South Coast Summit

Exchange Hybrid – Full Migration and Coexistence

Thomas Stensitzki

South Coast Summit

KPMG
Headline Sponsor

ANS
Community Sponsor

Platinum Sponsors

Capgemini
cloud nexus
CPS
dox42 automate your documents integrate your data
kerv Digital
Mexa solutions
mscrm-addons.com Your company for MS-CRM ADD-ONS!
NetApp
MSTALENT FOR THE MICROSOFT TALENT COMMUNITY
PowerSyncPro
redstor
Spot by NetApp

Gold Sponsors

aptum
Beacon Intelligence
br
ClickDimensions It's your lead now
CloudDirect
cloudficient
C9DE.
crimson
Elysian:IT
encodian
Formus Pro
happiest minds The Mindful IT Company Born Digital . Born Agile
Engage & Gamify CardioLog Analytics
Kelverion
LANET
INAVISITE
NEXER
NiCE
ProMX
Rencore
rubrik
TOLLRING
TRUSTED TECH TEAM
xillio

Supporting Sponsors

INBOX CREATIVE
Talk Think Do
delaware
Dave Dodge PHOTOGRAPHY www.davedodgephotography.co.uk 023 8112 0080

South Coast Summit

Thomas Stensitzki

MVP M365 Apps & Services
MCT Regional Lead

Vinyl Collector

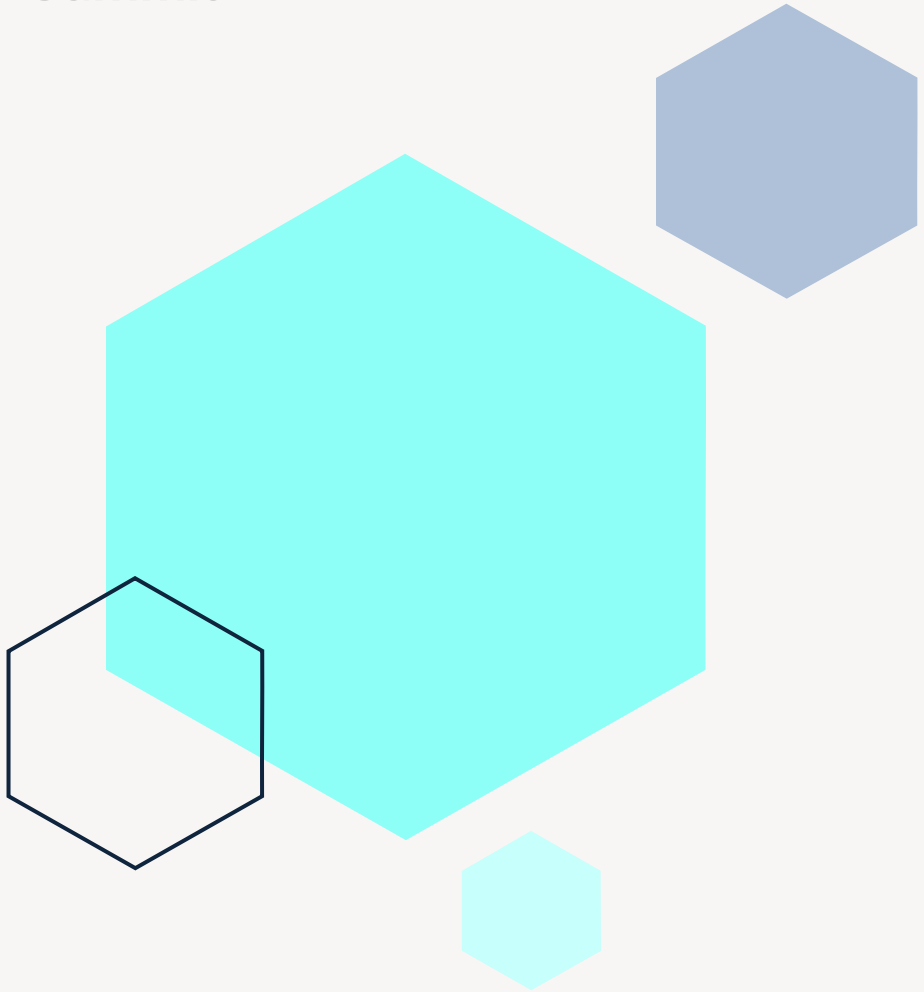
Blogger

Podcaster

South Coast Summit

Agenda

South Coast Summit



“Implementing Exchange Hybrid is simple.”

Undisclosed Exchange Consultant

South Coast Summit

Introduction

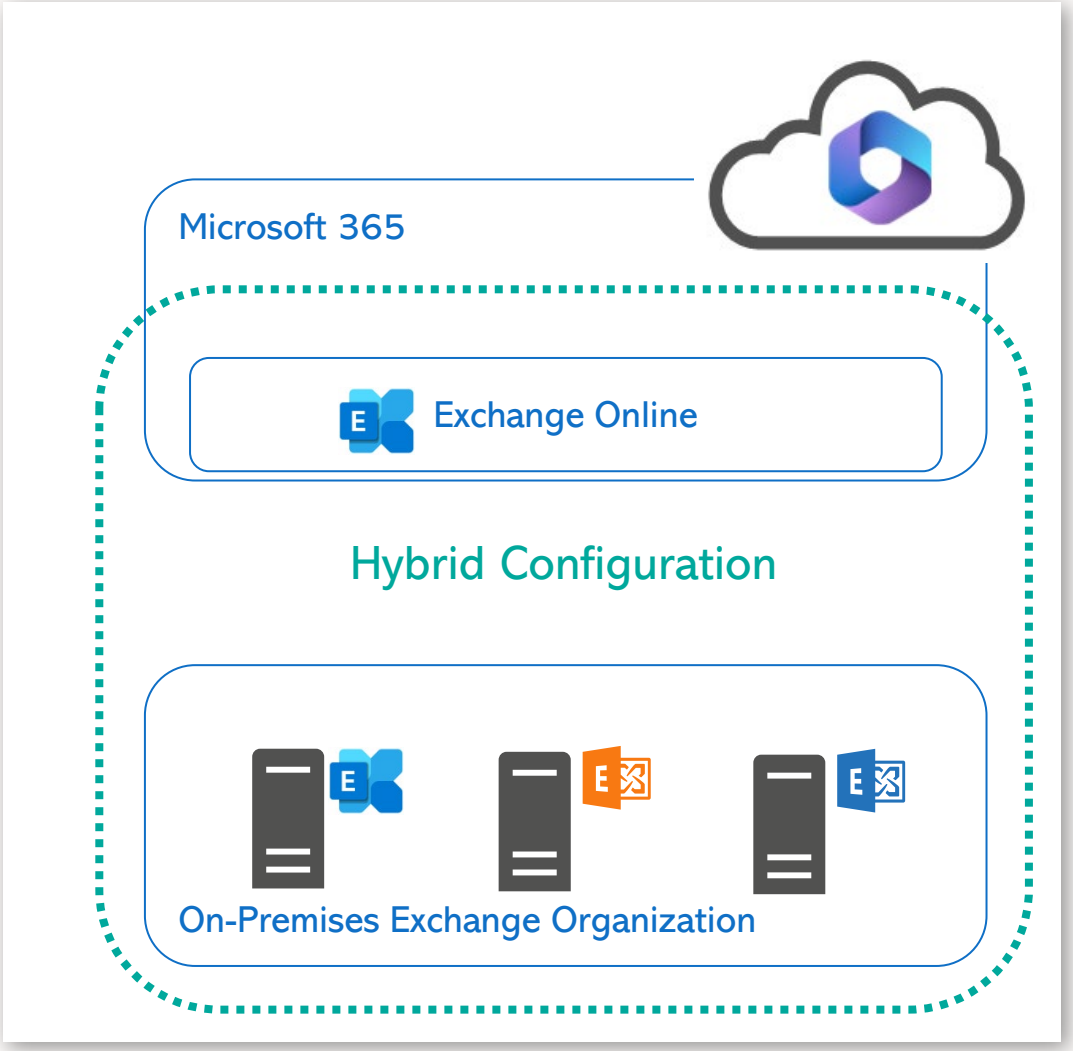
Not all companies can implement a cloud-only operation with Exchange Online. Sometimes a so-called Exchange Hybrid operation is necessary to conduct a smooth mailbox migration or to establish a continuous hybrid operation.

But what is Exchange Hybrid anyway?

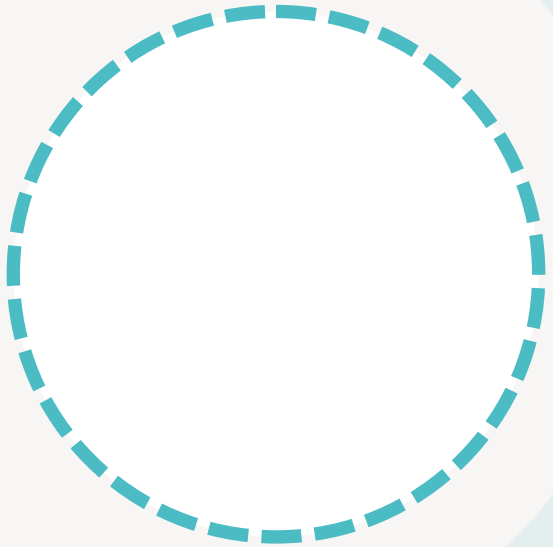
South Coast Summit

What is Exchange Hybrid?

- Trusted relationship between an on-premises Exchange Organization and Exchange Online
- Hybrid connections for mail flow (SMTP), and service access (HTTPS) for Exchange hybrid functionality
- Hybrid Configuration Wizard (HCW) activates and configures the hybrid mode of operation



South Coast Summit

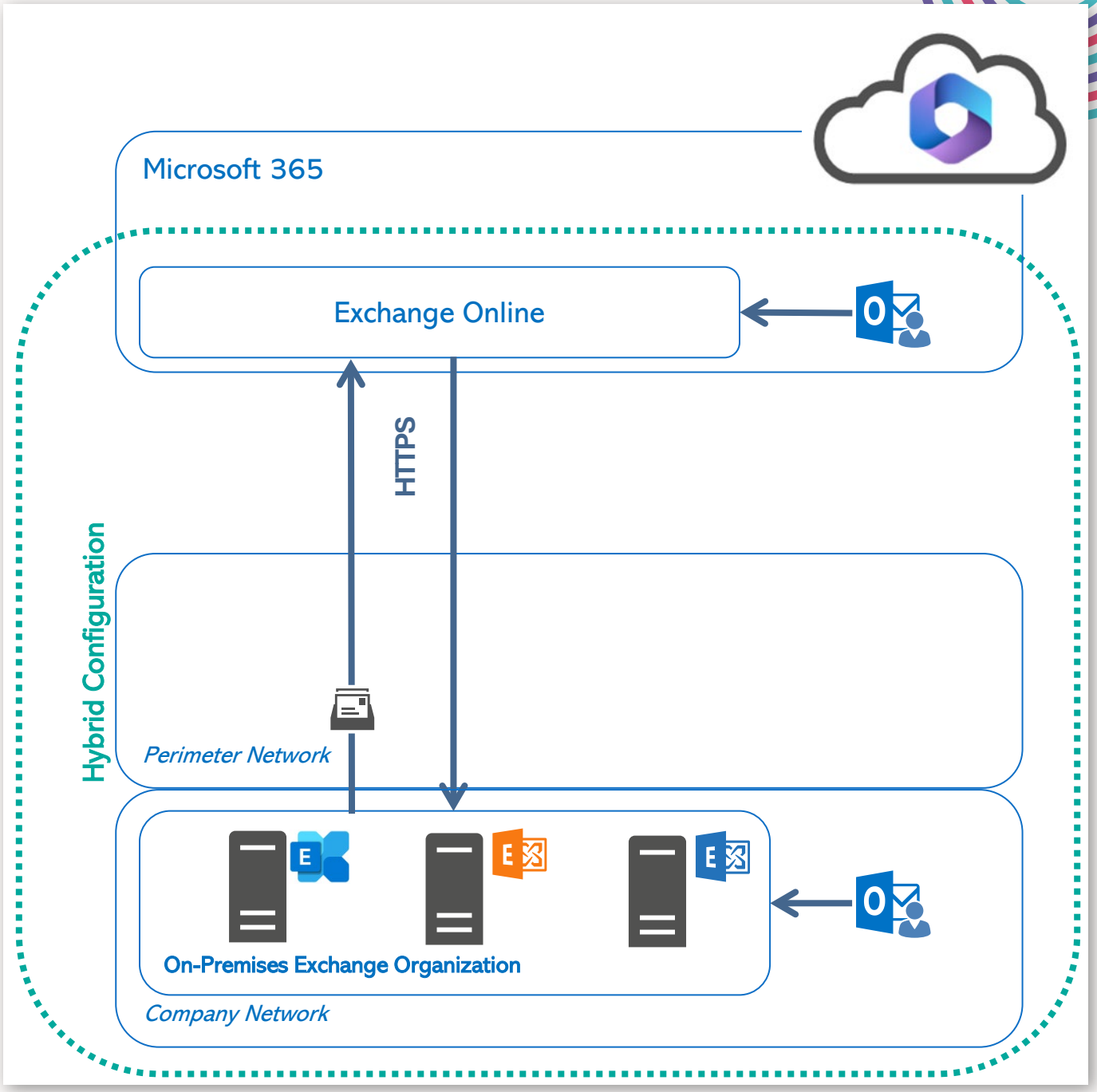


Why all the effort?

South Coast Summit

Why Do You Need It?

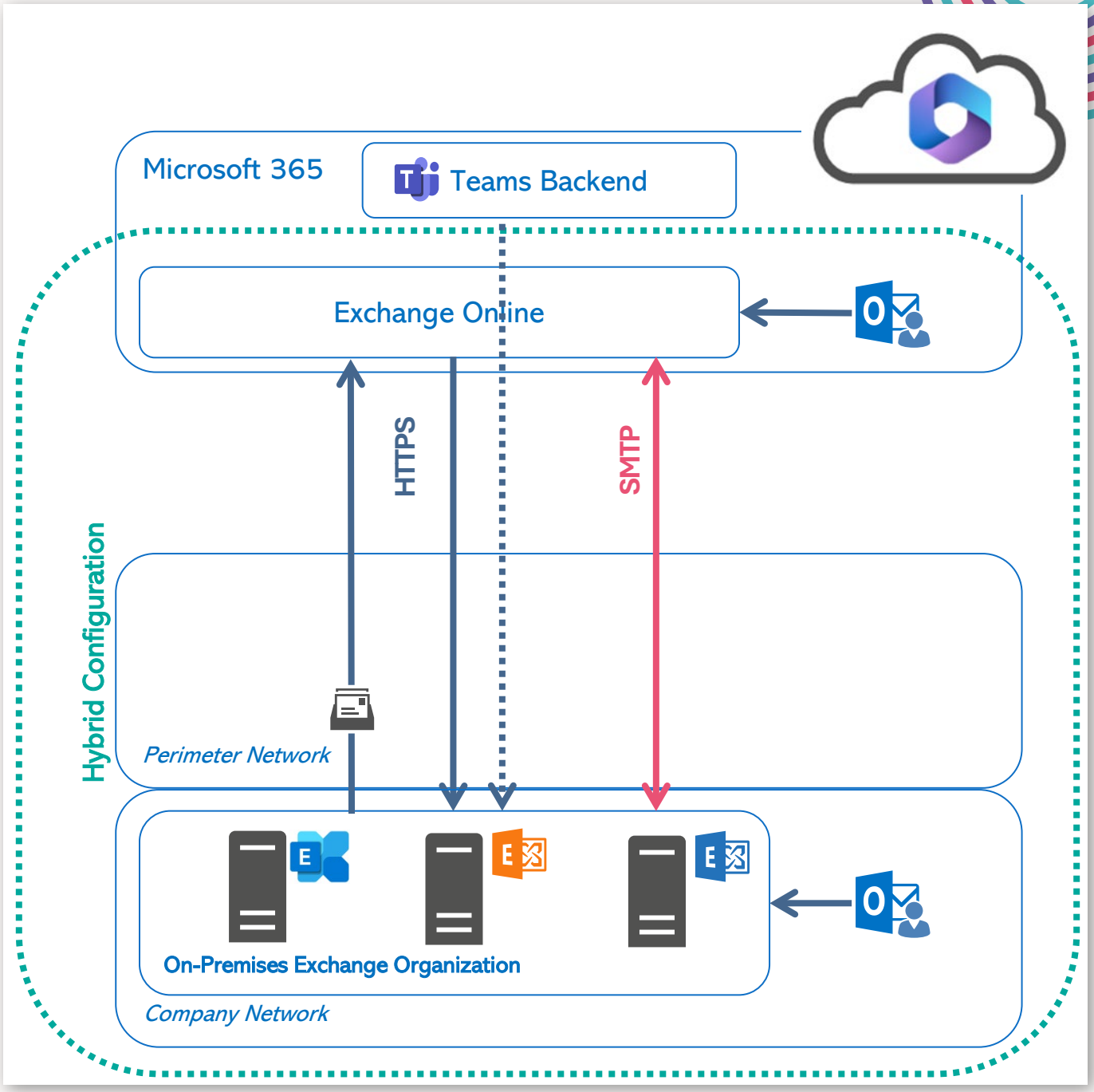
- Exchange Coexistence
  - Free/Busy Lookups, Mail Tips, Profile Pictures, etc.
- Migration
  - Native migration of mailboxes to and from Exchange Online
  - Seamless public folder migration to Exchange Online
- Transition from an On-Premises Exchange Organization to Exchange Online
  - Optimal migration experience for end users



South Coast Summit

Why Do You Need It?

- Centralized mail flow for use of on-premises email solutions with user mailboxes in Exchange Online
- Microsoft Teams with on-premises mailboxes (calendar access)



South Coast Summit

Other Reasons For Exchange Hybrid

- Centralized mail flow for use of on-premises email solutions with user mailboxes in Exchange Online
  - Gateway-based S/MIME decryption/encryption, email disclaimer, archiving, journaling, etc.
- Hybrid mail flow providing email relay functionality for on-premises legacy applications and hardware devices with
  - No direct access to the internet
  - No support for TLS protocols 1.0 or 1.1
  - No support for SMTPAUTH user authentication
  - No support for POP3 and IMAP4 modern authentication

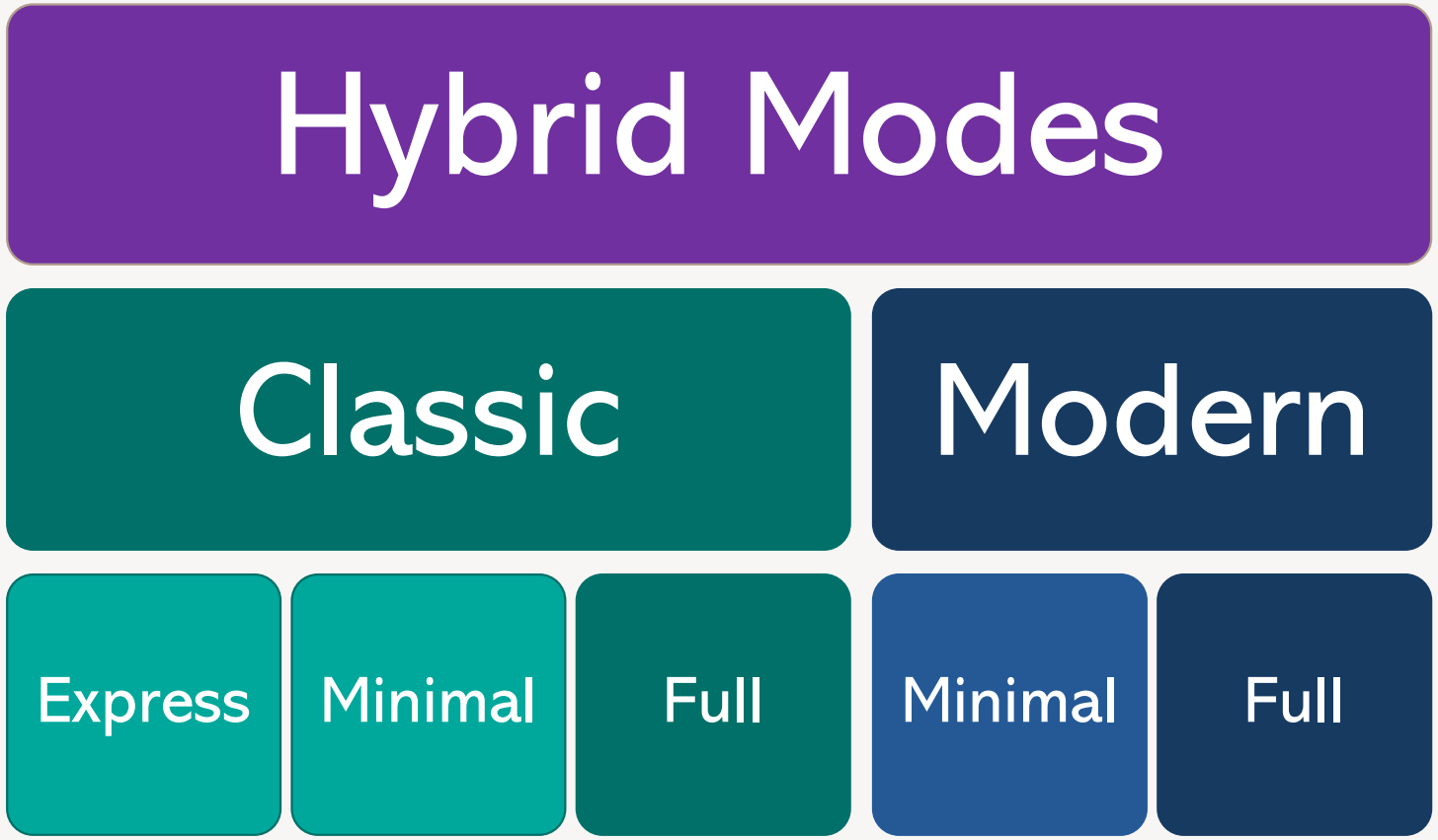
South Coast Summit

SOME MORE DETAILS

Classic or Modern?

South Coast Summit

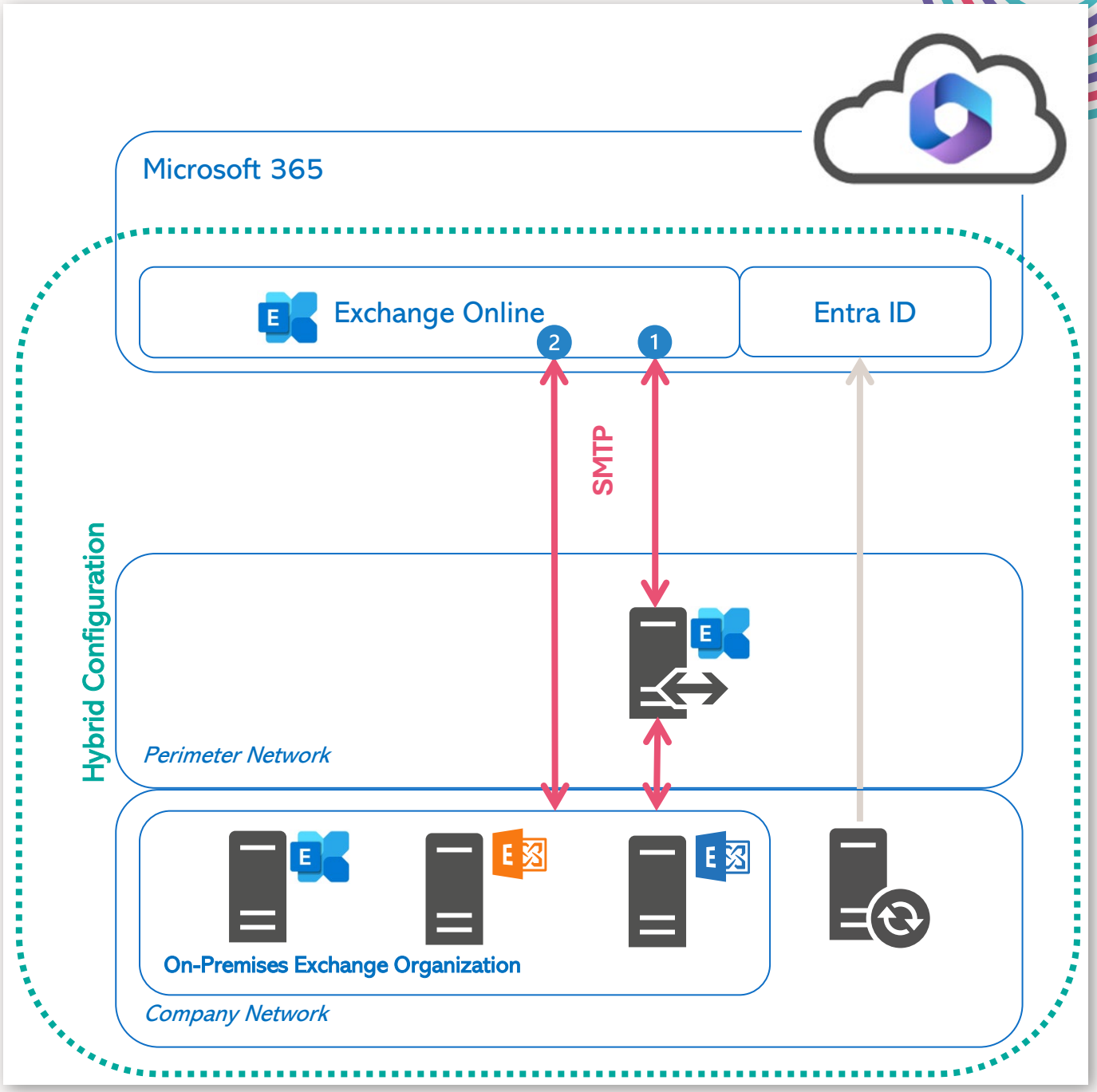
Two Variants – Up To Three Operating Modes



South Coast Summit

Classic Full Hybrid

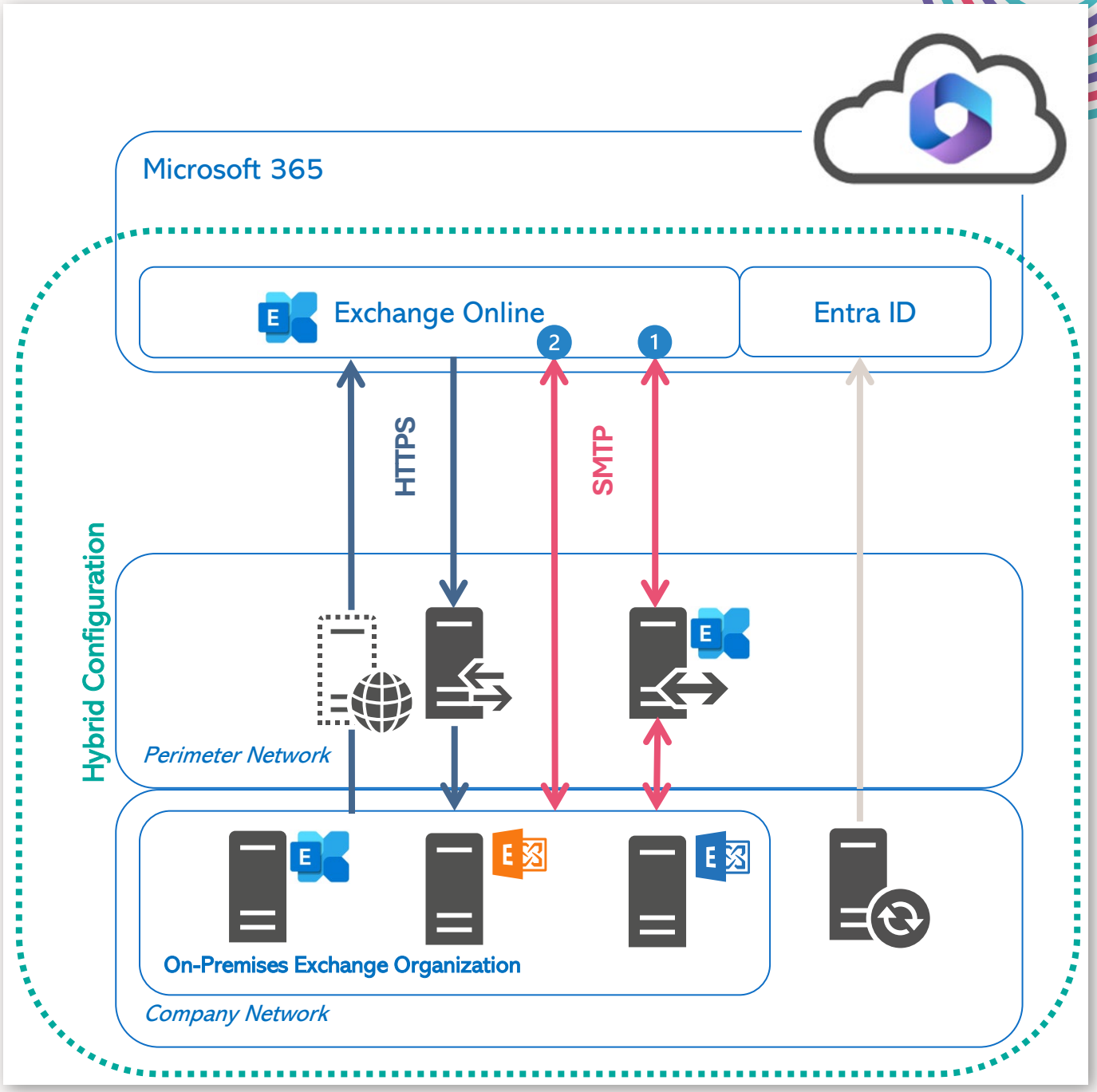
- Entra ID Hybrid with Entra ID Connect
  - Exchange Hybrid option enabled
- SMTP Connection between On-Premises and Exchange Online
  - Separate hostname for inbound SMTP connectivity (e.g., smtp365.company.com)
  - Additional public IP address
  - TLS certificate for hostname
  - Edge Transport Role in perimeter network (1)
  - Alternatively, direct inbound connection (2)



South Coast Summit

Classic Full Hybrid

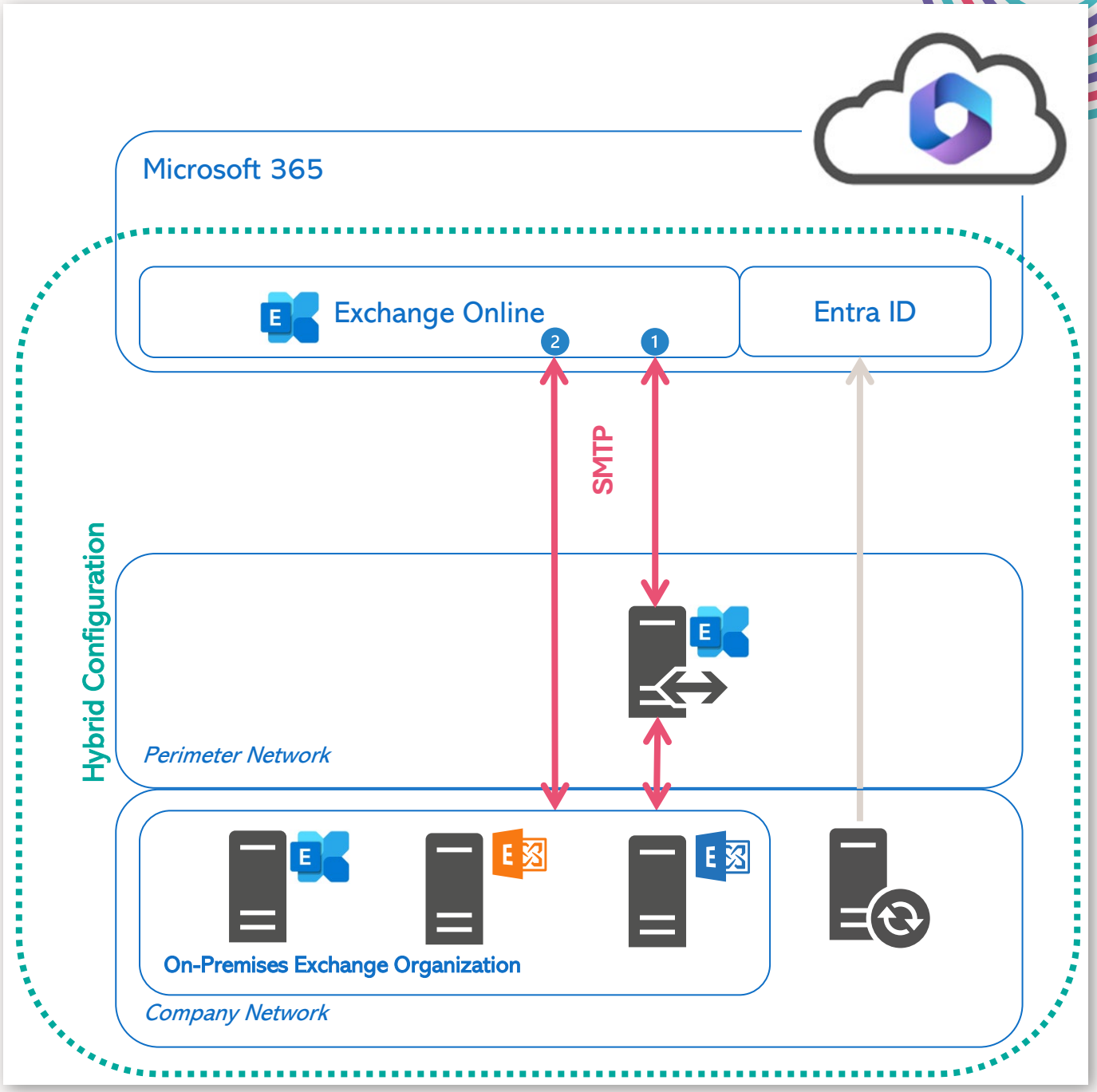
- Inbound HTTPS connection to Client Access Service
  - Internal Exchange Servers published using reverse proxy servers
  - Requires additional public IP address
- Outbound HTTPS connections to Exchange Online
  - Exchange Server communication to Exchange Online
  - Either direct or using outbound roxy server



South Coast Summit

Modern Full Hybrid

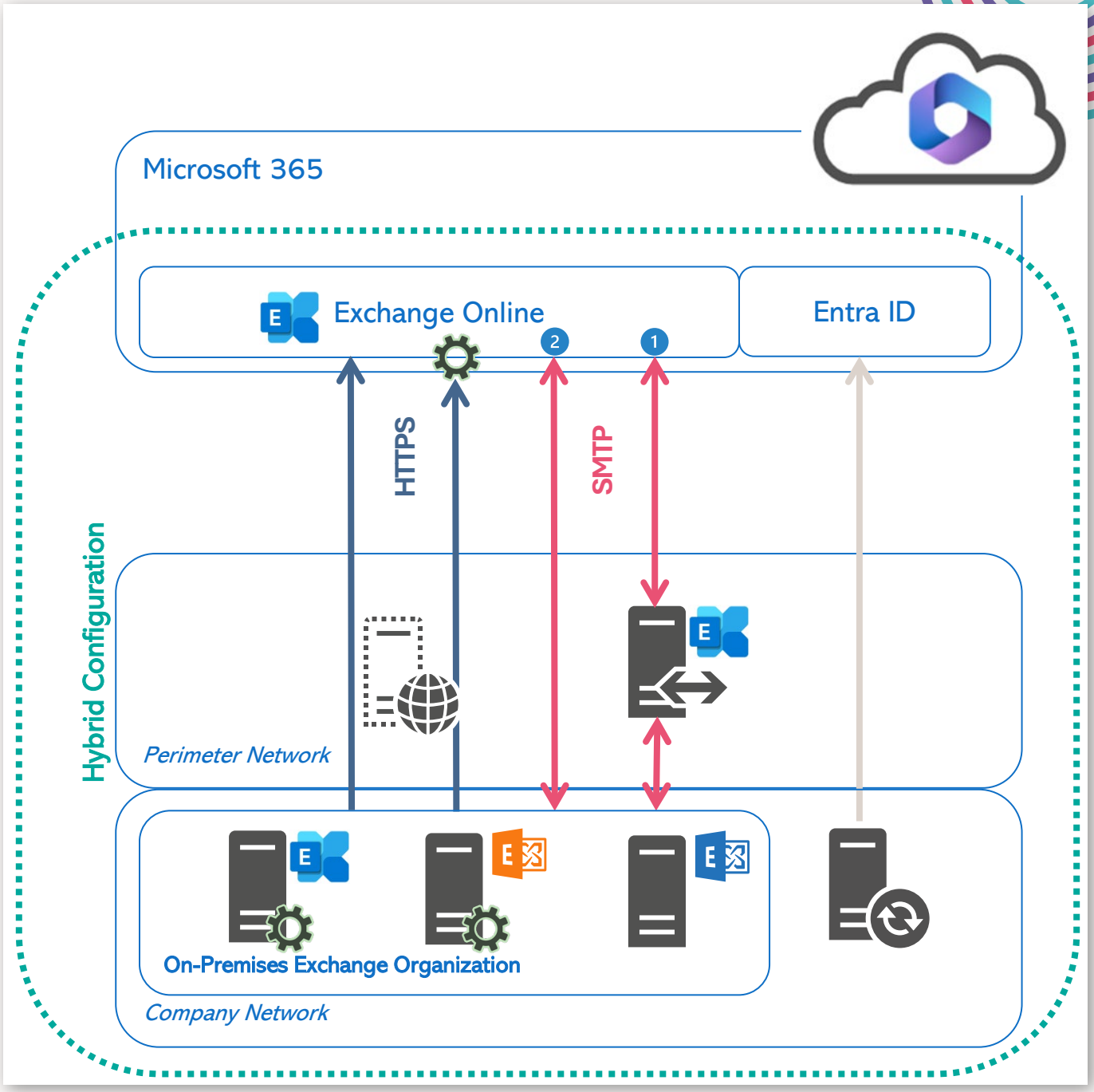
- Entra ID Hybrid with Entra ID Connect
  - Exchange Hybrid option enabled
- SMTP Connection between On-Premises and Exchange Online
  - Separate hostname (e.g., smtp365.company.com)
  - Additional public IP address
  - TLS certificate for hostname
  - Edge Transport Role in perimeter network (1)
  - Alternatively, direct inbound connection (2)



South Coast Summit

Modern Full Hybrid

- Outbound HTTPS connections to Exchange Online
  - Exchange Hybrid-Agent
    Exchange Online to Exchange on-premises communication
  - Exchange Server communication to Exchange Online
  - Install additional Hybrid-Agents for redundancy
  - Communication to Exchange Online either direct or using outbound proxy servers



South Coast Summit

The Differences

Classic	**Full**	Full classic hybrid configuration, Exchange server published to the internet (SMTP/HTTPS) → **permanent** hybrid operation **and Teams access** to on-premises
	Minimal	Hybrid configuration, without rich coexistence to migrate all on-premises mailboxes to Exchange Online → **temporary** hybrid operation for a **few weeks / months**
	Express	Hybrid configuration, with Azure AD Connect Express settings, to migrate all on-premises mailboxes to Exchange Online → **temporary** hybrid operation for a **few days / weeks**
Modern	**Full**	Full Modern Hybrid configuration, for new hybrid setups based on Hybrid Agent deployment, with reduced hybrid functionality → **permanent** hybrid operation **without Teams access** to on-premises
	Minimal	Modern Hybrid configuration, to migrate all on-premises mailboxes to Exchange Online → **temporary** hybrid operation for a **few weeks / months**

South Coast Summit

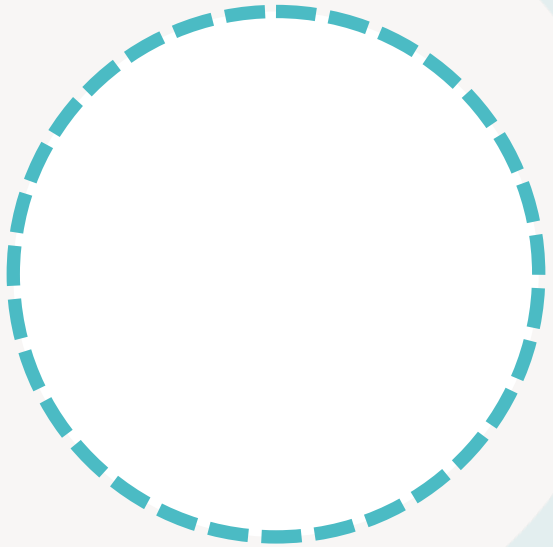
Microsoft Teams and Exchange Server

South Coast Summit

Why do you need Exchange Hybrid

- Optimal migration experience for end users
- Centralized mail flow for use of on-premises email solutions with user mailboxes in Exchange Online
  - Gateway-based S/MIME decryption/encryption, email disclaimer, archiving, journaling, …
- Hybrid mail flow providing email relay functionality for on-premises legacy applications and hardware devices with
  - No direct access to the internet
  - No support for TLS protocols 1.0 or 1.1
  - No support for SMTPAUTH user authentication
  - No support for POP3 and IMAP4 modern authentication

South Coast Summit



Exchange Hybrid Recommendations

South Coast Summit

Exchange Hybrid Recommendations

- Use Exchange Server 2019 as on-premises 2019 hybrid endpoint
  - Microsoft Teams backend services use AutoDiscover v2 to discover on-premises Exchange Web Services and REST endpoints
  - Client Access Endpoint must be accessible for Microsoft Teams backend services
  - Always install the latest Exchange Server cumulative update
  - In-Place upgrade capability for Exchange Server vNEXT (still announced, and we still pray)
- Use Third-Party TLS-certificate with all required subject alternate names (SAN) for inbound **HTTPS connections**
  - AutoDiscover
  - Exchange namespace → Exchange Virtual Directory's external URL-Settings

South Coast Summit

Exchange Hybrid Recommendations

- Use a dedicated Third-Party TLS-certificate for **SMTP connections** when using centralized mail flow
- Enable and configure OAUTH authentication using Hybrid Configuration Wizard
  - Exchange product group provides detailed information on how to configure OAUTH manually
- Publish AutoDiscover DNS resource records for all SMTP domains used for primary email addresses
- Ensure to activate the "Exchange Hybrid" option in Entra ID Connect (aka Azure AD Connect) prior to running Exchange Hybrid Configuration Wizard
  - Without that option activated you'll risk duplicate mailboxes (On-Premises and Exchange Online)

South Coast Summit

Summary

Exchange Hybrid is less complicated as it sounds.

Exchange Hybrid suits most requirements for migrating to Exchange Online or for permanent hybrid operation.

Using Microsoft Teams with on-premises mailboxes requires Classic Full Hybrid.

South Coast Summit

Any questions?

South Coast Summit

Thank you

Thomas Stensitzki

Thomas.Stensitzki@Granikos.eu

linktr.ee/stensitzki

South Coast Summit

Resources

- Exchange Server Hybrid Deployments
- Hybrid Deployment Prerequisites
- Hybrid Configuration Wizard FAQs
- Configuring Teams calendar access for Exchange on-premises mailboxes
- Configure OAuth authentication between Exchange and Exchange Online organizations
- Demystifying and troubleshooting hybrid mail flow: when is a message internal?
- Remote Connectivity Analyzer
- How Exchange and Microsoft Teams interact
- Microsoft Teams and on-premises mailboxes