 2010 SP1

# Exchange Deployment Assistant

## Exchange Deployment Assistant

http://technet.microsoft.com/exdeploy2010

- Currently supports manual hybrid configuration with:
  - Exchange Server 2003
  - Exchange Server 2007
  - Exchange Server 2010 SP1
- Support for the Hybrid Configuration Wizard coming soon

# SP1 Improvements

- Significant documentation improvements
- Exchange Deployment Assistant
  - Custom step by step guidance
  - Additional scenarios added over time (continually evolving)
- Fixes for Exchange federation and Exchange 2003 support delivered in SP1 RU4 and to the Exchange Online service in our regular service updates

# Hybrid deployment feedback

- Difficult and fiddly configuration process
- Lots of manual steps
- New technical concepts
- A number of different administrative tools/interfaces to go to

# Hybrid Configuration Wizard

## The new SP2 process

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# What's new in Exchange 2010 SP2

- **Coexistence Domain –** Replaces the requirement for the customer to create a "service.contoso.com" domain
- **Federation Trust improvements –** Removes the requirement to create a "exchangedelegation.contoso.com" domain
  - SP2 automatically prepends a well know string ("FYDIBOHF25SPDLT") to the beginning of the account namespace.
- **Dedicated hybrid management  experience**
  - Hybrid Config Wizard
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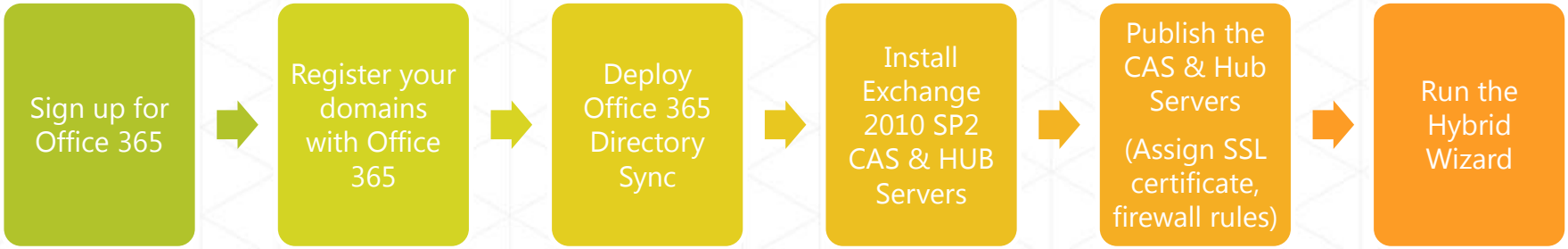
- **Dedicated hybrid management experience**
  - Hybrid Config Wizard
  - New/Get/Set/Update-HybridConfiguration cmdlets
- The wizard & cmdlets will configure the following th
  - Exchange federation trust
  - Organization relationships
  - Remote domains/accepted domains
  - Email address policies
  - Send/Receive connector
  - Forefront inbound/outbound connectors
  - MRSProxy
  - Pre-req checks (i.e. Office365 Active Directory Sync, Exchange certificates, registered custom domains, etc…)

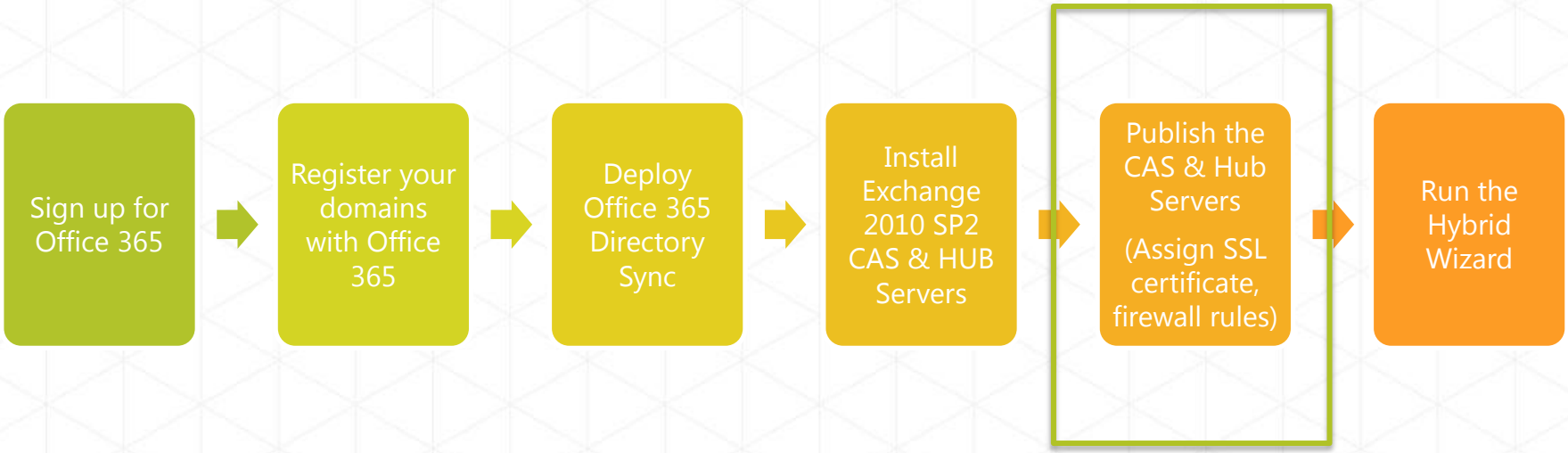
**Pre-SP2:** Over 50+ manual steps

**With SP2:** Now only 6 steps, all within the UI

# SP2 Hybrid Deployment Process

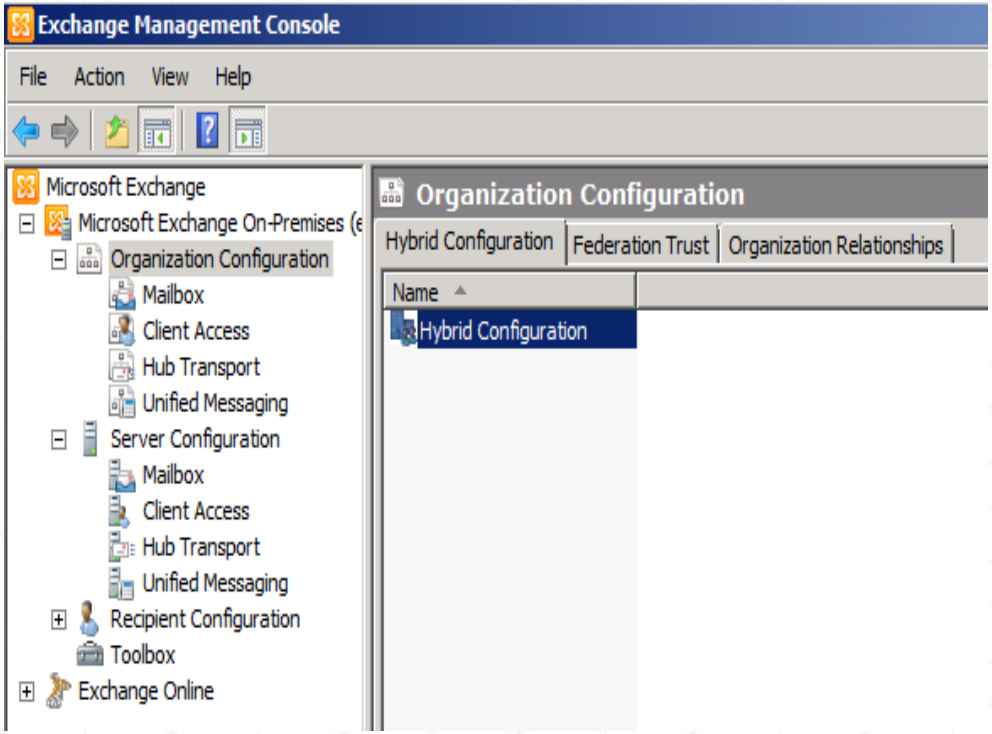


# SP2 Hybrid Deployment Process




Use the Exchange **Remote Connectivity Analyzer** to verify this stage

# The new Hybrid Configuration Wizard



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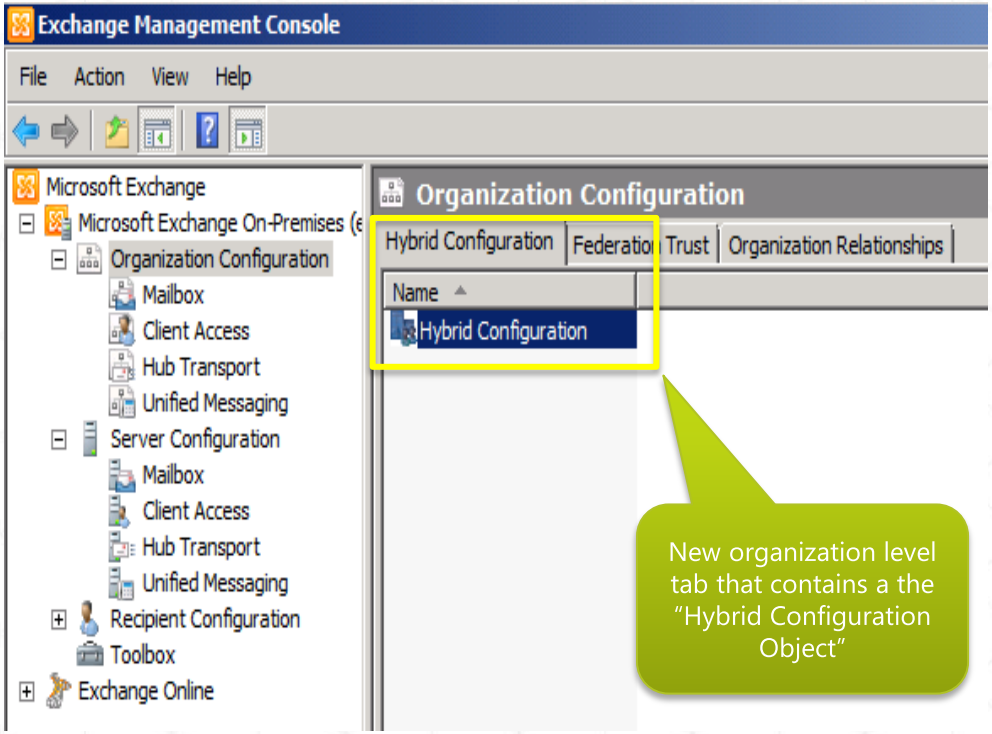

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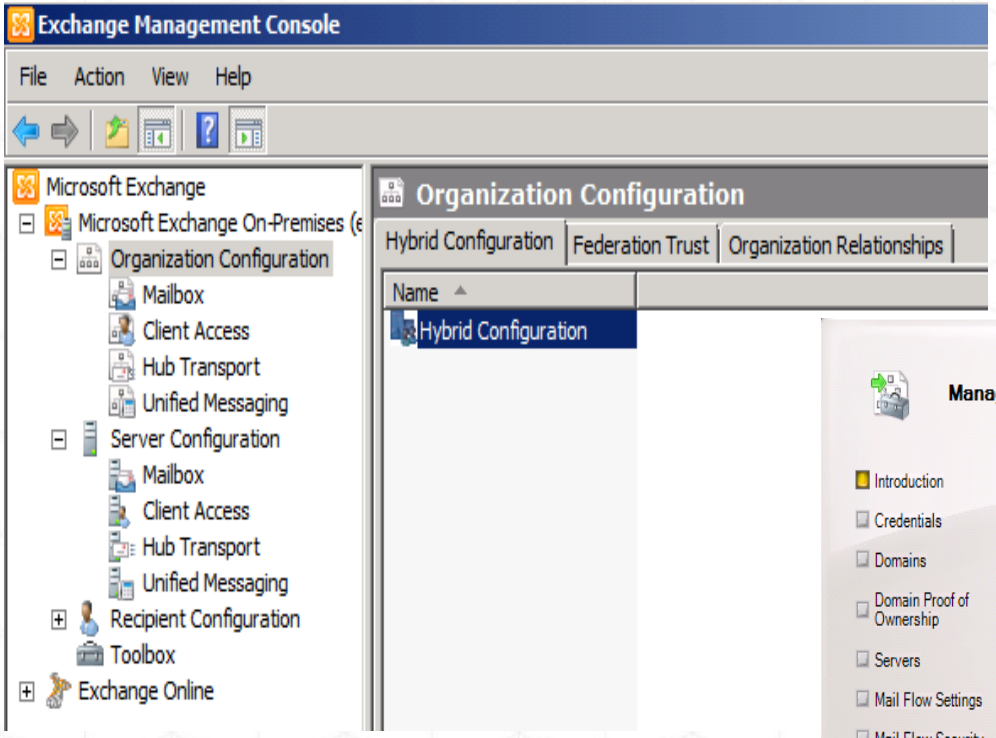


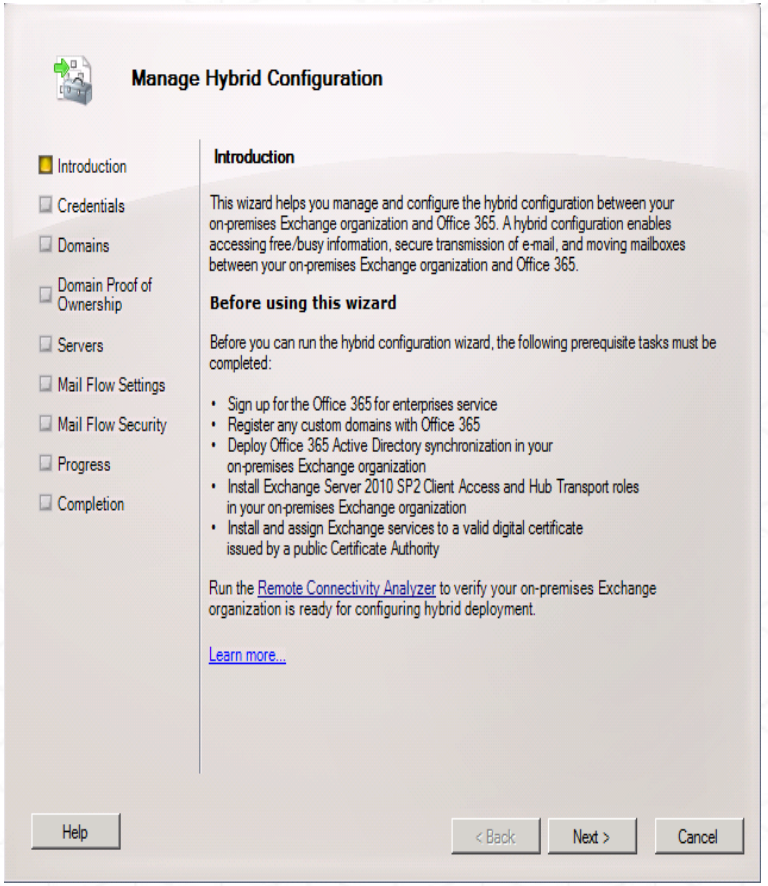

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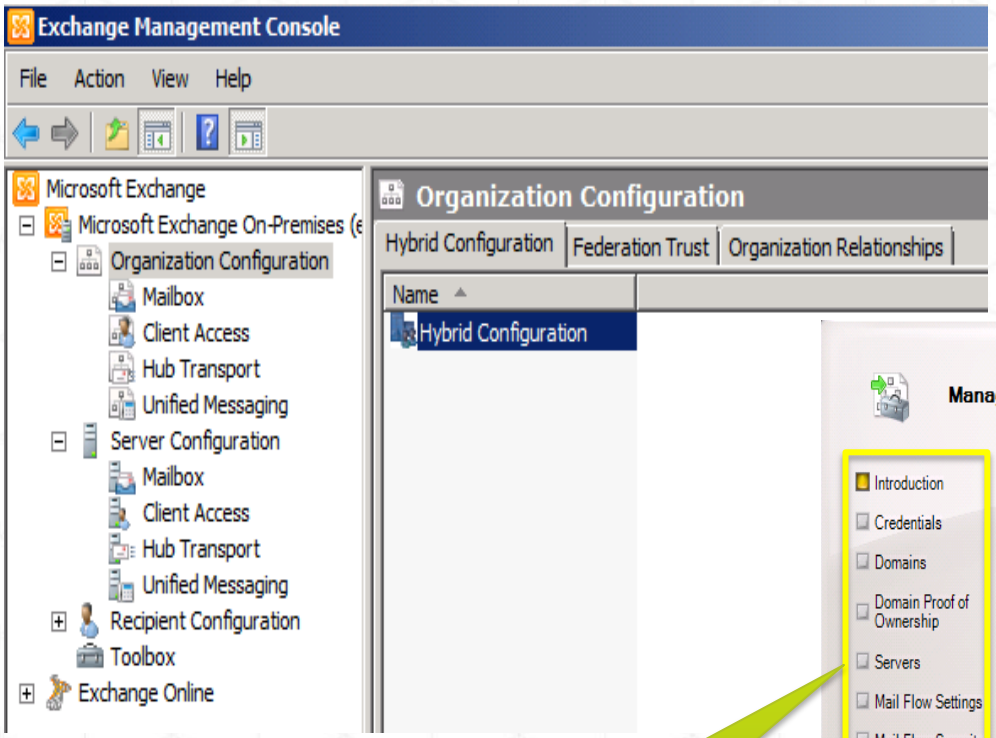
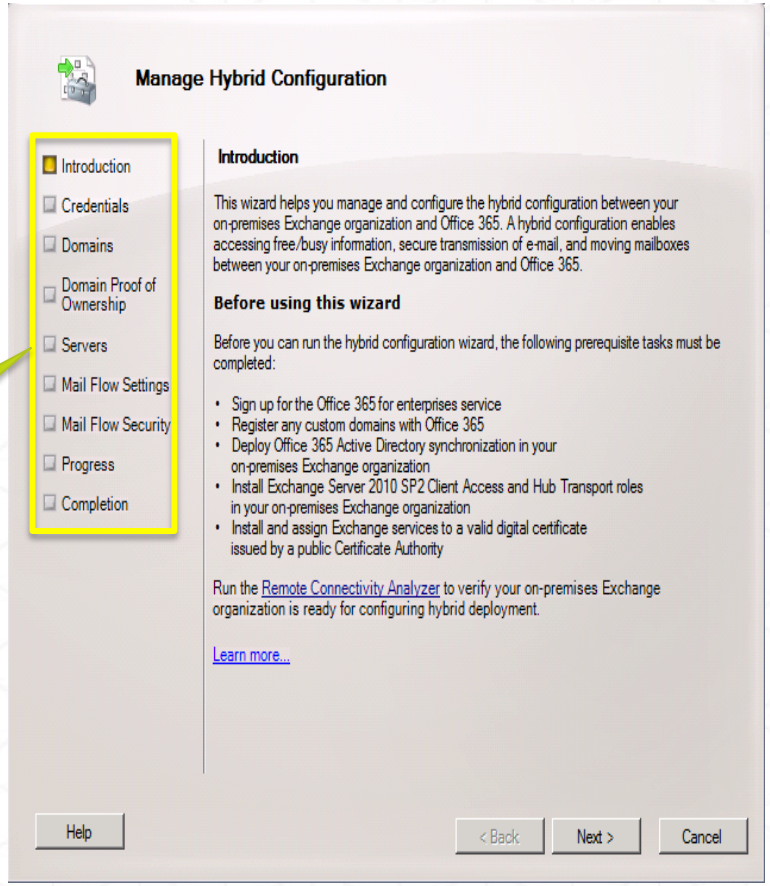


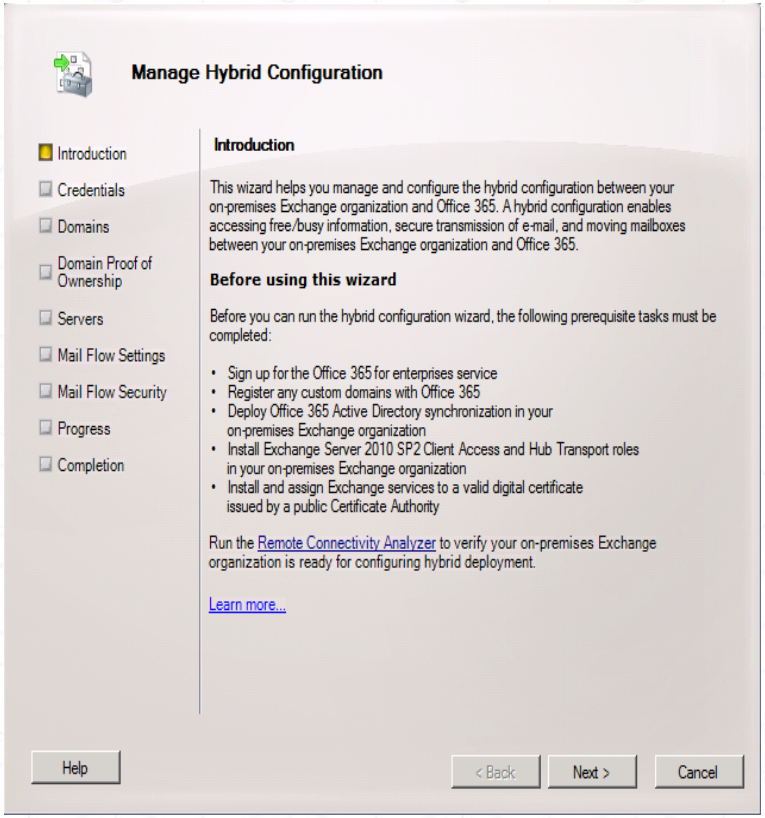

End to end wizard that guides you through each step of configuring hybrid



Video

# Hybrid Configuration Wizard

# The Wizard & the Configuration Engine



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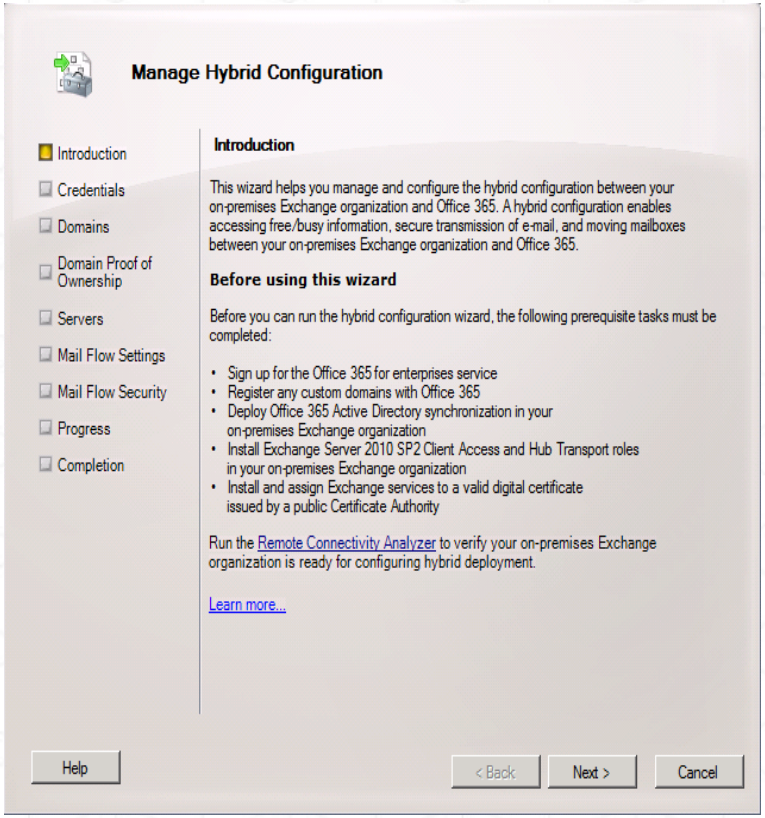
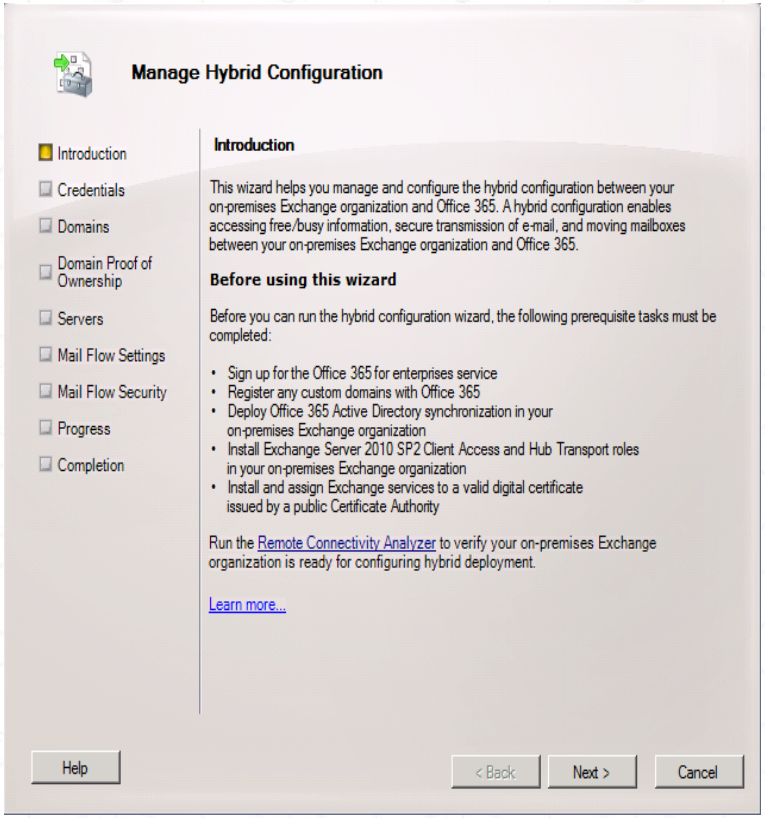



**Update-HybridConfiguration**

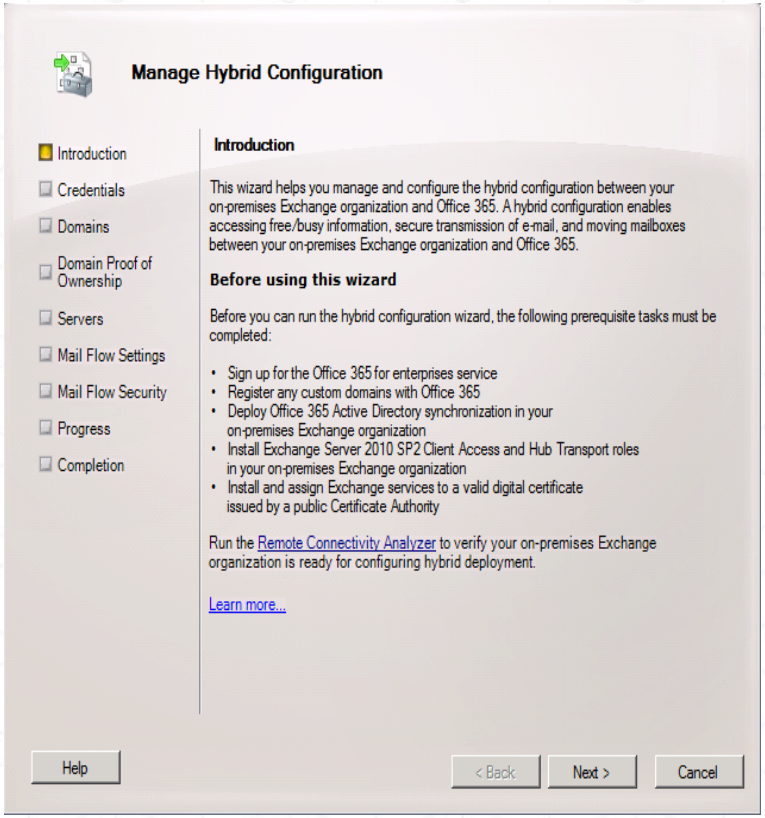
# The Wizard & the Configuration Engine




**Update-HybridConfiguration**

- The Wizard records the information collected from the user via the "Set-HybridConfiguration" cmdlet

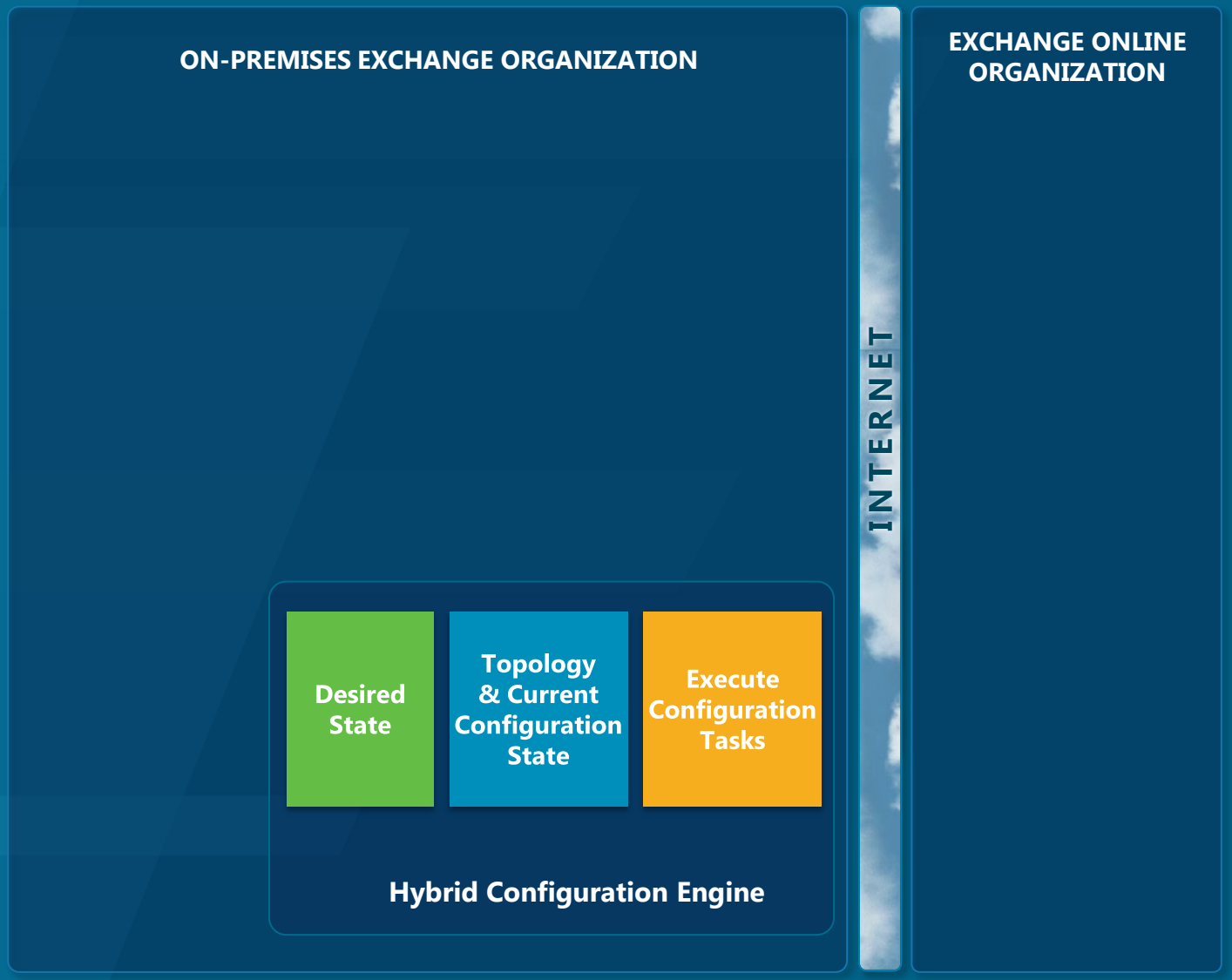
# The Wizard & the Configuration Engine




**Update-HybridConfiguration**

- The Wizard records the information collected from the user via the "Set-HybridConfiguration" cmdlet
- All deployment actions are taken by the Hybrid Configuration Engine, which is called by the Update-HybridConfiguration cmdlet

# Hybrid Configuration Engine

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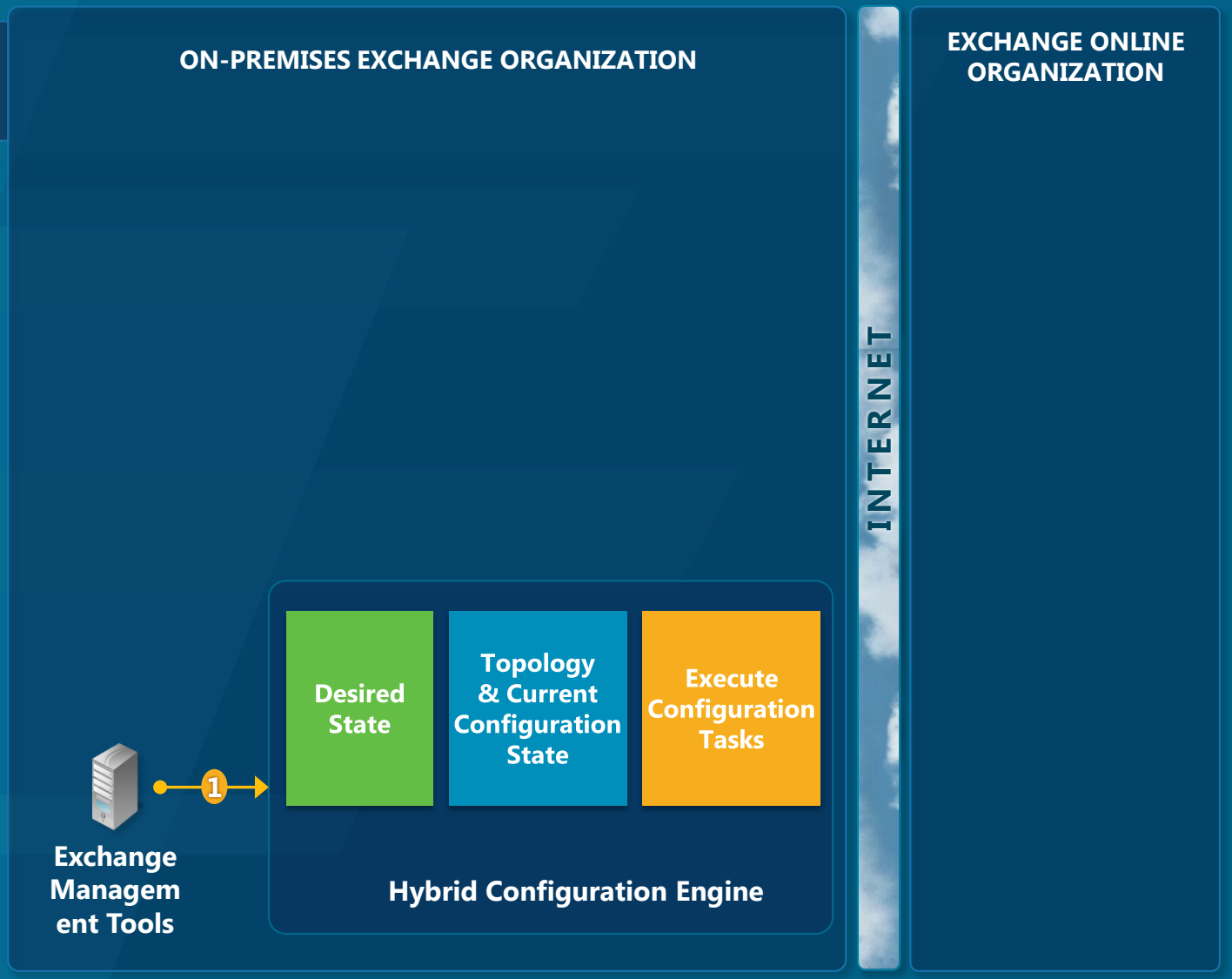
# Hybrid Configuration Engine

**Step 1** The *Update-HybridConfiguration* cmdlet triggers the Hybrid Configuration Engine to start.

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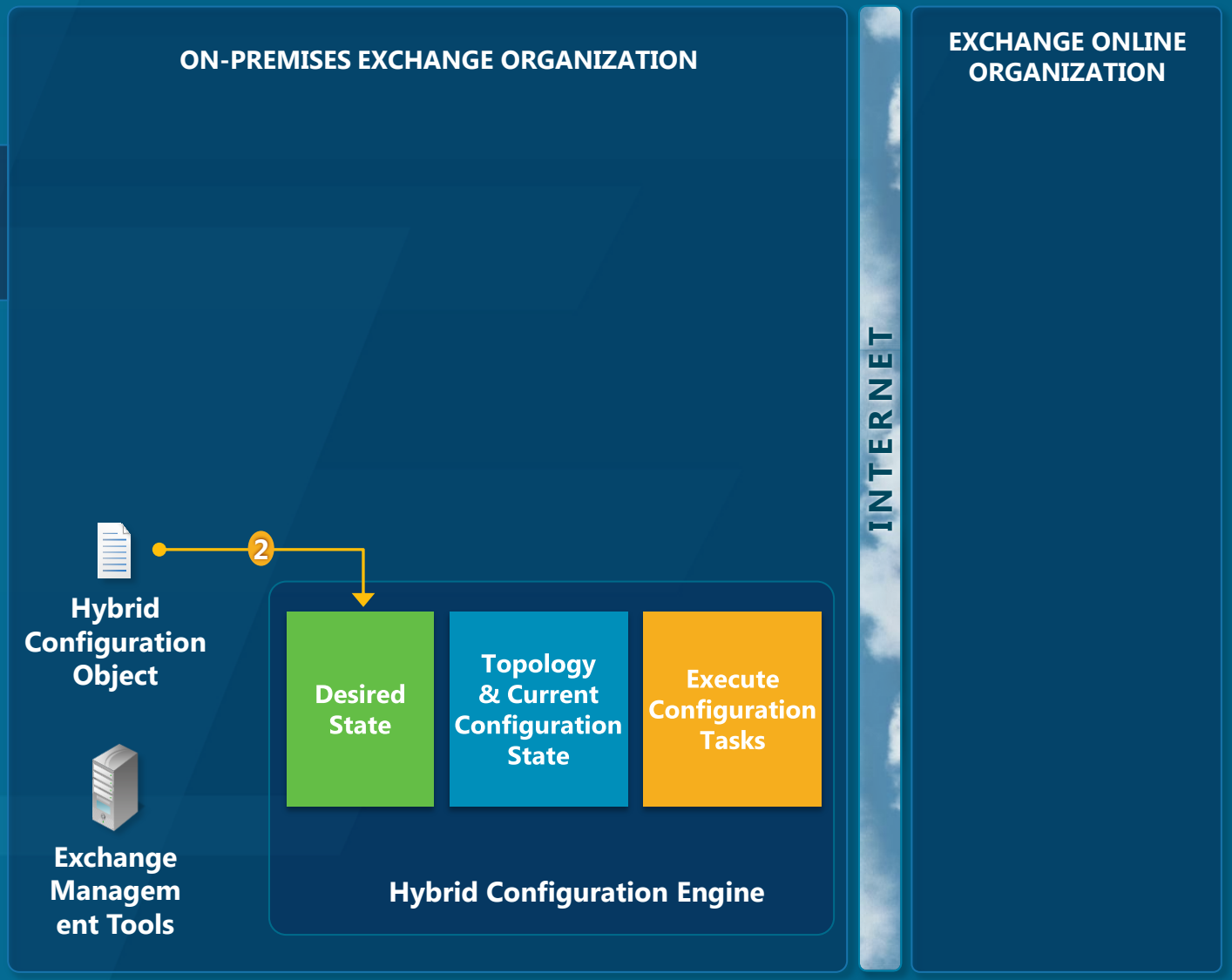


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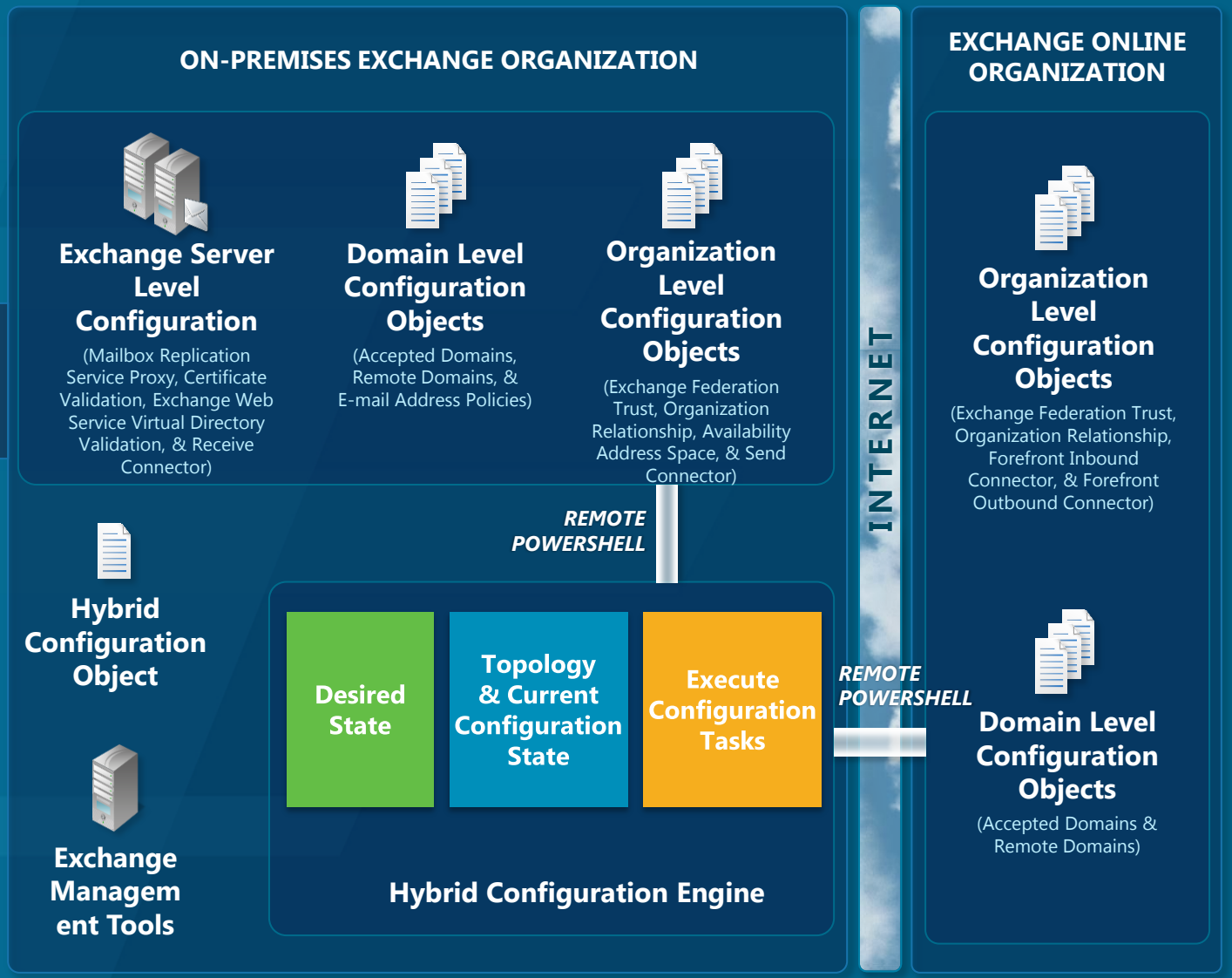


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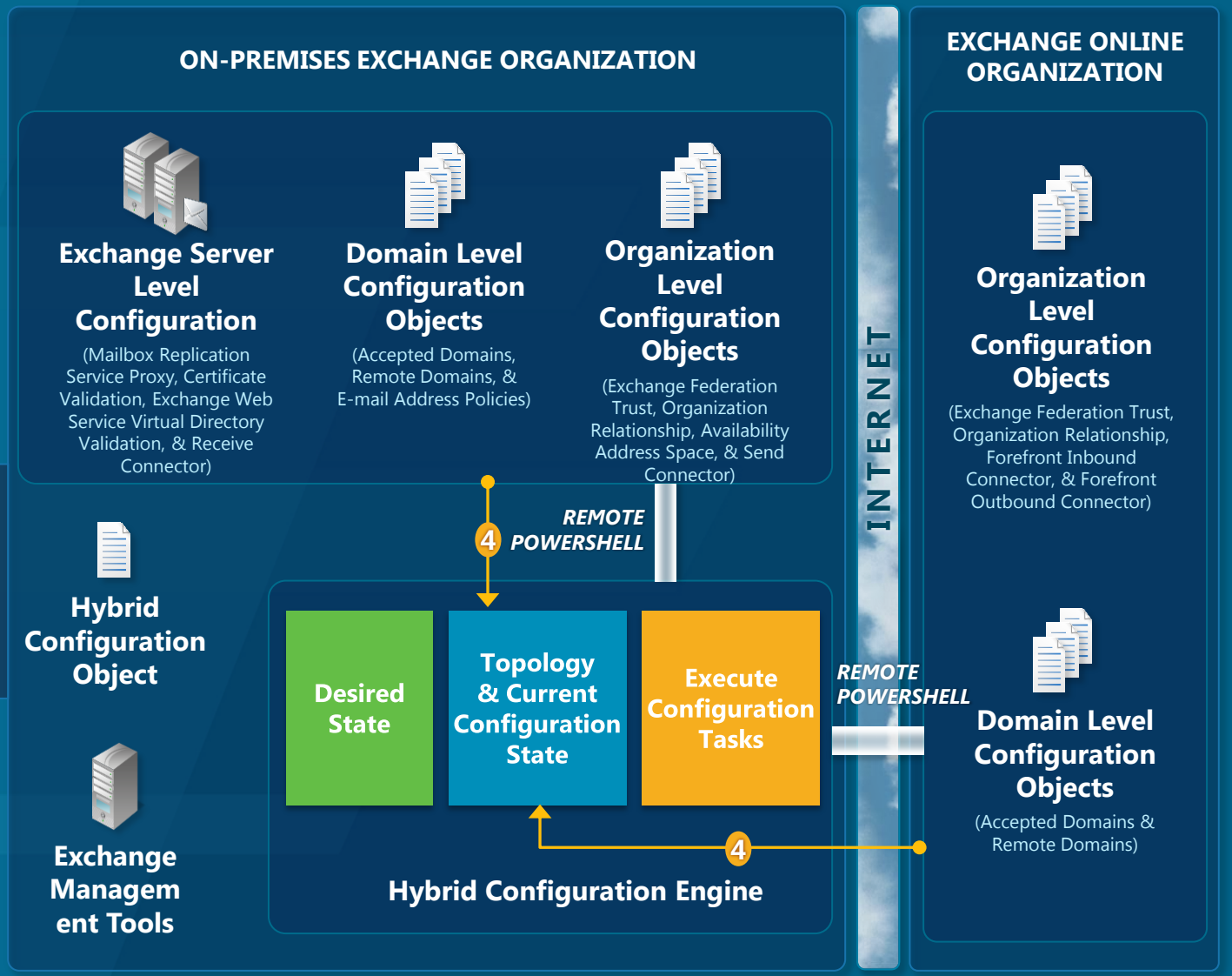


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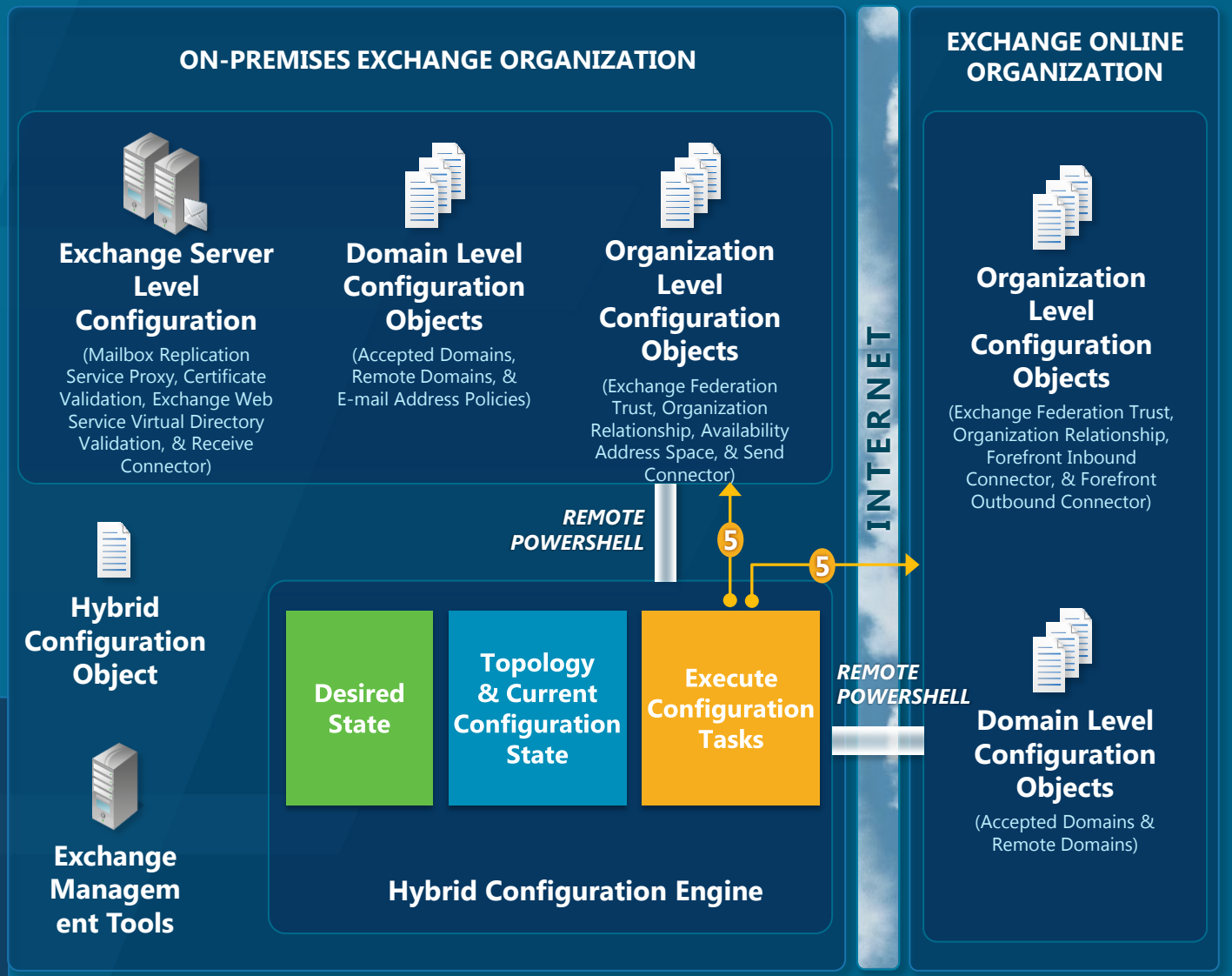
**Step 4** The Hybrid Configuration Engine discovers topology data and current configuration from the on-premises Exchange organization and the Exchange Online organization.

**Step 5** Based on the desired state, topology data, and current configuration, across both the on-premises Exchange and Exchange Online organizations, the Hybrid Configuration Engine establishes the "difference" and then executes configuration tasks to establish the "desired state."

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# Organization Relationship Creation

MICROSOFT FEDERATION GATEWAY

PUBLIC DNS

**ON-PREMISES EXCHANGE ORGANIZATION**

Exchange 2007 Mailbox Server

Exchange 2007 Client Access Server

Exchange 2010 Client Access Server

Hybrid Configuration Engine

**EXCHANGE ONLINE ORGANIZATION**

Exchange Online Mailbox Server

Exchange Online Client Access Server

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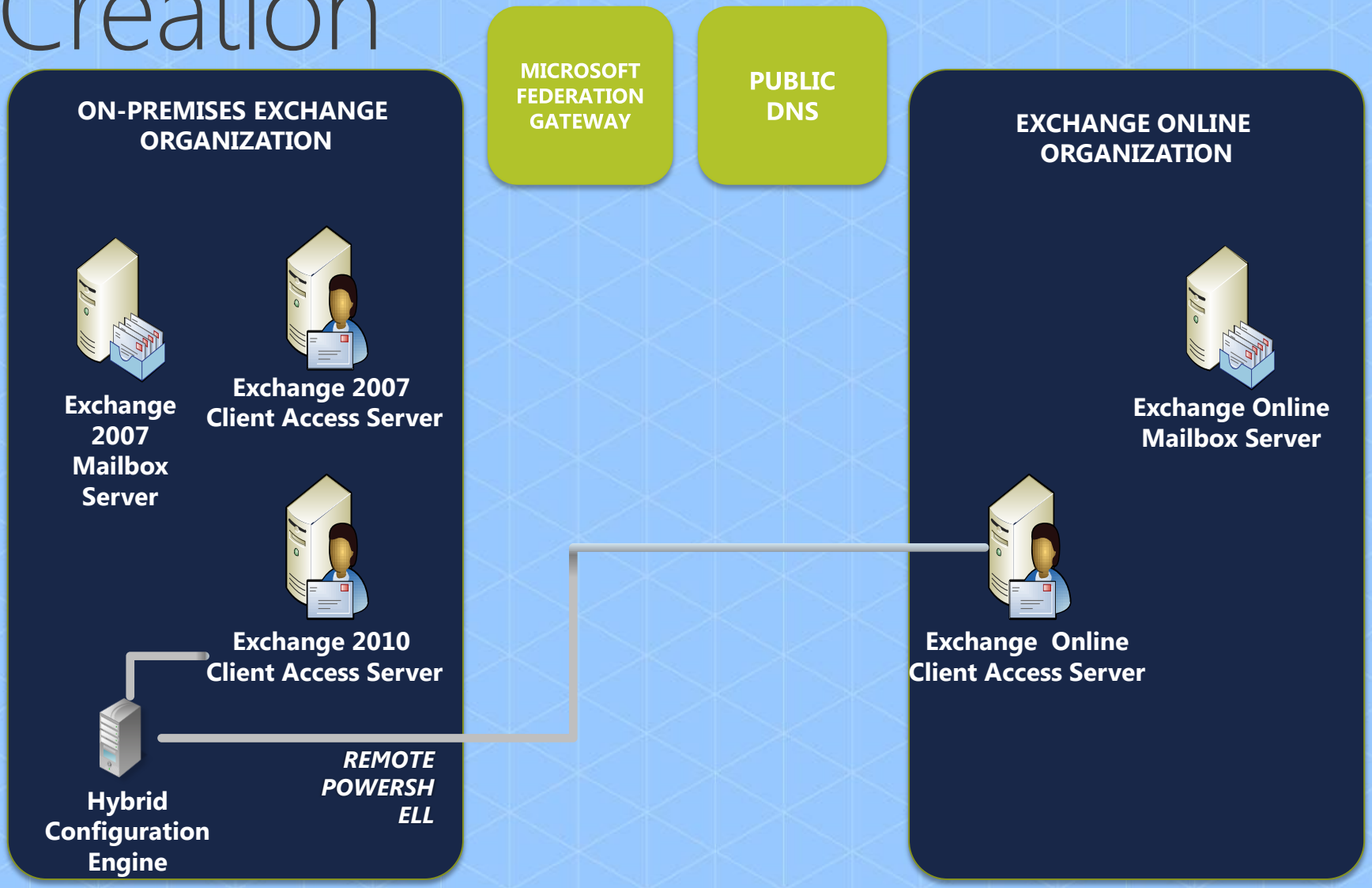
# Organization Relationship Creation

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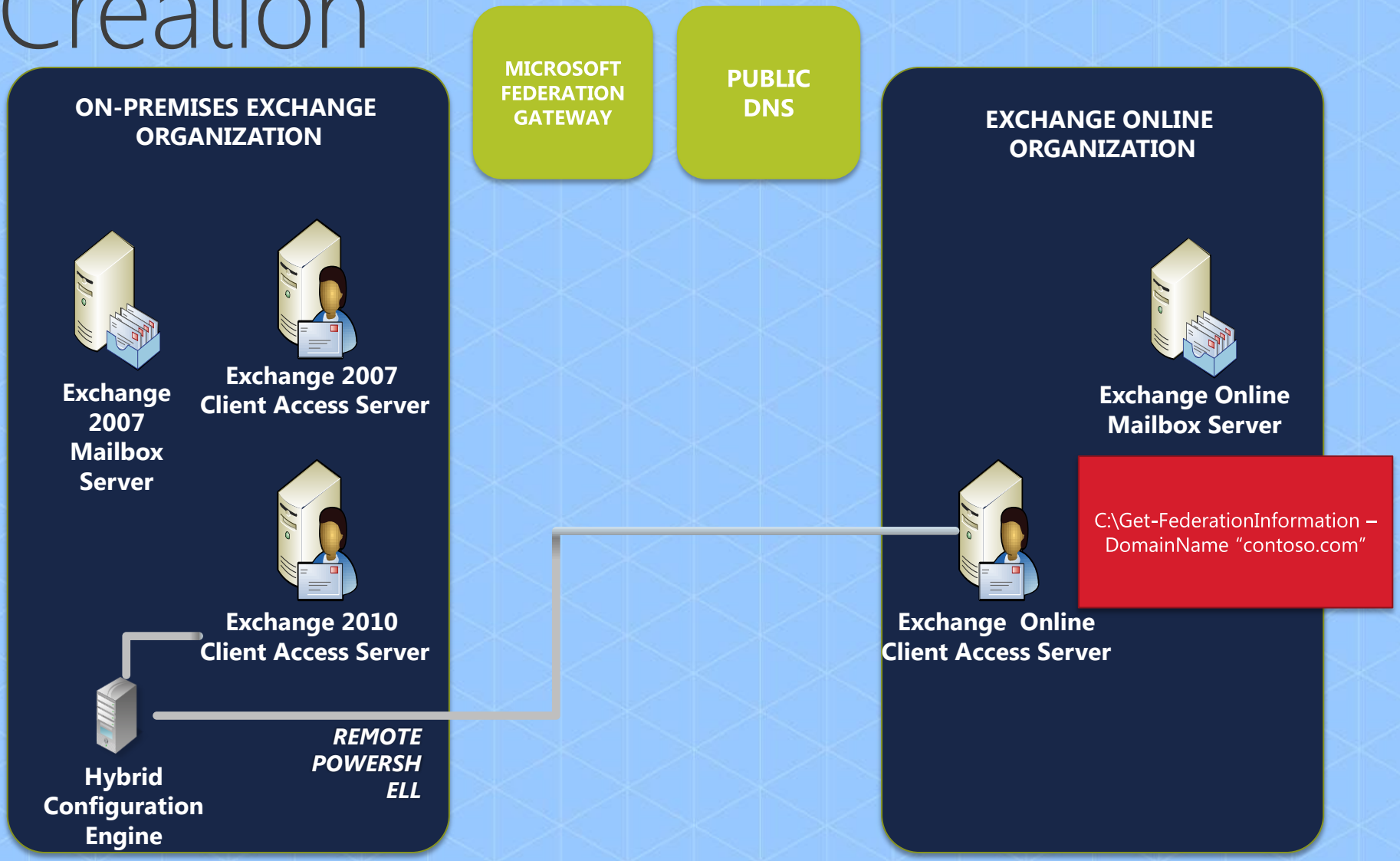


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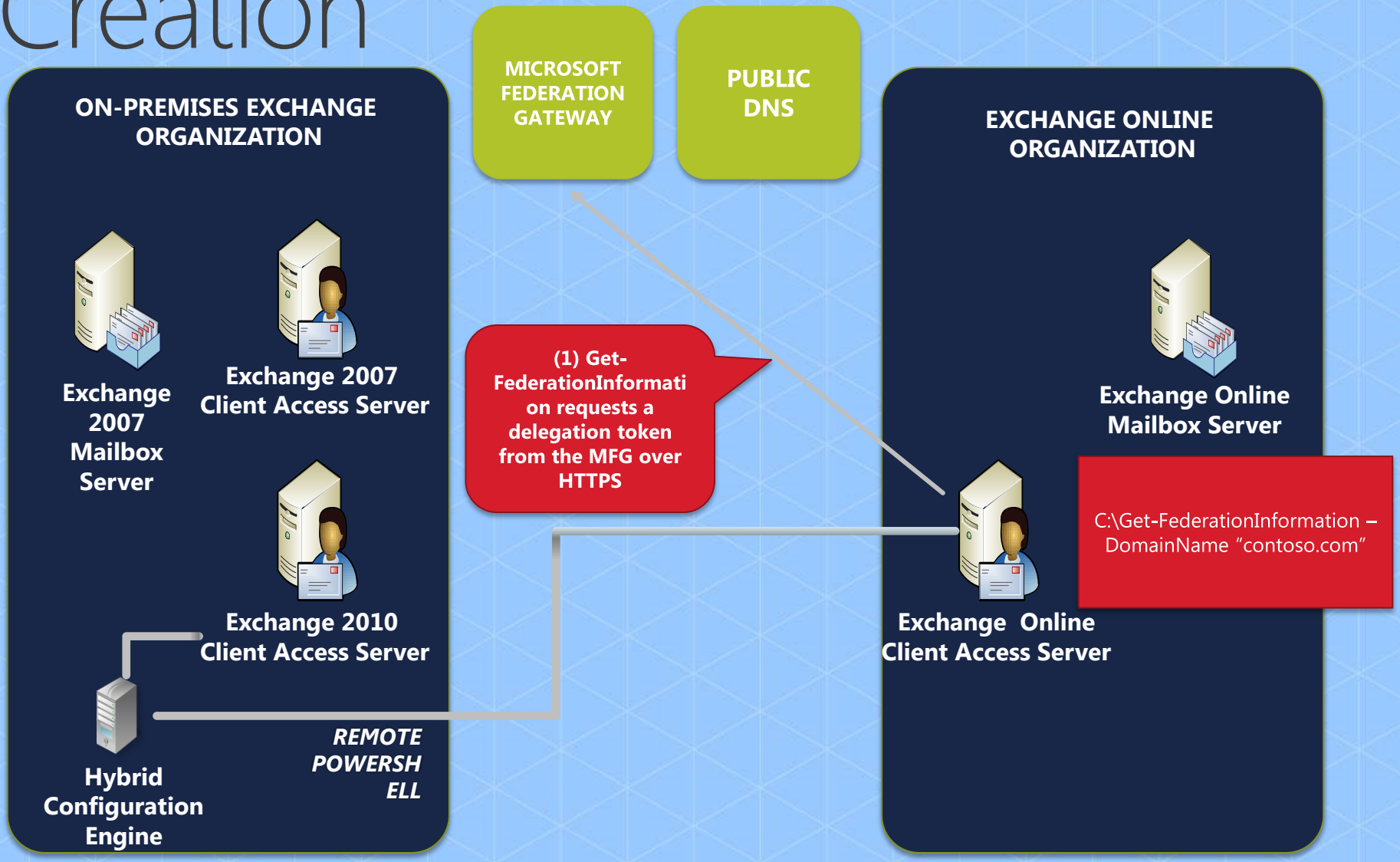


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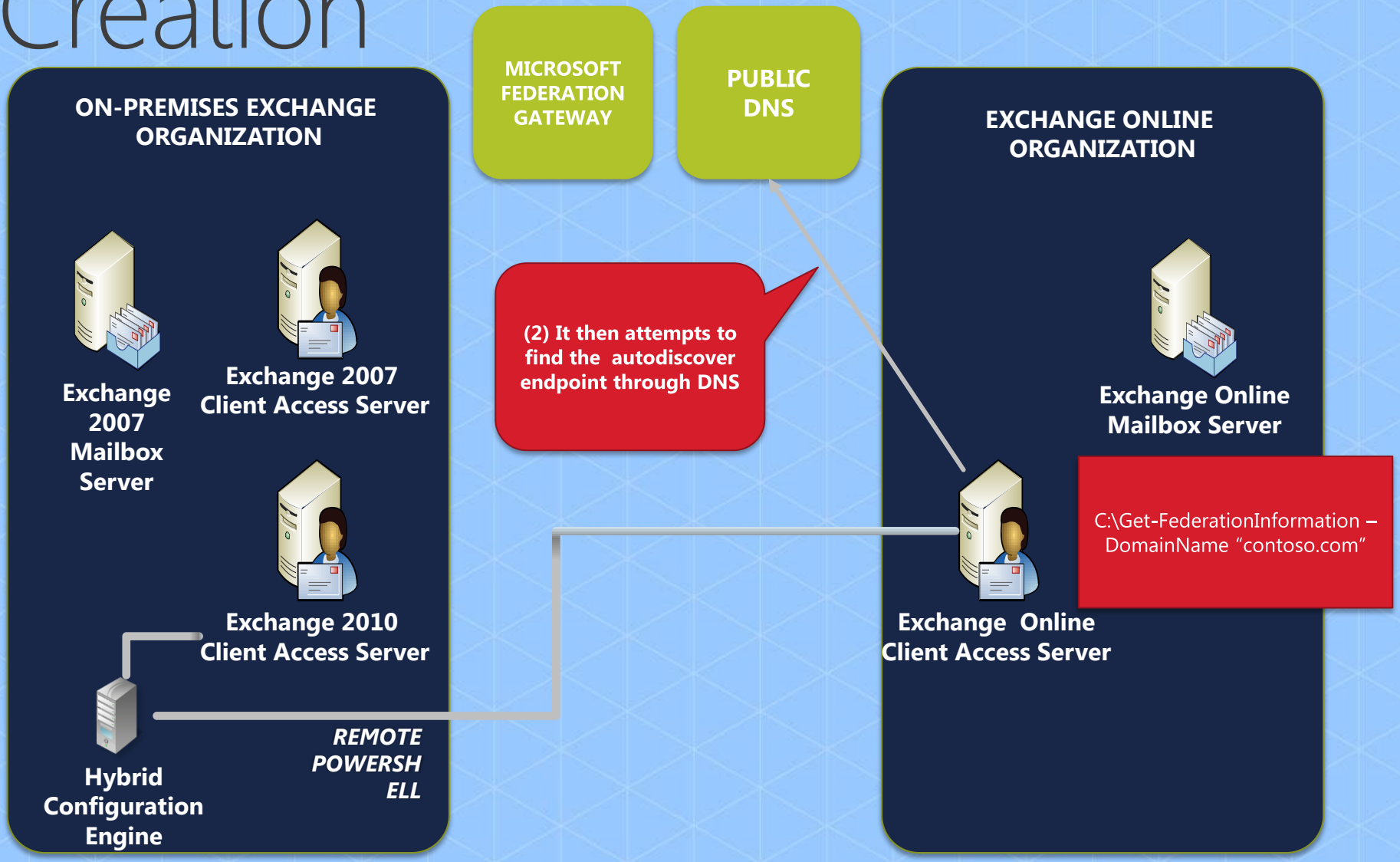


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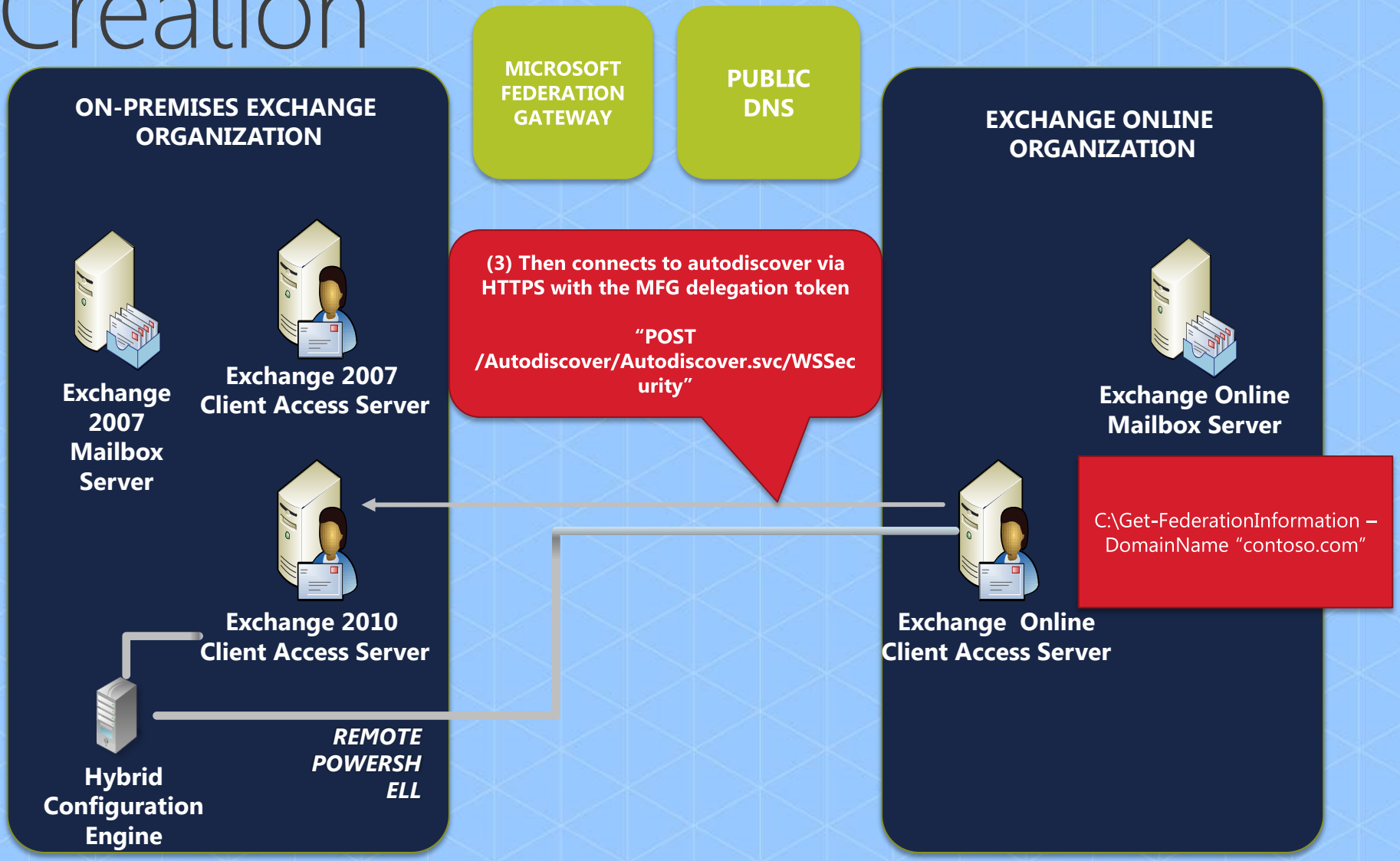


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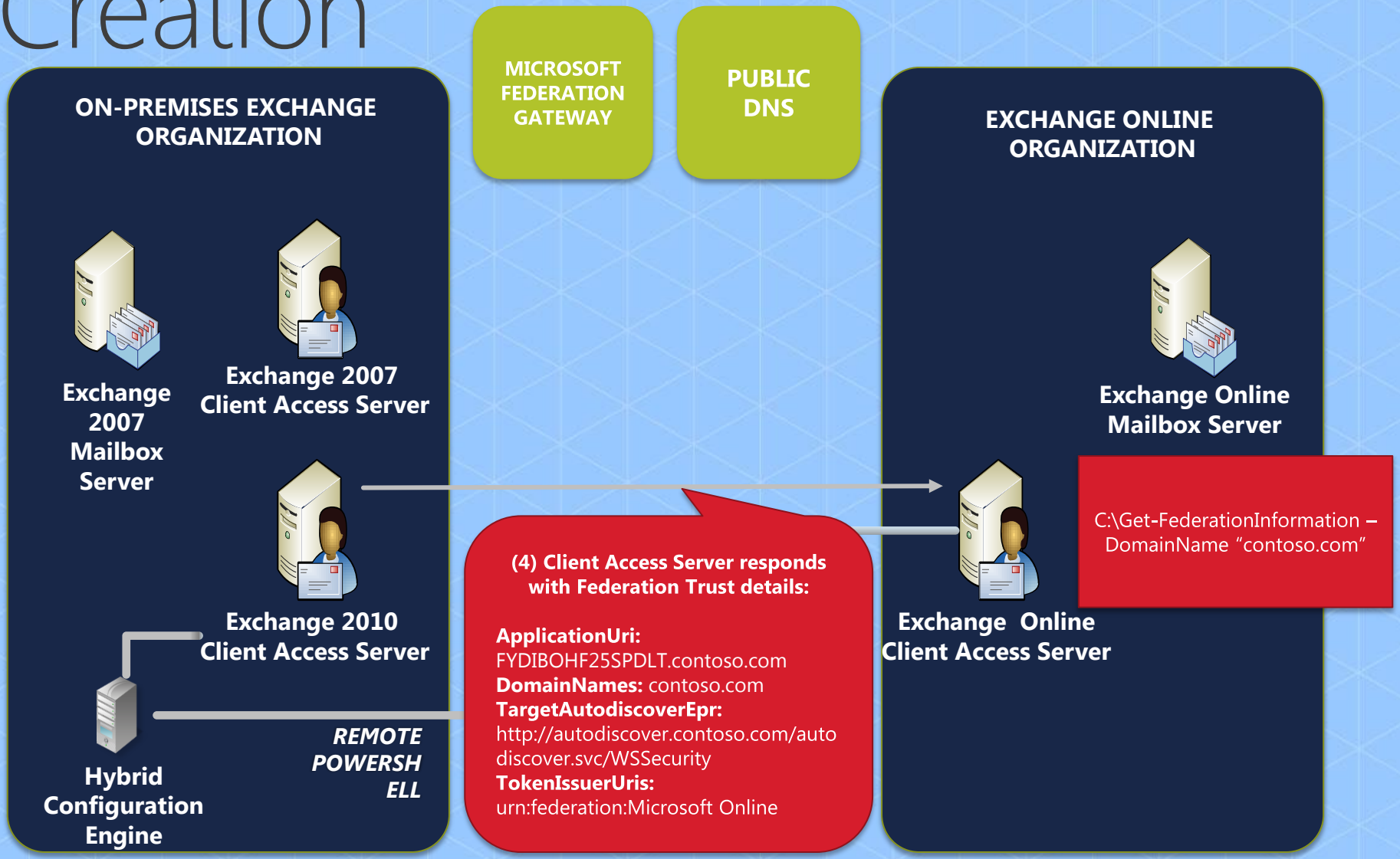


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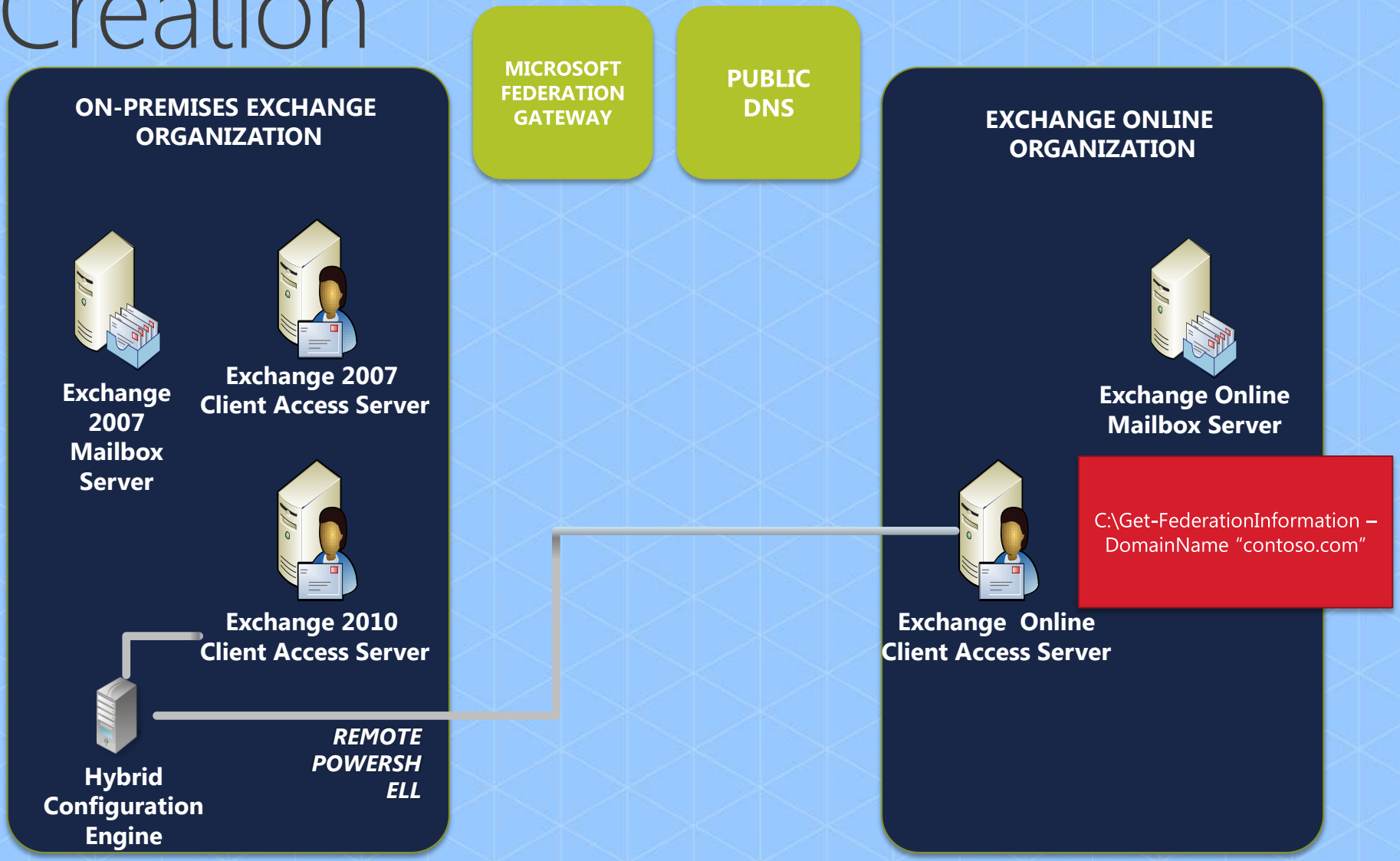


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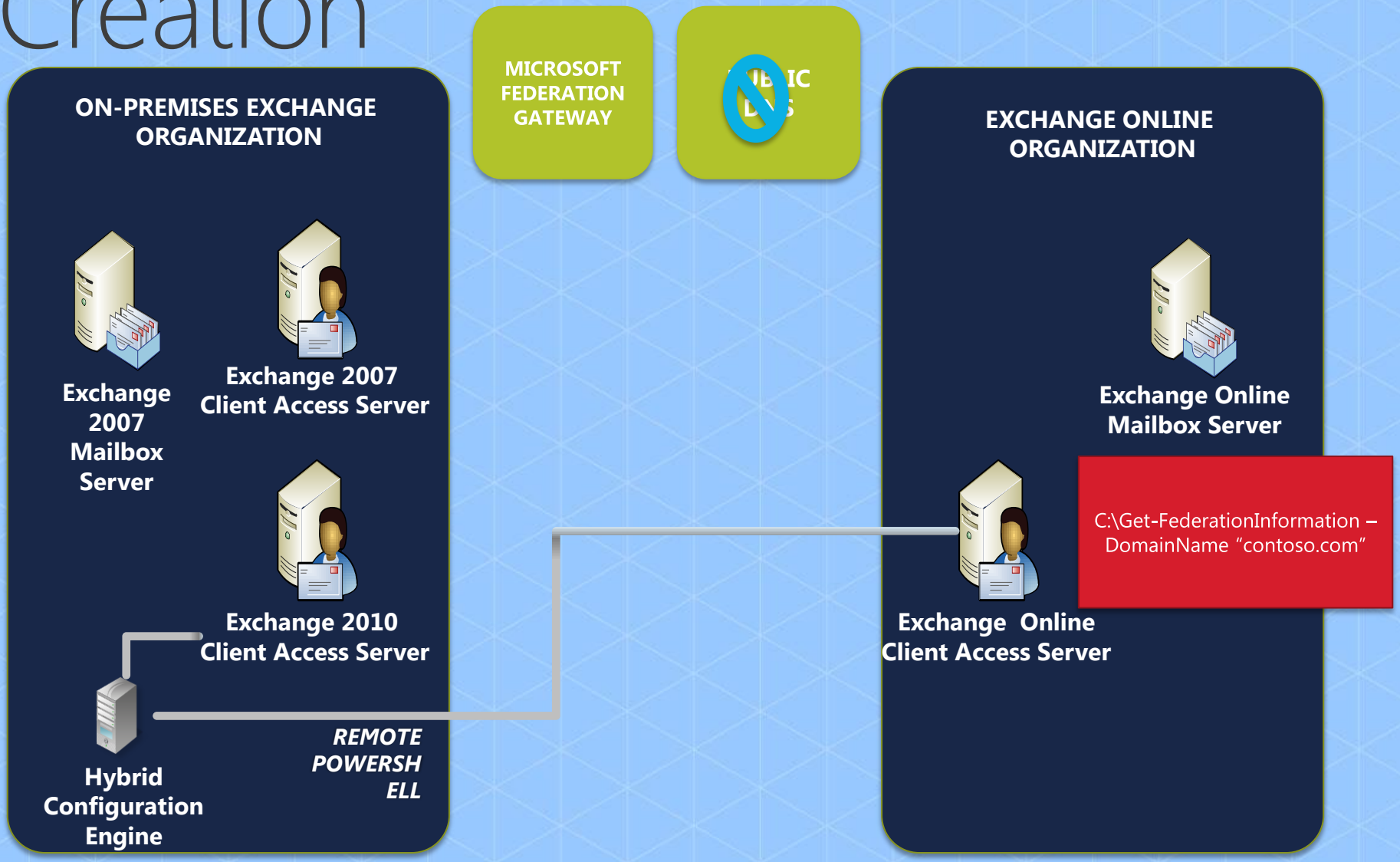


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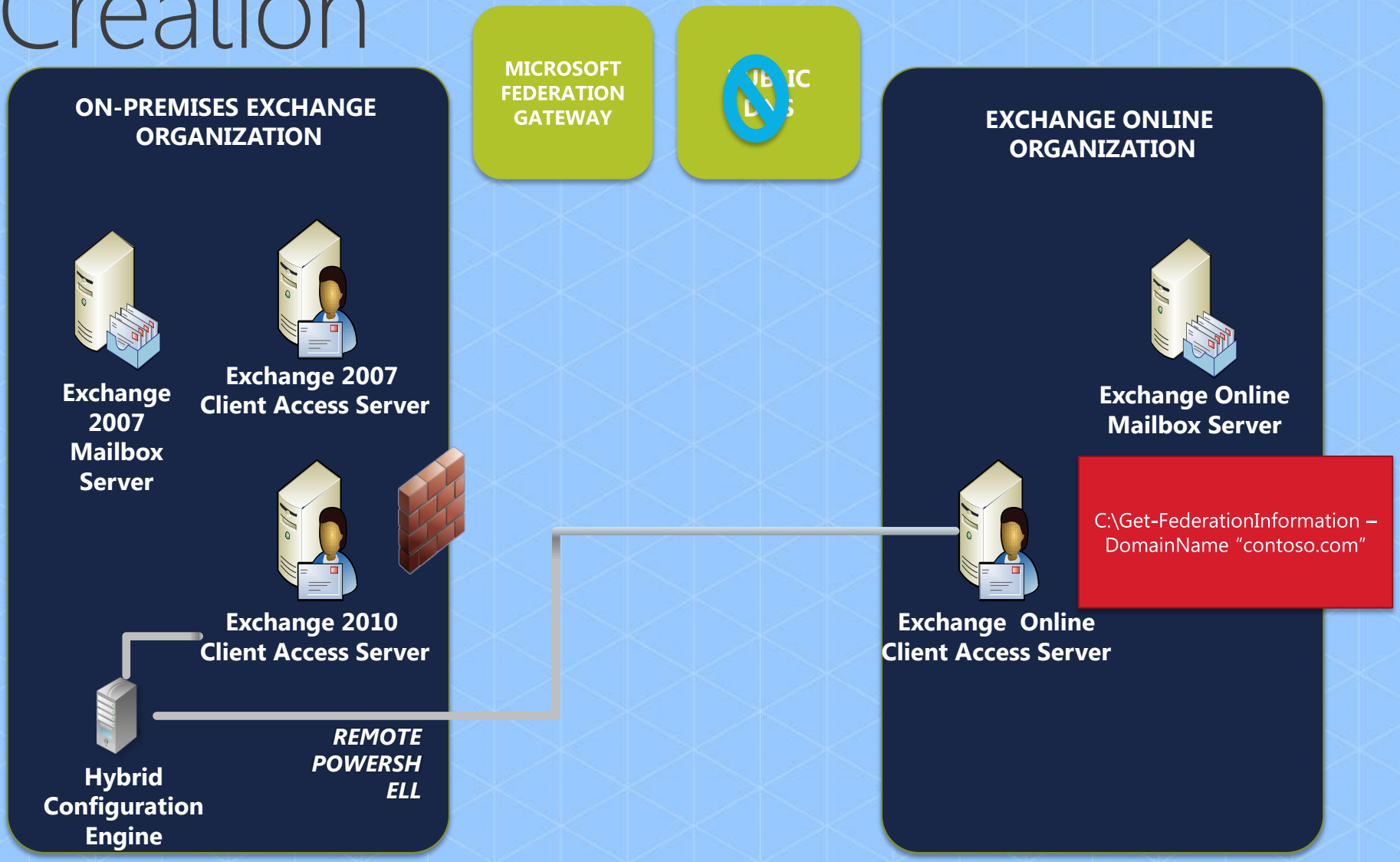


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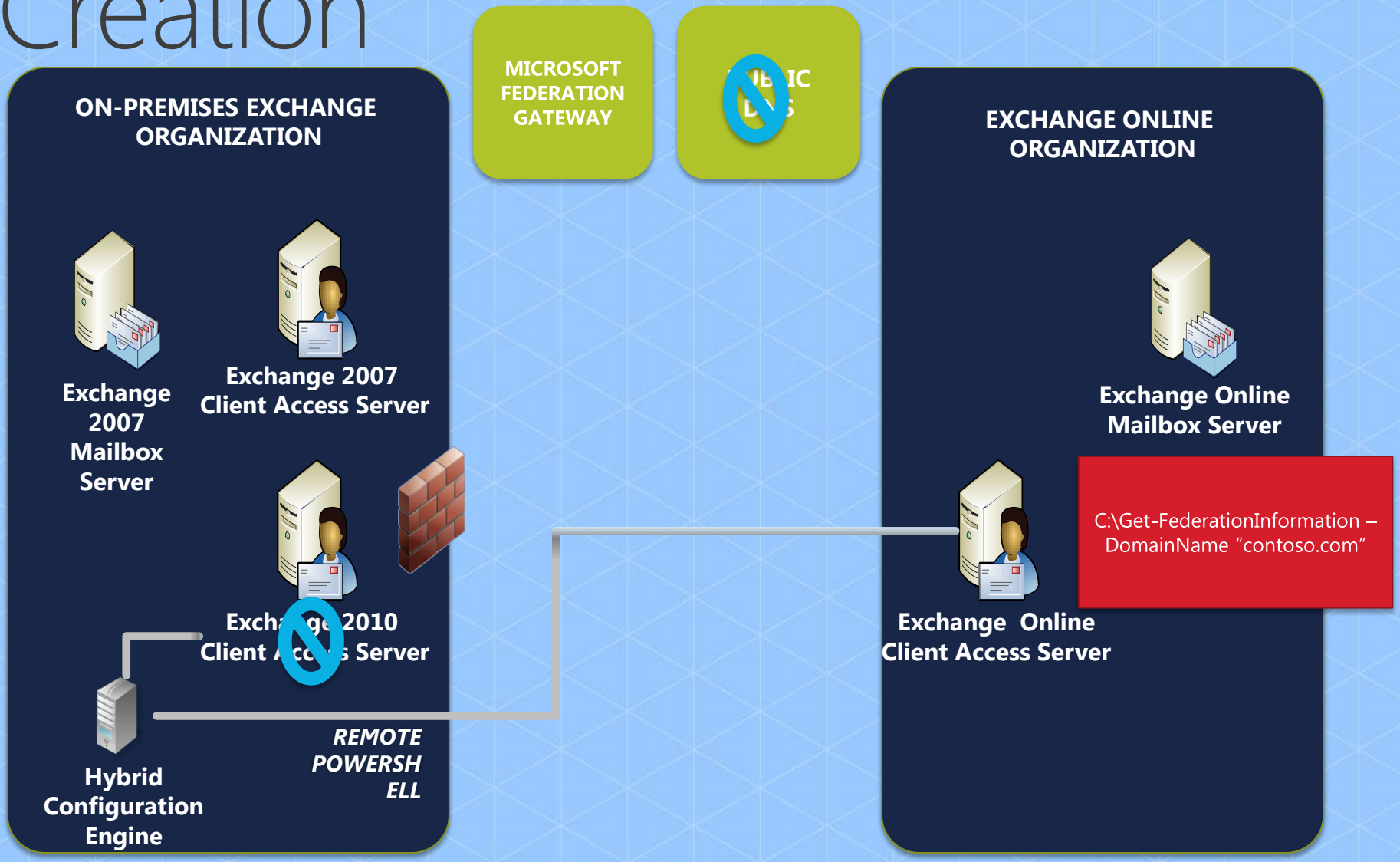


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# Mail Flow – decentralized

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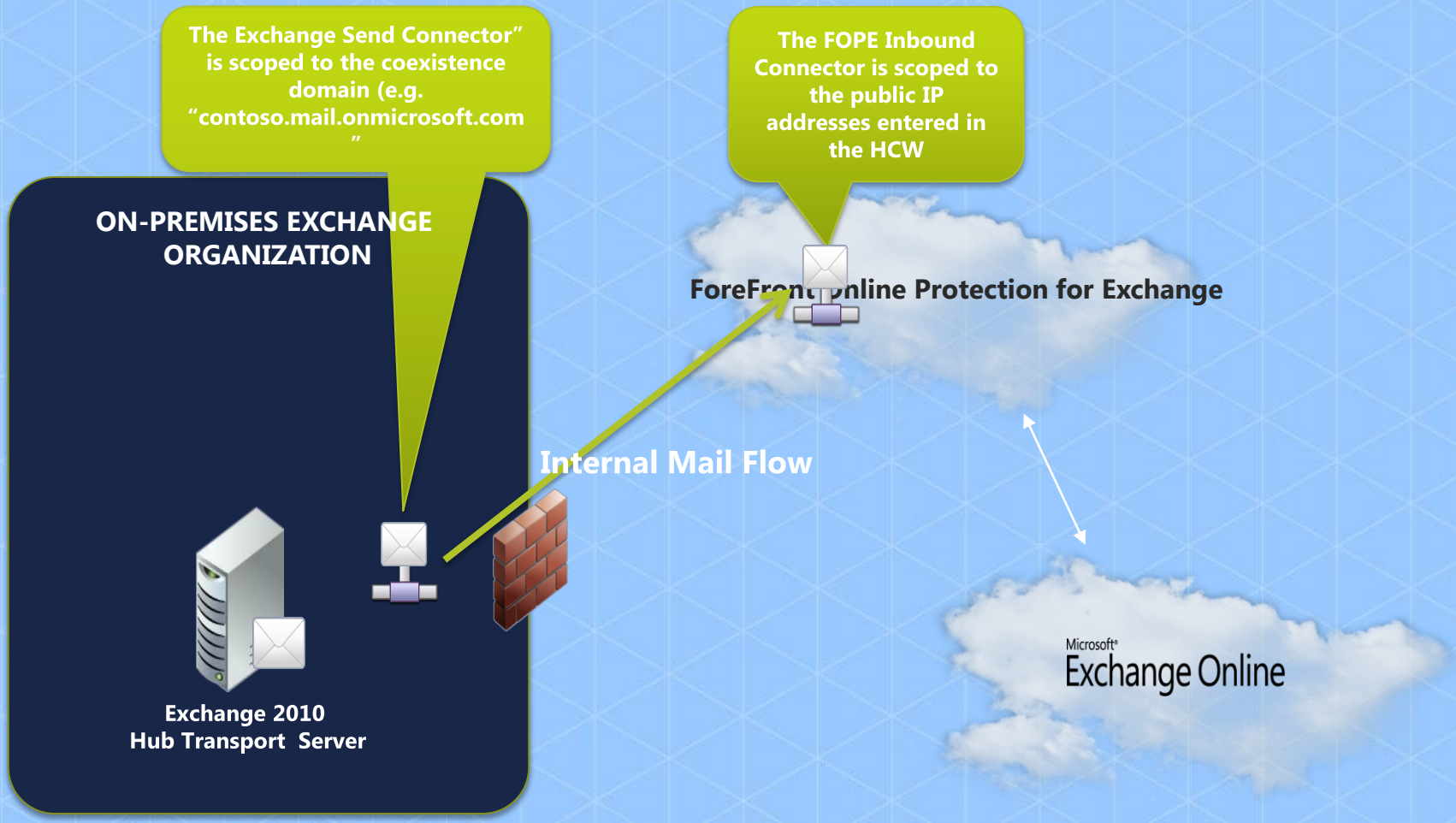


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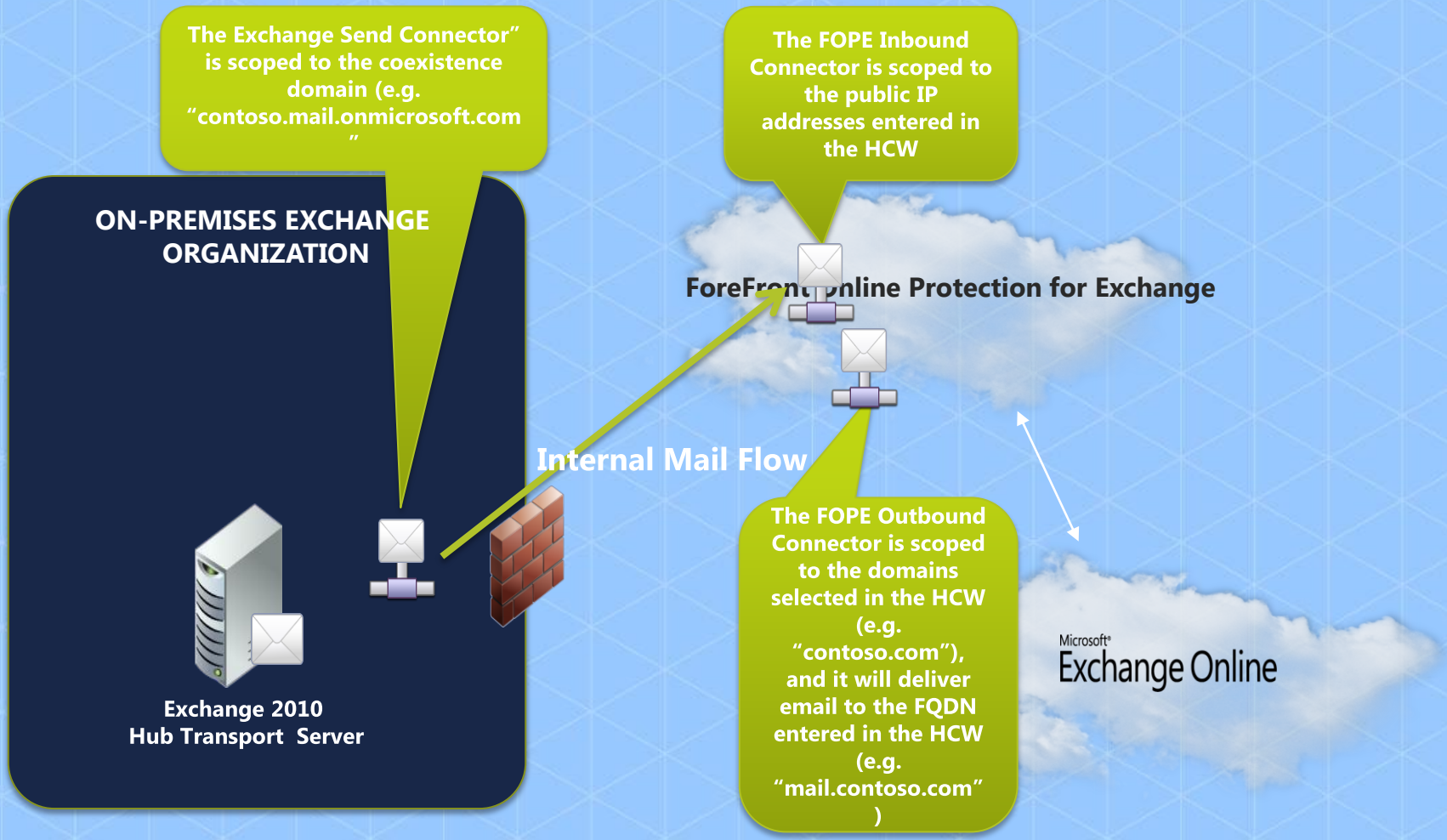
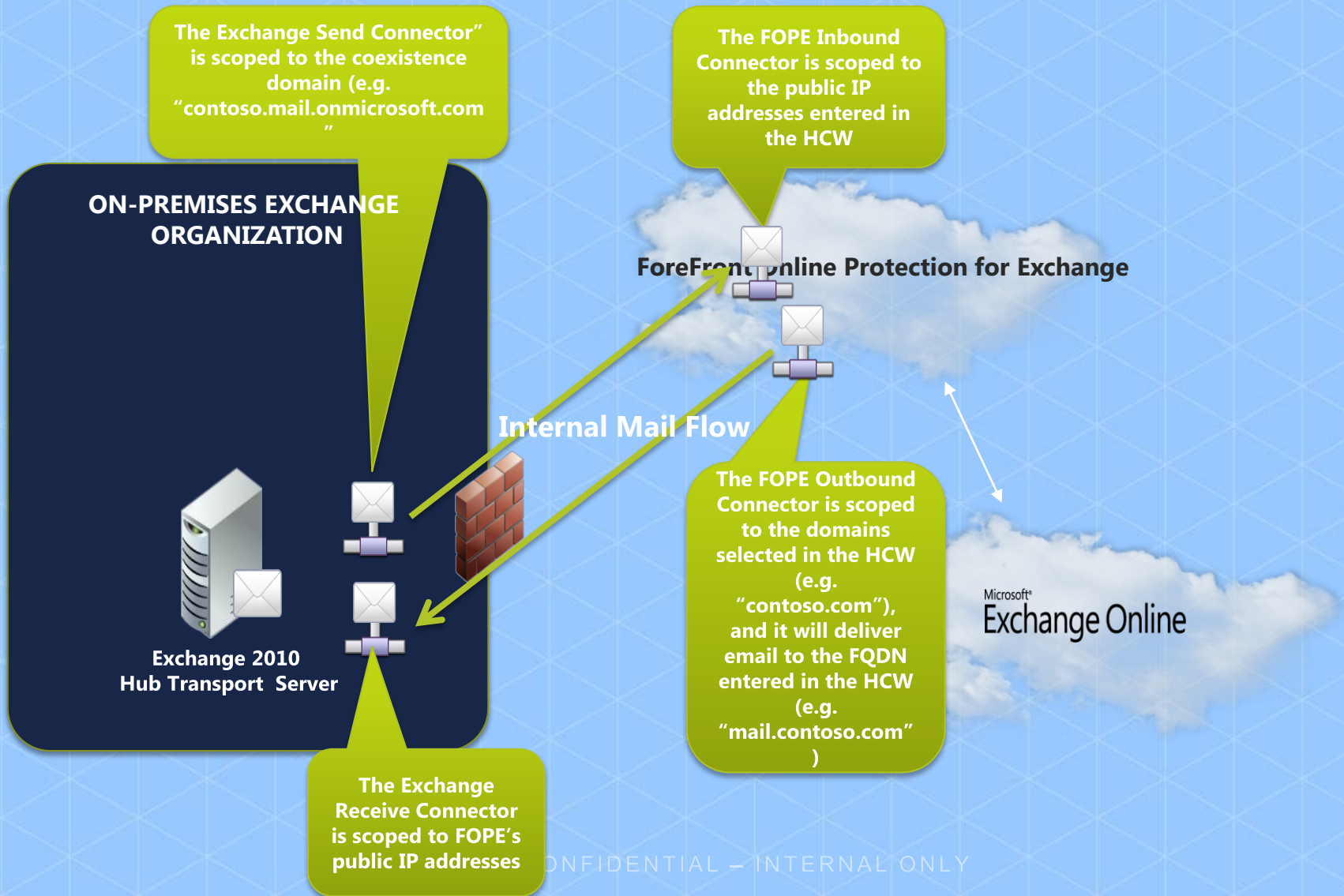
# Mail Flow – decentralized




MICROSOFT CONFIDENTIAL – INTERNAL ONLY

# Mail Flow – decentralized

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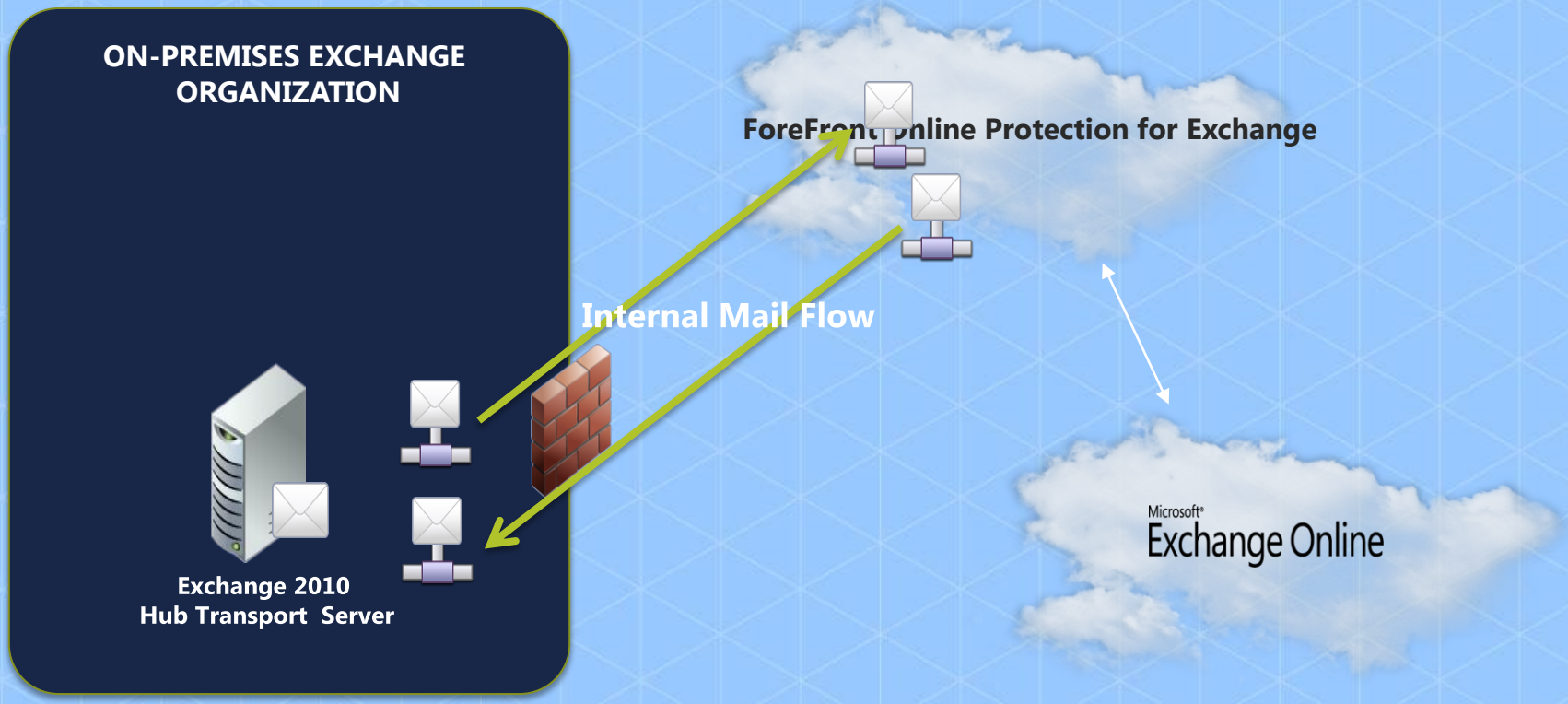
# Mail Flow – decentralized

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# Mail Flow – decentralized

External Recipient"

ON-PREMISES EXCHANGE ORGANIZATION

ForeFront Online Protection for Exchange

Internal Mail Flow

Microsoft® Exchange Online

Exchange 2010 Hub Transport Server

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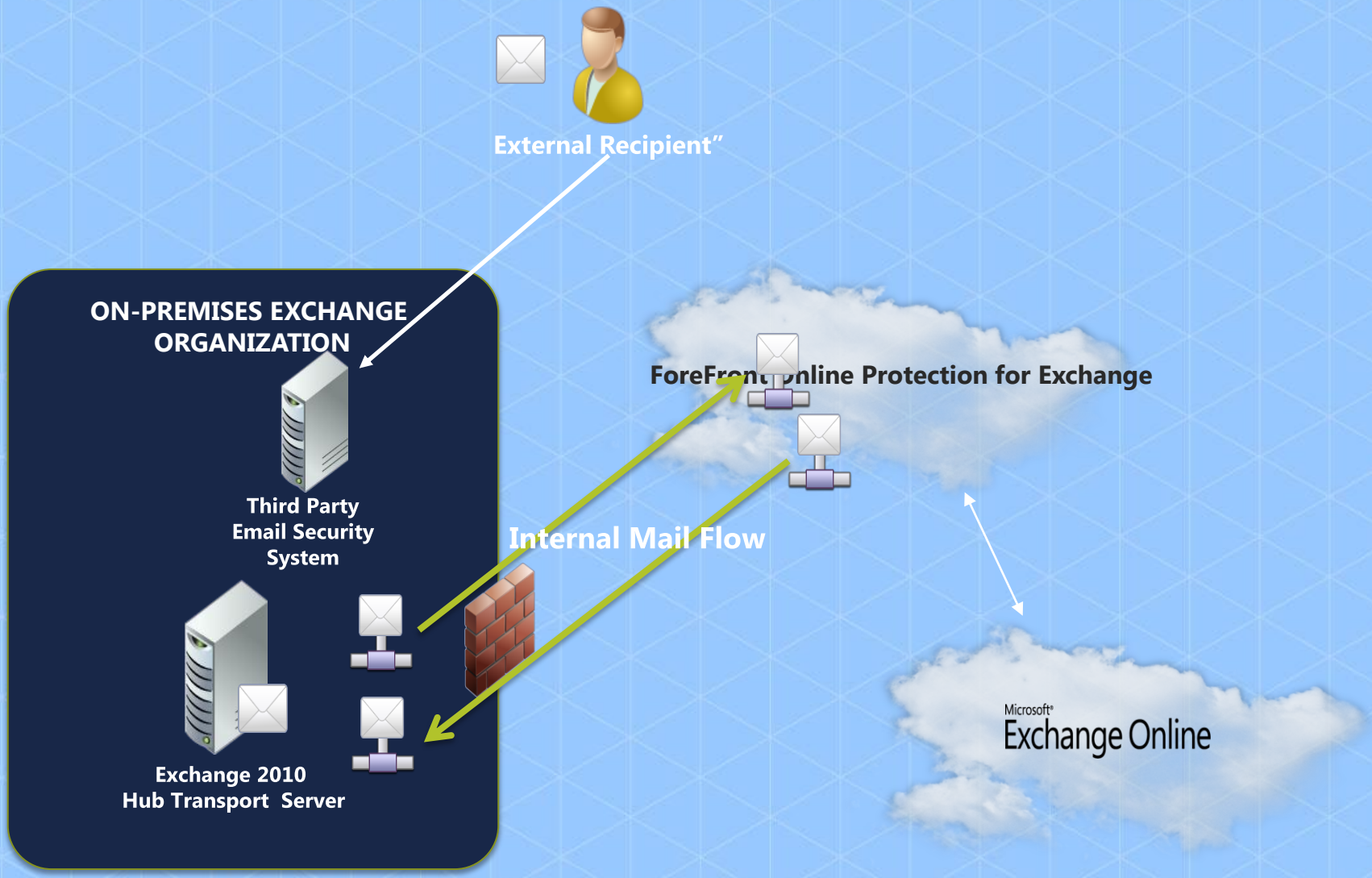
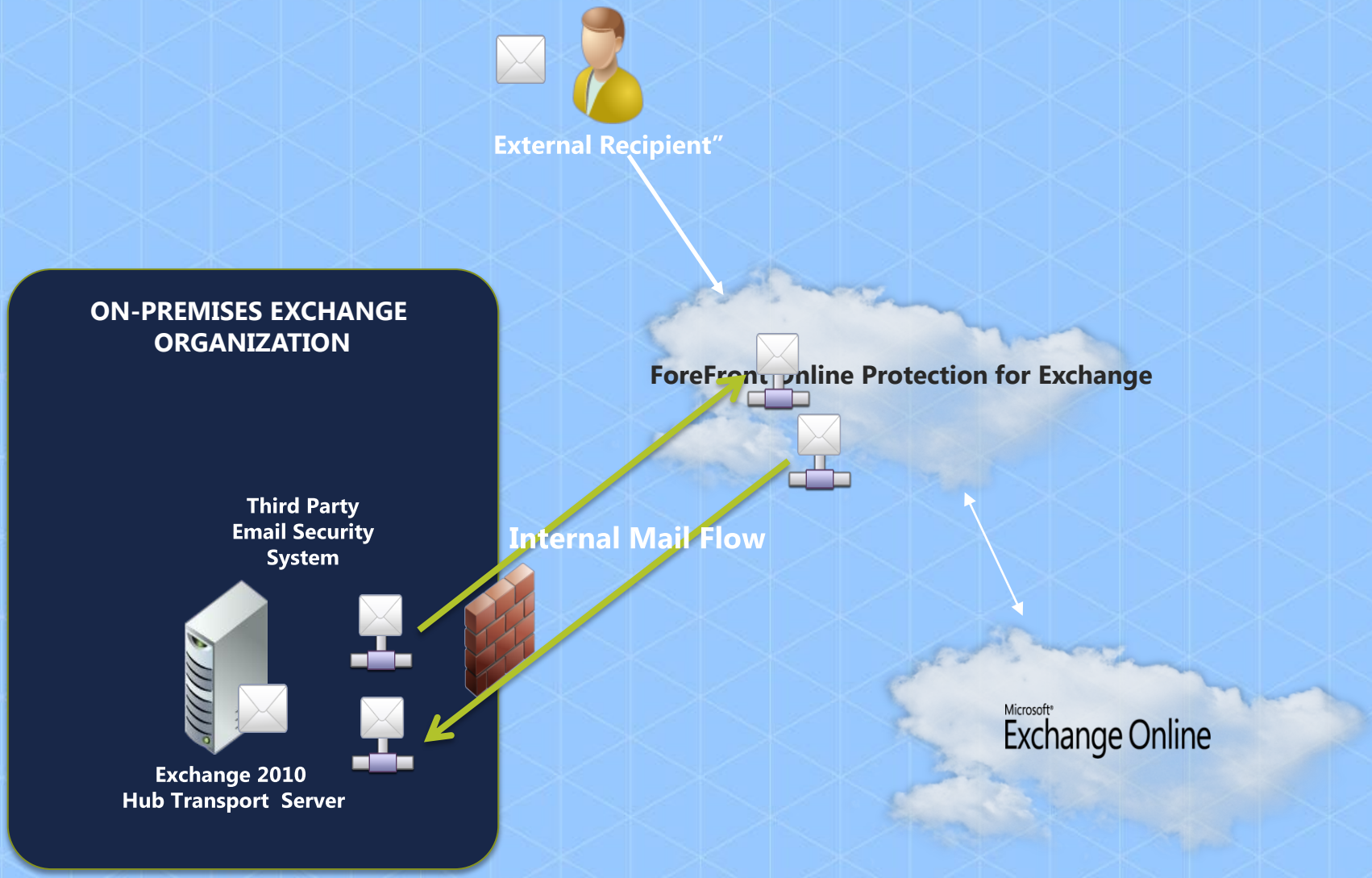
# Mail Flow – decentralized




MICROSOFT CONFIDENTIAL – INTERNAL ONLY

# Mail Flow – decentralized

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# Mail Flow – Centralized

MICROSOFT CONFIDENTIAL – INTERNAL ONLY

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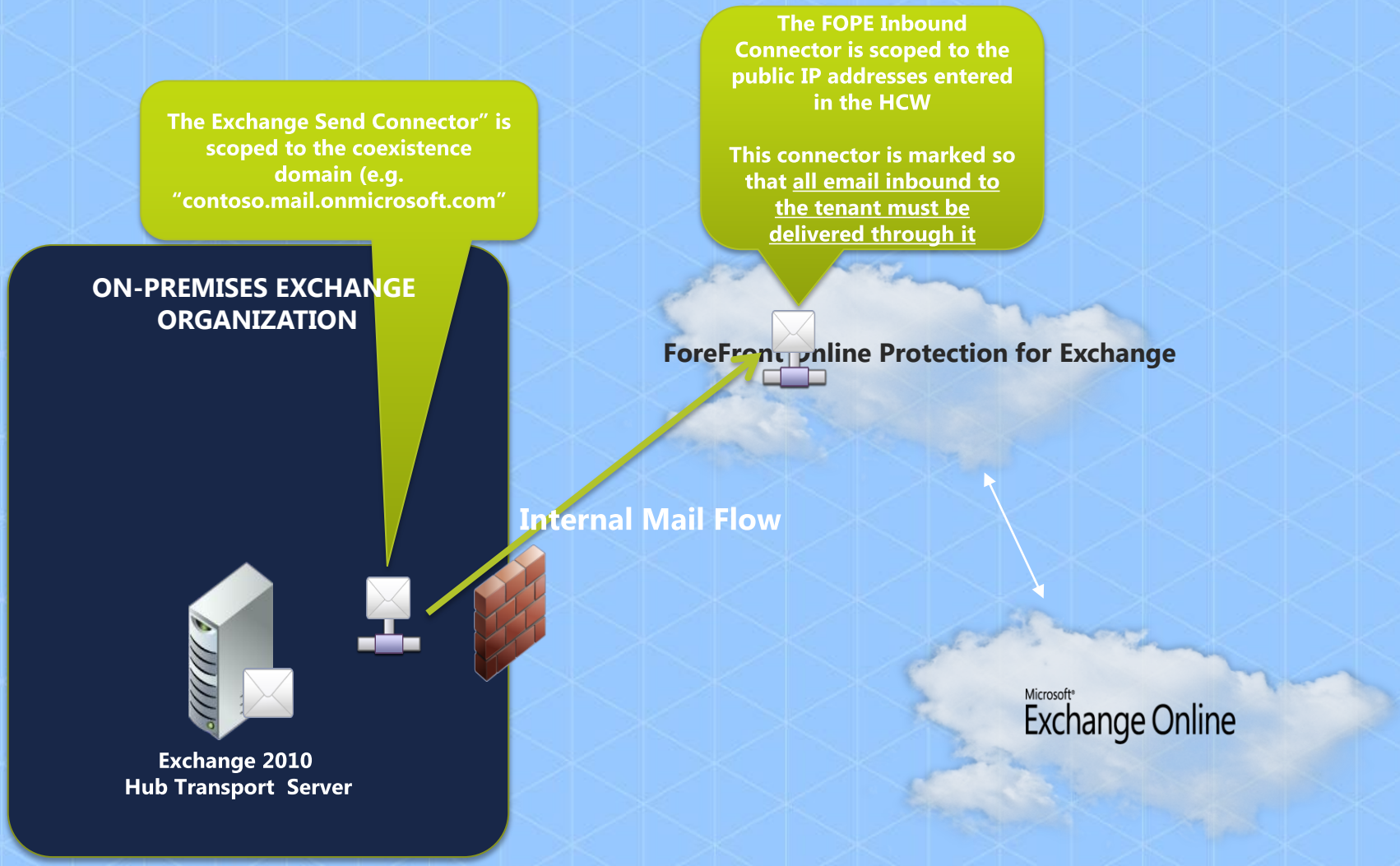
MICROSOFT CONFIDENTIAL – INTERNAL ONLY

# Mail Flow – Centralized

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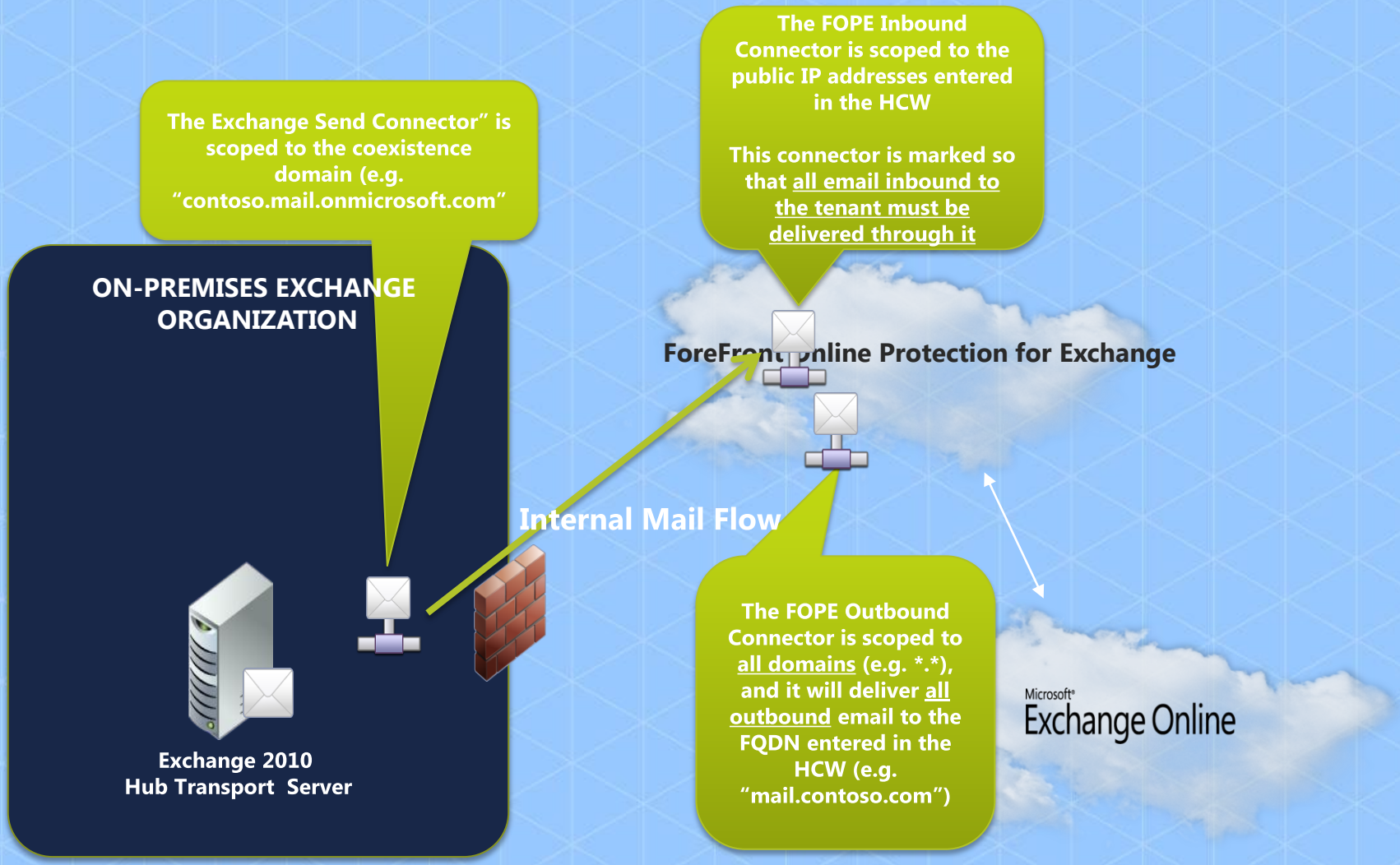


MICROSOFT CONFIDENTIAL – INTERNAL ONLY

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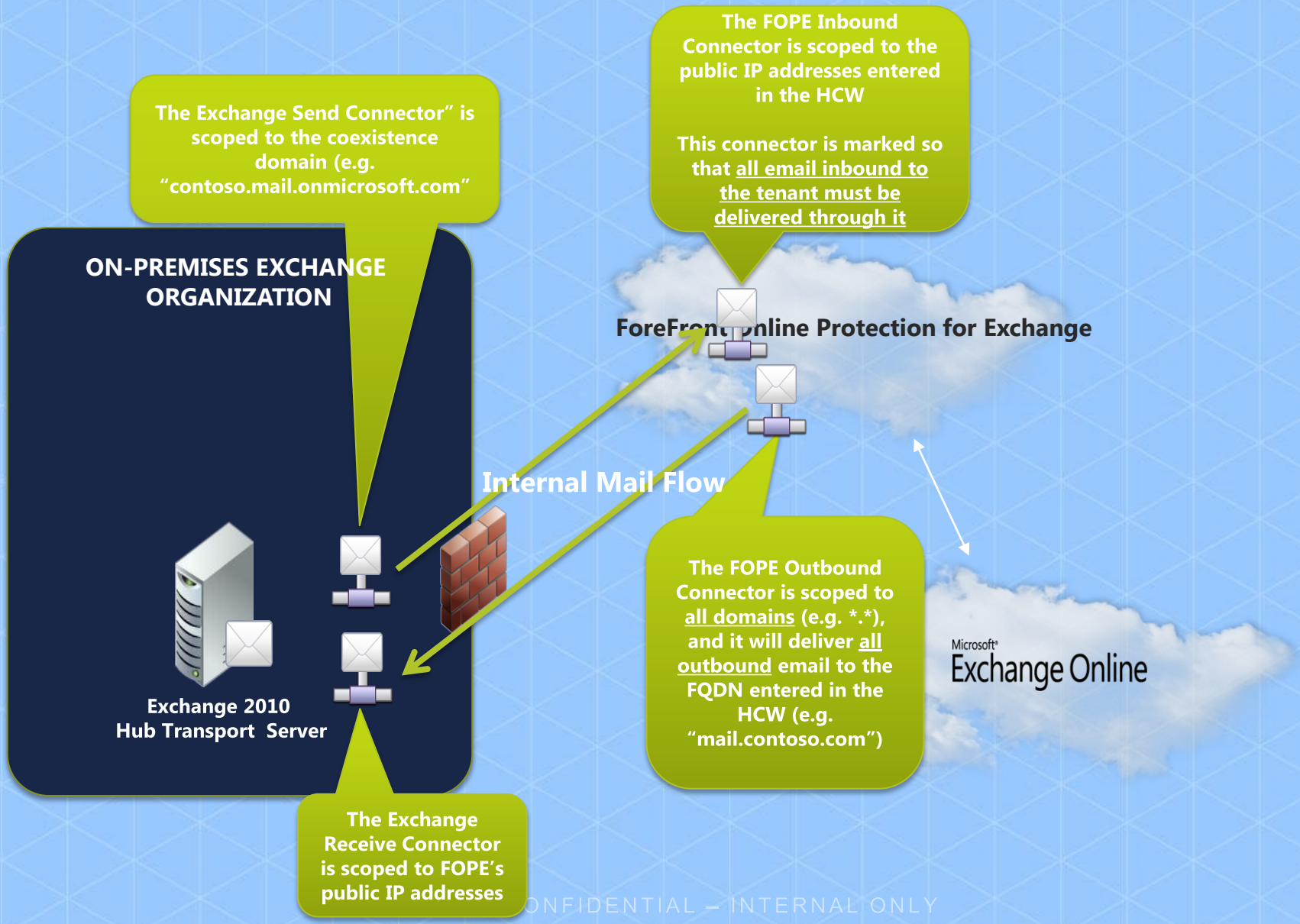
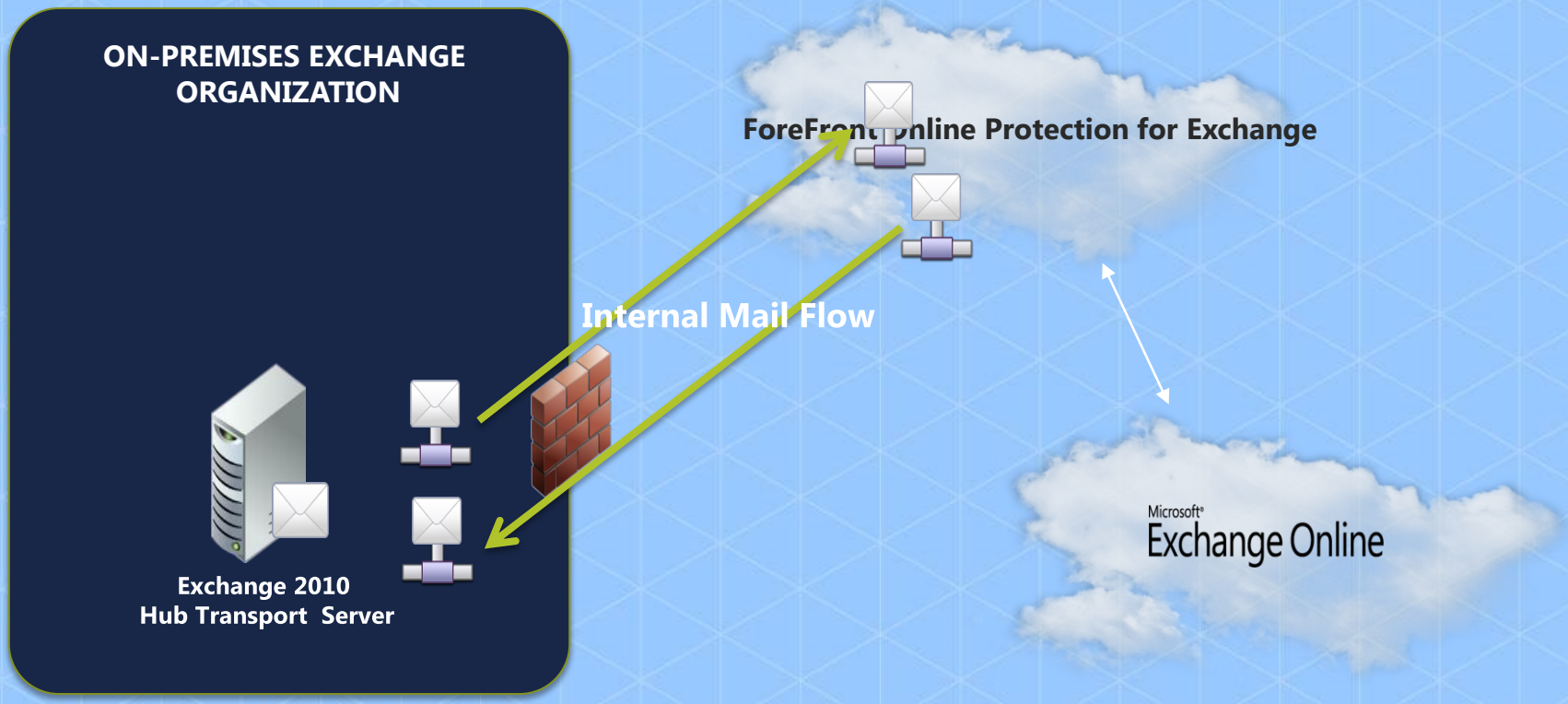



CONFIDENTIAL – INTERNAL ONLY

# Mail Flow – Centralized

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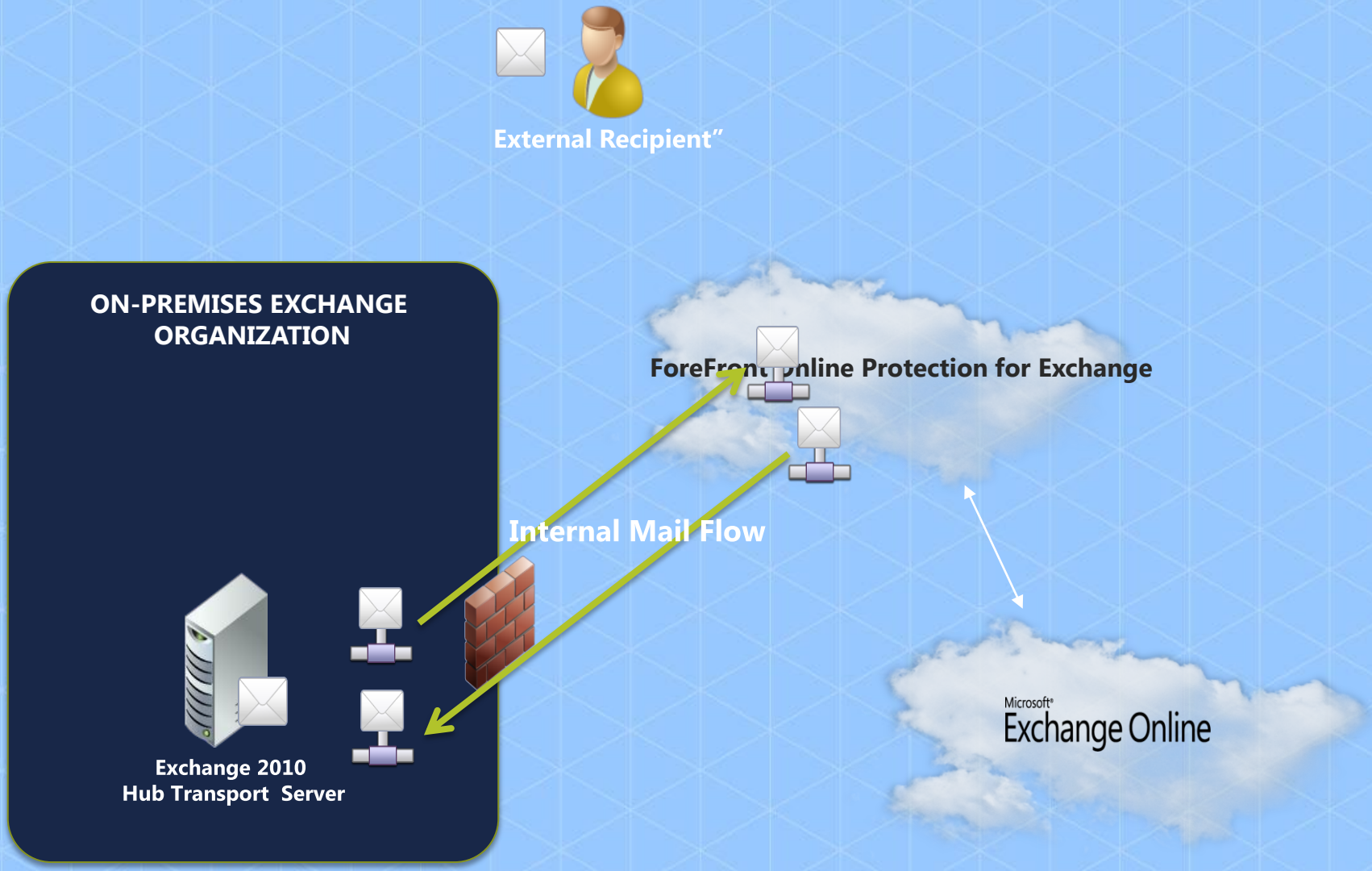


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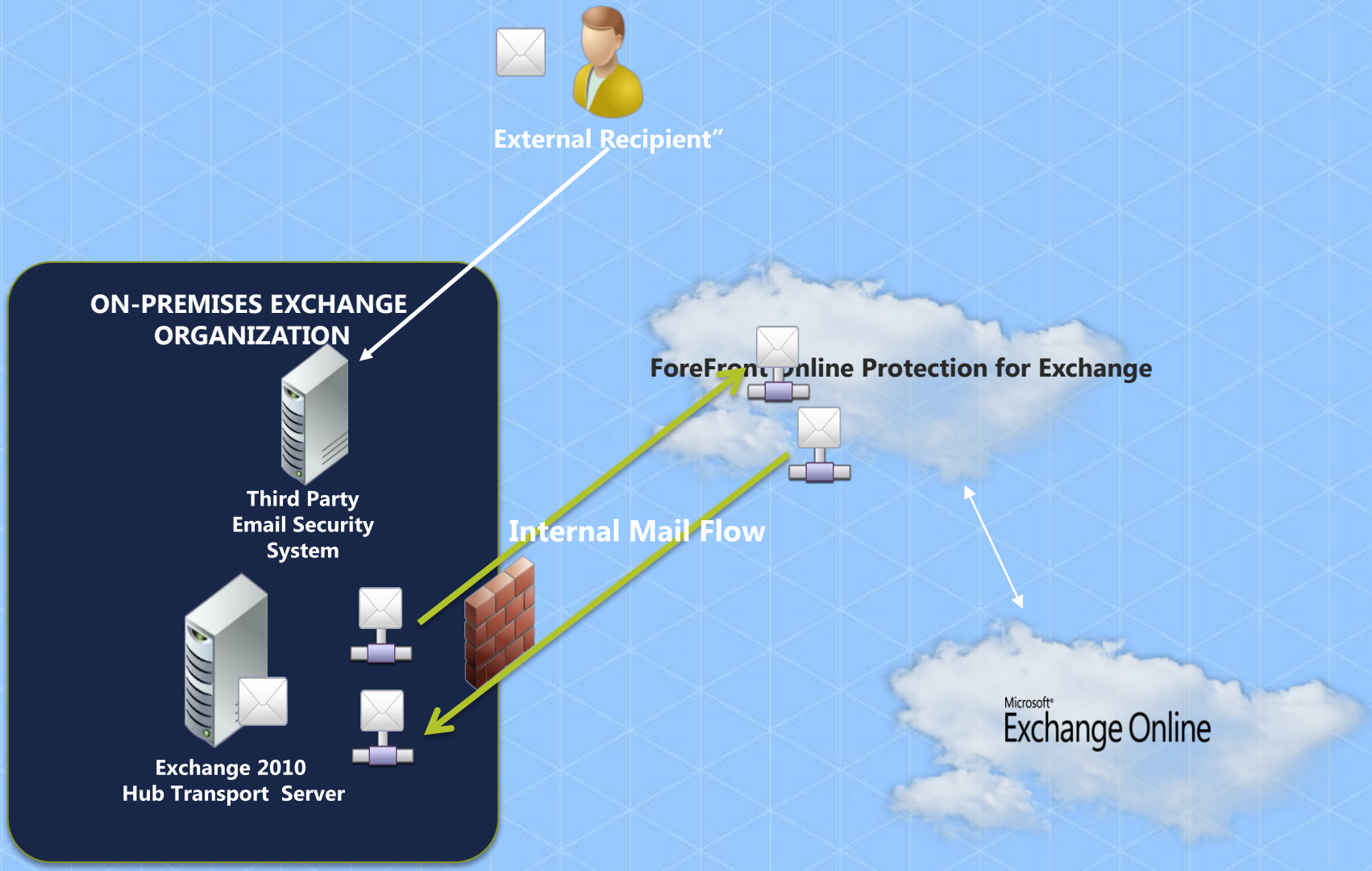


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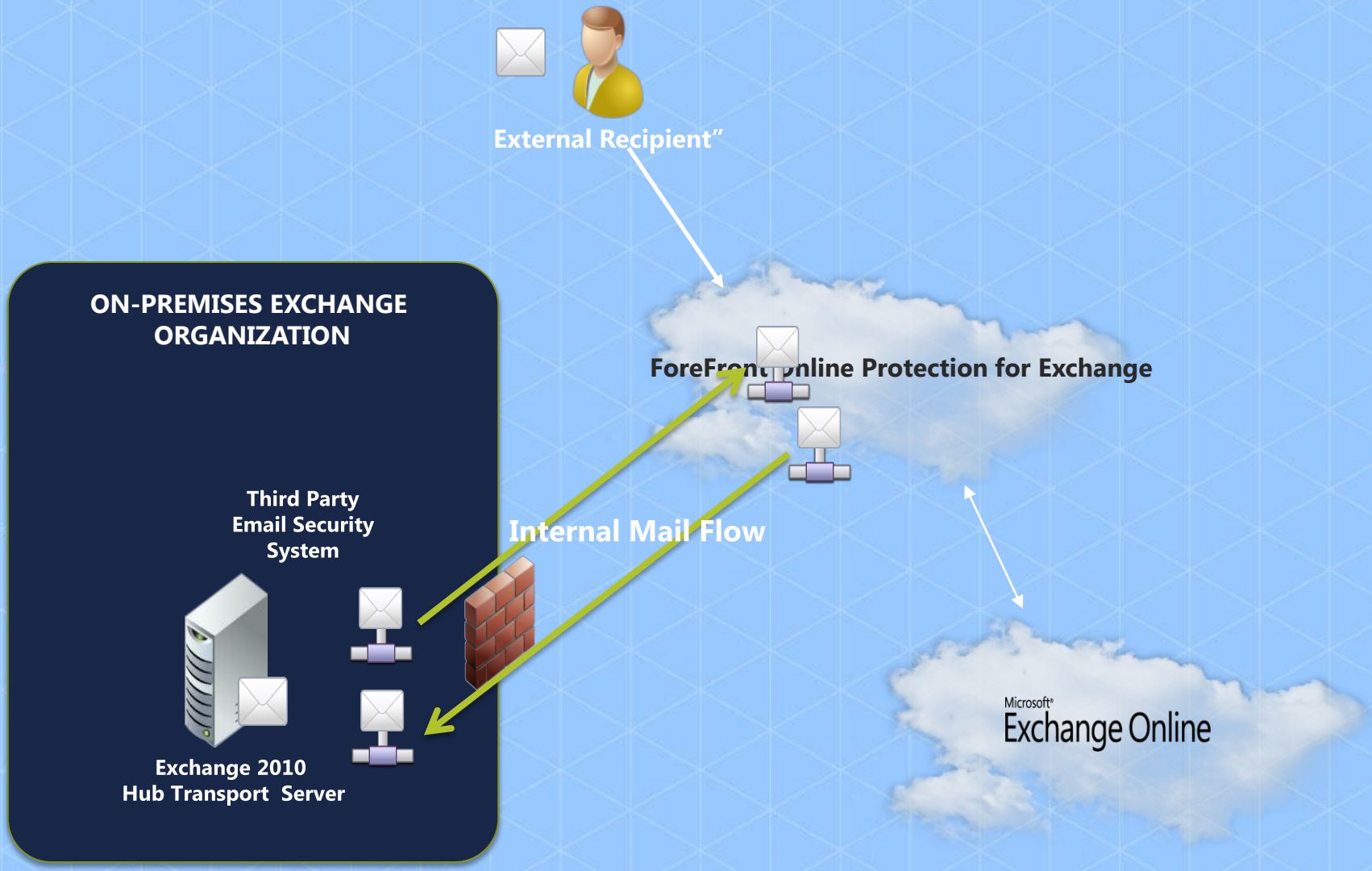


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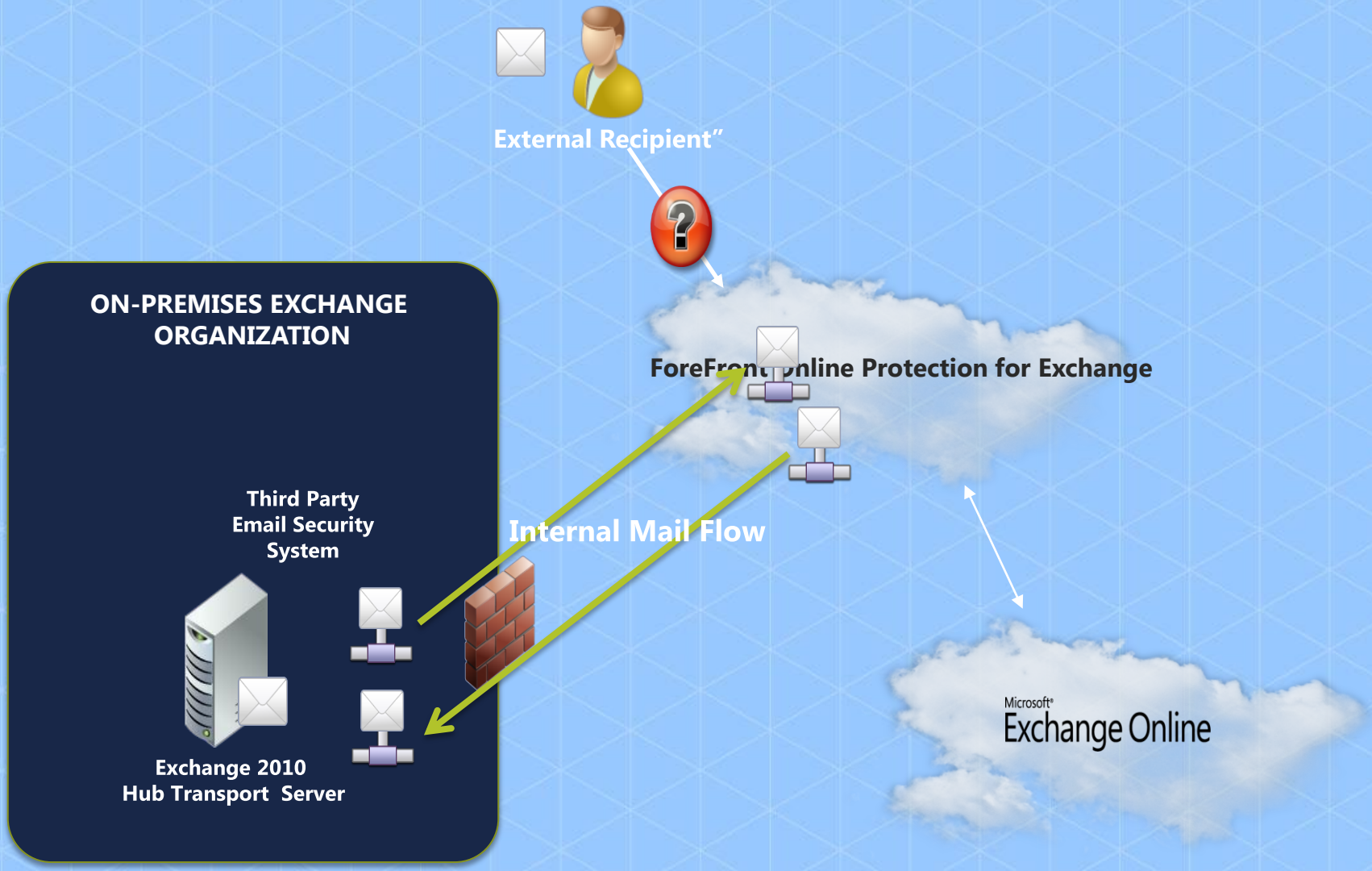


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# Common Deployment Issues - CAS

- Autodiscover is not published correctly
  - The external public DNS record for primary smtp domains must resolve to an Exchange Server 2010 SP1+ Client Access Server
  - The CAS server must have a public SSL certificate bound to it
  - The certificate must include the autodiscover DNS name within the Subject or SAN
- Pre-authentication is used in front of the Client Access Server
  - If using pre-authentication, the following URLs must be excluded and allow anonymous connections:
    - /EWS/Exchange.asmx/WSSecurity
    - /EWS/MRSProxy.svc/WSSecurity
    - /Autodiscover/Autodiscover.svc/WSSecurity
- SSL Off loading is being used in front of CAS
  - Hybrid Configuration Wizard fix for SSL offloading in Rollup1
  - Updated SSL Offloading guidance published to TechNet which includes MRSProxy specific steps here – Need to add a “http” binding into the /EWS/web.config

# Common Deployment Issues – Mail Flow

- Third party SMTP security devices in use between Exchange on-premises and ForeFront Online Protection for Exchange
  - TLS connection between Exchange on-premises and FOPE, for internal mail flow, must initiate/terminate on 2010 SP1+ Hub Transport or Edge Transport
- MX record is point to FOPE with Centralized Transport Control enabled
  - This scenario only works if FOPE was already in use prior to creating the Office 365 tenant
- Wildcard certificate used for TLS
  - There is a bug fixed in Rollup1 to enable support for wildcard certificates

# Session Objectives and Takeaways

- Session Objective(s):
  - Understand how the Hybrid Configuration Engine works
  - Understand the common pitfalls customers hit when they're configuring hybrid, and how to avoid them
- Dependencies are key. You must have your certs, DNS names etc working before you attempt to configure hybrid.  Otherwise it's going to be hard

# Housekeeping

- 98 Breakout Sessions
- Hands-on Lab at Rooms S223, S227, S424
- Windows 8 Consumer Preview Breakouts
- Technology Expo
- Microsoft Launch Products Zone

- Be Part Of The "Tech.Days 15th Anniversary Special – Worldfuture 2012" Game
- Test Your Word Power – Wordament
- Hand in Evaluation Form & Get a Souvenir Pack
- Stay Until the End of The Event – Sweet Surprise

# PRESENTATION DOWNLOAD BEFORE MAR 22

***http://www.microsoft.com/hk/techdays2012/***

# Next Session – 13:30-14:45

- Room S221
  - UNC393 – Lync® Core Voice Planning and Deployment (English)
  - Speaker: Andrew Ehrensing
- Room S224-225
  - PMGT286 – Hybrid Cloud Management with System Center 2012 (Cantonese)
  - Speaker: Daniel Lai
- Room S228
  - WP330 – A Year in the Life of Wordament™ (English) (Repeated Session)
  - Speaker: John Thornton

# Next Session – 13:30-14:45

- Room S421
  - SVR384 – Windows 8 Hyper-V®: Scalability (English)
  - Speaker: Bryon Surace
- Room S425
  - PMGT319 – Orchestrator and Service Manager – Deep Integration in Action (English) (Repeated Session)
  - Speaker: Mark Gosson
- Room S426-427
  - BIN260 – IOIT & Big Data, Microsoft's Vision, Strategy and Roadmap (English)
  - Speaker: Denny Lee
- Room S428
  - OFC302 – Getting to Grips with Office 2010 Compatibilities (English)
  - Speaker: Kingsley Starling

# Next Session – 13:30-14:45

- Hands-on Labs
  - Room S223
    - PMGT369-HOL – Introduction to System Center Operations Manager 2012 (Cantonese) (Repeated Session)
    - Speaker: Jacky Yiu
  - Room S227
    - SVR379-HOL – What's New in Active Directory® (V3.0) (Cantonese) (Repeated Session)
    - Speaker: John Lee
  - Room S424
    - UNC383-HOL – Exchange Server 2010 SP1: Compliance-Archiving and Retention (Cantonese)
    - Speaker: Philip Yeung

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