

# Application Architecture SAP RISE (Rest of the World)

|              |                                                                                                                      |
|--------------|----------------------------------------------------------------------------------------------------------------------|
| Status       | Approved                                                                                                             |
| Owner        | MUTHUSAMY-ext, Kunalan                                                                                               |
| Stakeholders |                                                                                                                      |
| LeanIX Link  | <a href="#">SAP S/4HANA - [ERP] (Rest of World instance)</a><br><a href="#">SAP S/4HANA - [ECP] (China instance)</a> |

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The purpose of the document is to outline the application architecture of the SAP RISE environment in Europe, which is used to support all businesses not using the China instance (see also [KDD057](#)). It will cover the following topics:

- [Landscape overview](#)
- [Application and components](#)
- [Application security and access](#)
- [Operational architecture](#)

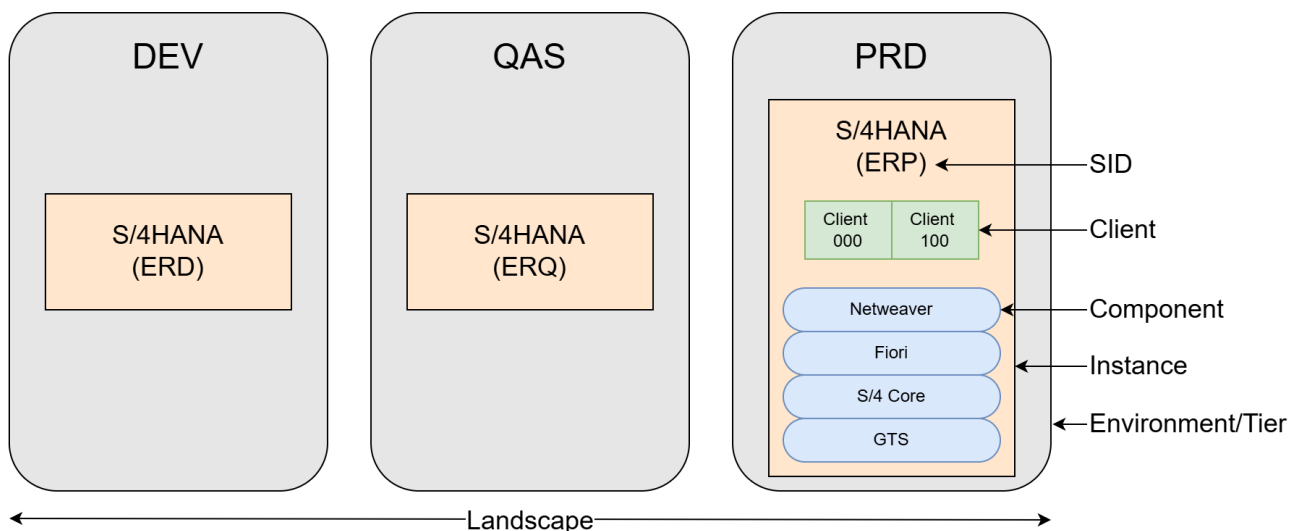
Out of scope:

- Detailed architecture designs that are managed by SAP RISE.
- RISE operating model.
- Information related to product documentation and can be found online will not be documented here.

## Key Decisions and Requirements

| Description                                                                         | Rationale                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SAP Private Cloud deployment model was selected for S/4HANA deployment              | Please refer to <a href="#">KDD026 - SAP S/4HANA Deployment Model</a> .                                                                                                                                                                                                                                                                                                                                               |
| SAP GTS will be co-deployed with S/4HANA as a separate client.                      | Please refer to <a href="#">KDD074 - Architecture of SAP GTS</a>                                                                                                                                                                                                                                                                                                                                                      |
| Embedded Fiori deployment model - SAP Fiori front-end server is deployed on S/4HANA | S/4HANA will be the only backend system for Fiori and there is a strict dependency between Fiori and S/4HANA version. Hence an embedded deployment will be preferred and it also optimizes hosting and maintenance costs.<br><br>Embedded deployment option is also recommended for S/4HANA by <a href="#">SAP</a> .                                                                                                  |
| SSL and SNC will be configured for S/4HANA to encrypt web and RFC traffic           | Based on SyWay implementation approach, all data in transit must be encrypted.                                                                                                                                                                                                                                                                                                                                        |
| Configure SSO for S/4HANA                                                           | As part of SyWay project, a common authentication mechanism (e.g., SAML) will be adopted for ease of access and unified user experience.                                                                                                                                                                                                                                                                              |
| 99.9% SLA and SAP RISE short distance disaster recovery for production systems.     | Based on Syensqo existing non-functional requirements.                                                                                                                                                                                                                                                                                                                                                                |
| Setup Best Practices client using alternative 1 method: Best Practices client .     | As discussed in <a href="#">KDD071 - Development System Approach</a> , alternative 1 is selected and client 050 will be created and configured as Best Practice client.                                                                                                                                                                                                                                               |
| Enhanced Operations Service add-on services is included in SAP RISE for Syensqo.    | Enhanced Operations Service was purchased for the following reasons: <ul style="list-style-type: none"> <li>• Customer Delivery Manager (CDM) and Technical Service Manager (TSM) who are dedicated to Syensqo account.</li> <li>• Named engineers and architecture who support Syensqo account.</li> <li>• Higher non-PRD SLA of 98%.</li> <li>• 24x7 Non-PRD service request scheduling &amp; execution.</li> </ul> |
| EU Access services is included in SAP RISE for Syensqo.                             | To ensure only SAP RISE support team located in Europe has accesses and maintains Syensqo SAP RISE systems.                                                                                                                                                                                                                                                                                                           |
| Common Development Landscape                                                        | A common development landscape used to ensure process harmonization across the systems deployed in EU and China regions.                                                                                                                                                                                                                                                                                              |

## Terminology



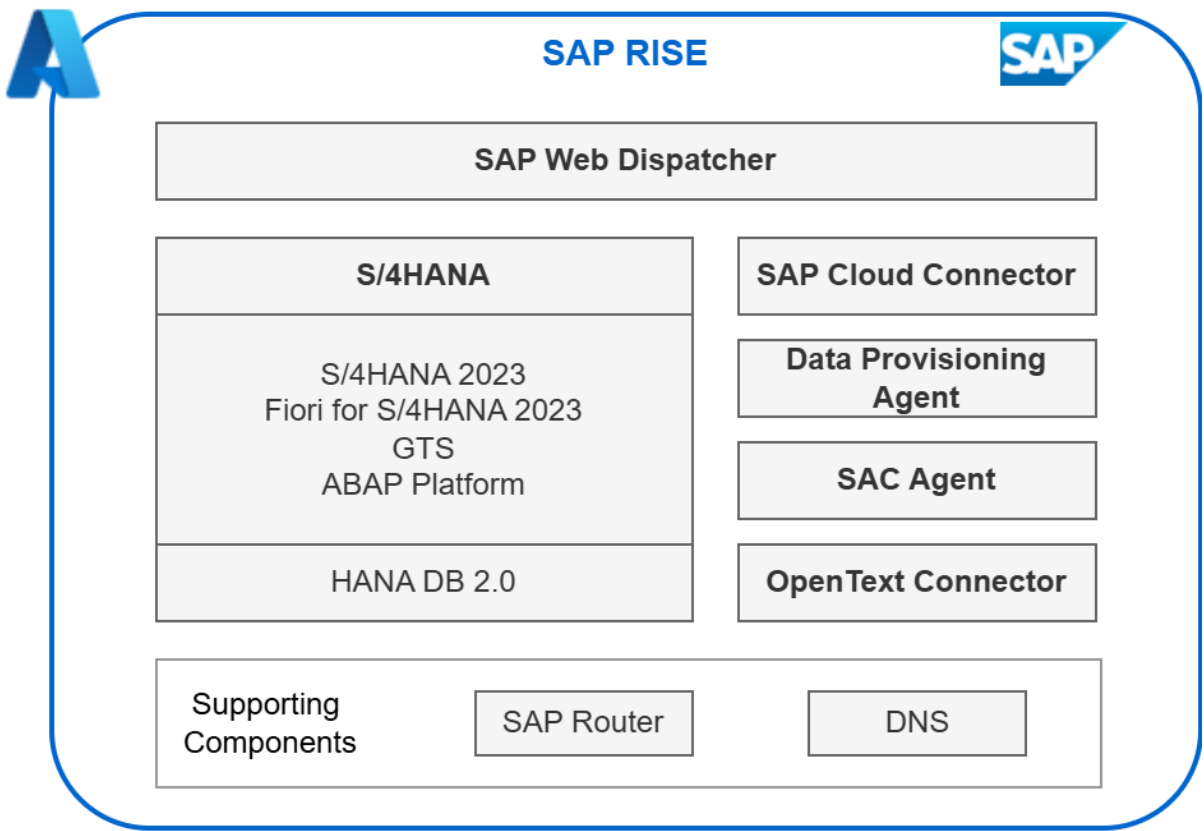
- Client: A self-contained, logically-separated unit in an SAP system (technical instance based on ABAP Application Server) with separate master data, transactional data and configurations that are client specific. E.g., Client 100.

- Component: Software modules or add-on that are installed in the instance and enables a specific function. E.g., Fiori, GTS.
- Instance: An entity refers to the entire system including the software and all technical components (DB, application server etc.). E.g., S/4HANA Production.
- SID: Unique identifier for an SAP instance that consists of three characters.
- Environment/Tier: Refers to systems that are used for the different stages of the project lifecycle. Each environment serves a distinct purpose and has a dedicated instance to ensure stability and integrity. E.g., Development, QAS.
- Landscape: Refers to all the environment for an application or entire project. E.g., S/4HANA landscape, SyWay landscape.

# Application Architecture

## Overview

SAP RISE application architecture is represented in the diagram below. It will be hosted in Azure and the cloud infrastructure will be managed by SAP.



### SAP RISE Details

The table below summaries SAP RISE details.

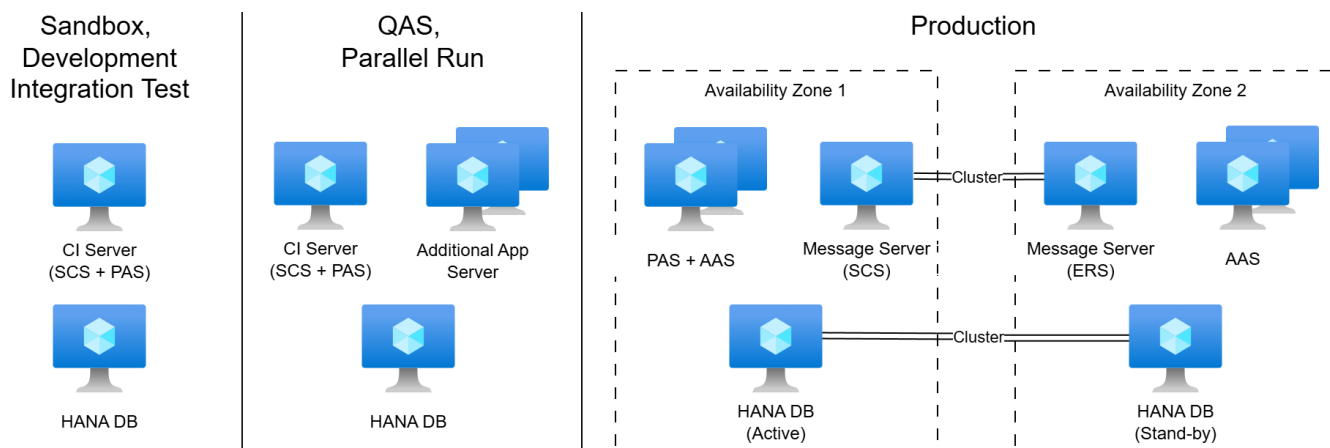
|                     |                                                                                                                                                                                                                                                                                                                           |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer ID         | YSQ                                                                                                                                                                                                                                                                                                                       |
| Customer Number     | 3008440                                                                                                                                                                                                                                                                                                                   |
| Installation Number | 21360356                                                                                                                                                                                                                                                                                                                  |
| S-User for PCE      | S0026961840                                                                                                                                                                                                                                                                                                               |
| Cloud Provider      | Azure                                                                                                                                                                                                                                                                                                                     |
| Cloud Region        | North Europe (Ireland - Dublin)                                                                                                                                                                                                                                                                                           |
| RISE Add-ons        | <ul style="list-style-type: none"><li>• RISE with SAP, private edition (99.9% SLA)</li><li>• SAP S/4HANA Cloud, disaster recovery, private edition</li><li>• SAP S/4HANA Cloud, EU access, priv.ed.</li><li>• Enhanced operations service for large enterprises for RISE with SAP S/4HANA Cloud Private Edition</li></ul> |

## Application Components

### S/4HANA

S/4HANA is an Enterprise Resource Planning solution based on SAP HANA database and SAP ABAP platform. It is a core component in SyWay landscape. SAP Fiori and GTS components will be co-deployed with S/4HANA. A two tier deployment approach will be adopted for S/4HANA systems: Application and DB.

- For Sandbox, Development, Integration testing and Training S/4HANA systems, 1 application and 1 DB server will be deployed.
- For QAS and Parallel Testing S/4HANA systems, multiple application servers will be deployed with 1 DB server.
- For Production, high availability is in scope and S/4HANA components (like message server, app and DB) are deployed across 2 availability zones with pacemaker clusters to ensure no single point of failure.



CI: Central Instance, SCS: SAP Central Services, PAS: Primary Application Server, AAS: Additional Application Server

### Add-ons

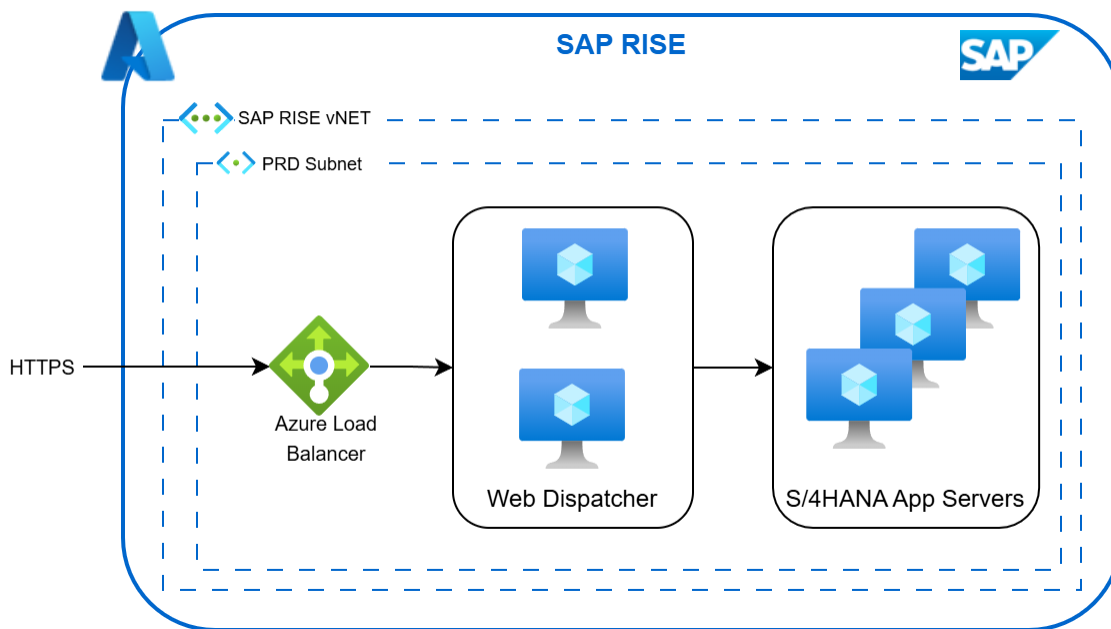
The following SAP add-ons are installed in S/4HANA.

| Add-On                             | Purpose                                                |
|------------------------------------|--------------------------------------------------------|
| SUCCESSFACTORS_HCM_INTEGR          | Integration with SuccessFactors                        |
| ARIBA CLOUD INT S/4 HANA           | Integration with Ariba                                 |
| SAP GTS ED FOR SAP HANA            | Co-Deploy GTS with S/4HANA                             |
| SAP FIORI FOR SAP GTS              | Fiori Apps for GTS                                     |
| S/4HANA ADA BY OT                  | OpenText integration for Archiving and Document Access |
| S/4 INVOICE MGMT BY OT (FND & INV) | OpenText Vendor Invoice Management (VIM)               |
| SAP MRS FOR S4HANA                 | SAP Multiresource Scheduling                           |
| Blackline Core & Connector         | Integration with Blackline                             |

### SAP Web Dispatcher

SAP Web dispatcher acts as a reverse web proxy for S/4HANA systems. It facilitates and load balances incoming HTTP traffic.

- For all non-PRD environment, one web dispatcher for each tier will be deployed
- For PRD, two Web Dispatchers will be deployed for HA purposes and Azure load balancer will be used to load balance HTTP traffic to the 2 PRD Web Dispatchers.

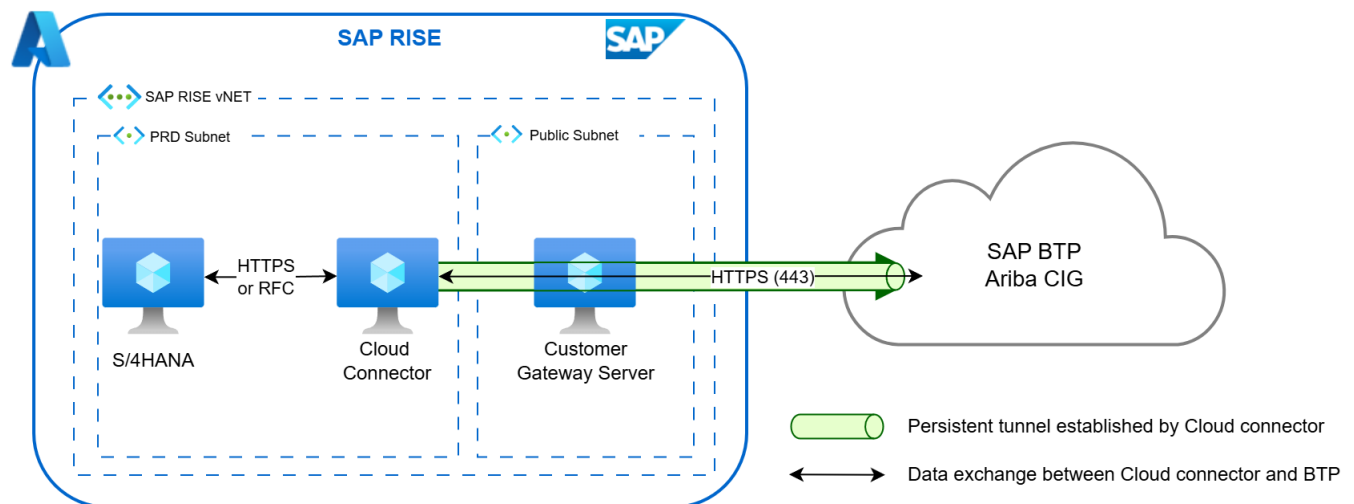


## SAP Cloud Connector

The SAP Cloud connector acts as a reverse invocation proxy to establish network connection between SAP RISE systems and SAP BTP services (Integration suite, API management, SAP Analytics Cloud etc.) and Ariba Cloud Integration Gateway (CIG). Due to its reverse invoke capabilities, the network traffic originates from SAP Cloud connector to SAP BTP and once the link has been established, data can be exchanged between SAP RISE systems and BTP. HTTPS or RFC protocols are used between SAP Cloud Connector and S/4HANA, and HTTPS protocol is used between Cloud Connector and SAP BTP.

To enable outbound internet traffic from SAP RISE, SAP has provisioned a customer gateway server (CGS) with a forward internet proxy installed on it. CGS will be configured with a public IP which will be used for SAP Cloud Connector connection to SAP BTP and this public IP will be whitelisted in SAP BTP.

A 2 tier landscape will be adopted for SAP cloud connector: non-PRD and PRD. The non-PRD cloud connector will be shared across all non-PRD landscape.

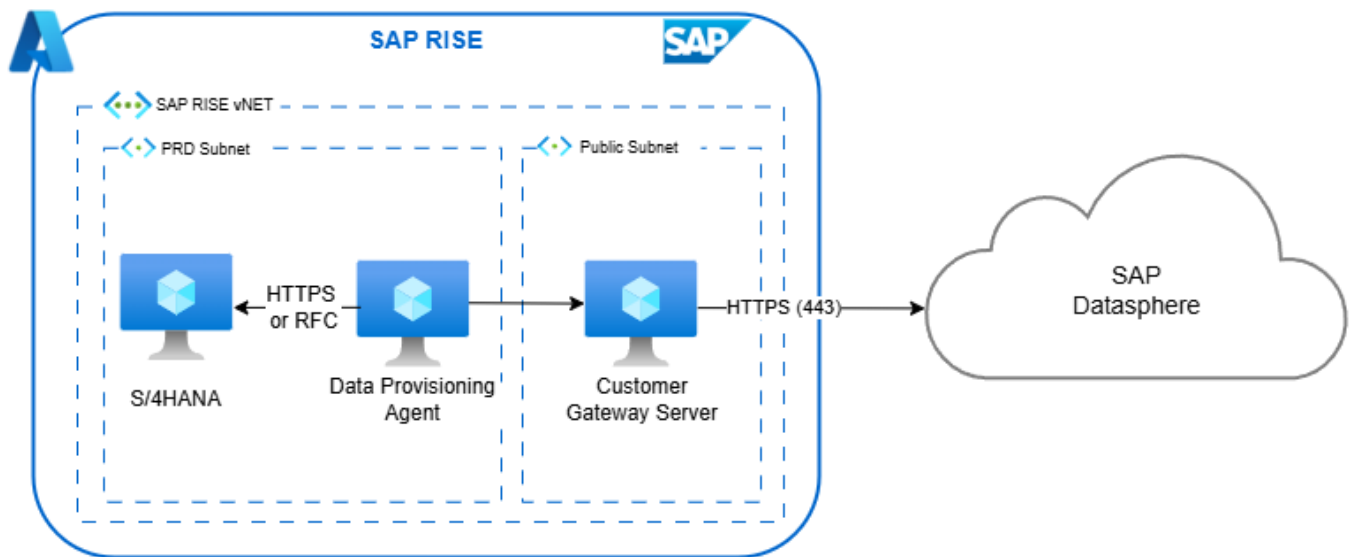


## Data Provisioning Agent

Data Provisioning Agent (DPA) is used for real-time and batch data replication from S/4HANA to SAP Datasphere. The network connection to SAP Datasphere is initiated by DPA and CGS is used to facilitate the internet connection to SAP Datasphere.

DPA uses the HTTPS or RFC protocols to communicate with S/4HANA and uses the HTTPS protocol to communicate with SAP Datasphere.

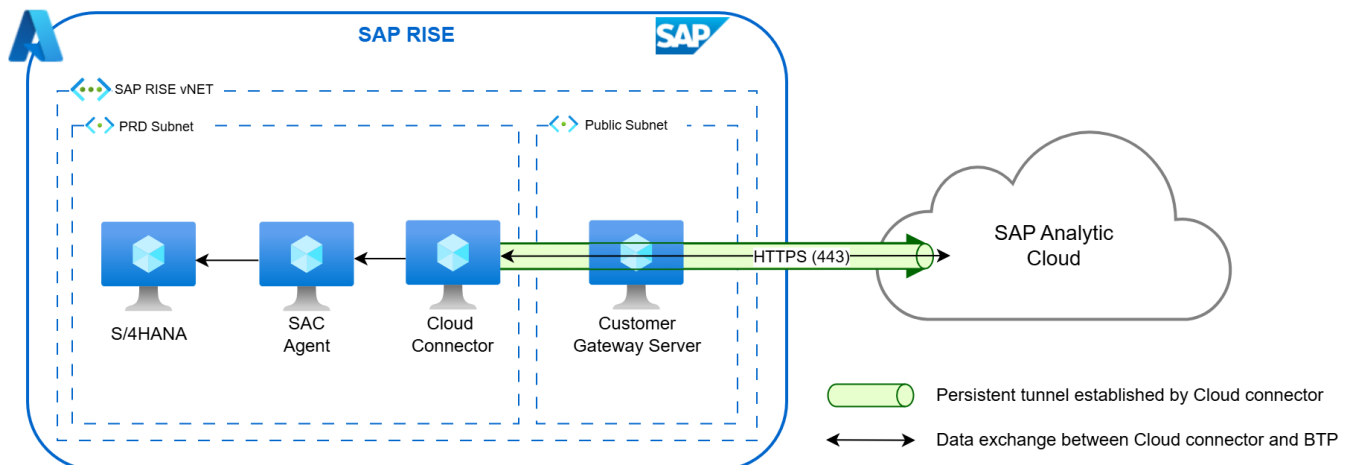
A 2 tier landscape will be adopted for DPA: non-PRD and PRD. The non-PRD instance will be shared across all non-PRD landscape.



## SAP Analytics Cloud (SAC) Agent

SAC Agent facilitates secure data connectivity and data transfer from S/4HANA to the SAP Analytics Cloud. It leverages SAP Cloud connector connection to BTP to transmit data from S/4HANA to SAC. The HTTPS protocol is used for communication S/4HANA, SAC agent and SAC.

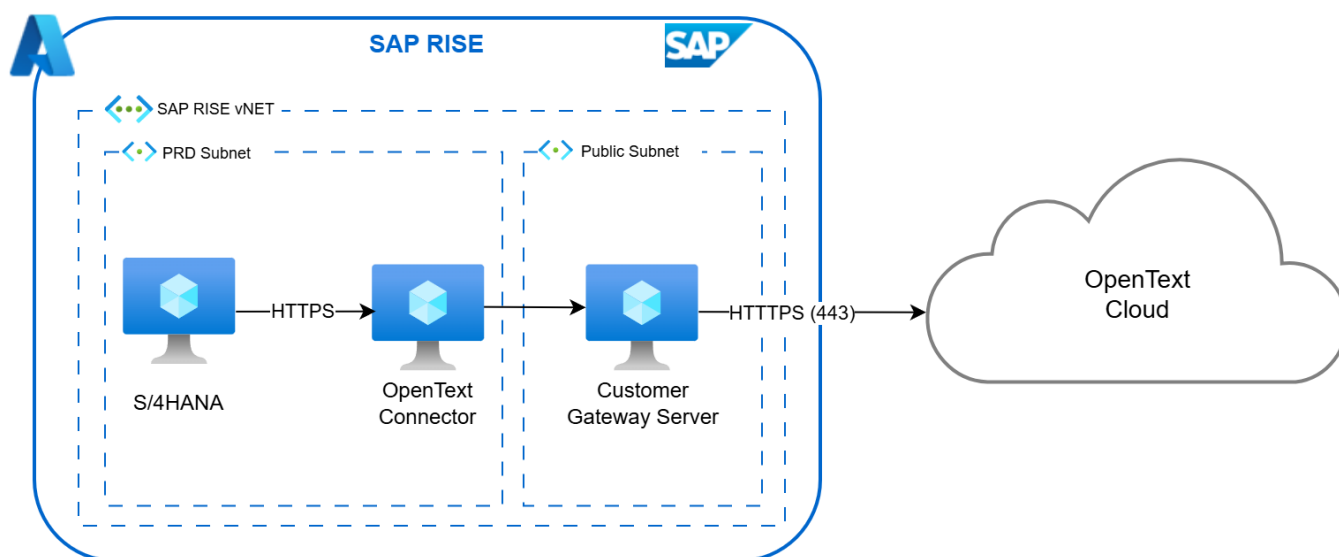
A 2-tier landscape will be adopted for SAC agent: non-PRD and PRD. The non-PRD SAC agent will be shared across all non-PRD landscape.



## OpenText Connector

OpenText connector facilitates the connection between S/4HANA and the OpenText cloud. The connection is initiated from S/4HANA to the OpenText connector and to OpenText cloud via CGS. The HTTPS protocol is used for communication between all components.

A 2 tier landscape will be adopted for OpenText Connector: non-PRD and PRD. The non-PRD instance will be shared across all non-PRD landscape.



## Supporting Components (SAP Router and DNS)

These are components deployed to SAP RISE landscape and are managed by SAP. Syensqo users will not have access to these applications and can raise requests to SAP to manage any changes.

- SAP Router: Single instance deployed in SAP RISE to manage SAP support's connection to Syensqo RISE systems.
- DNS: Three instances deployed in SAP RISE to manage SAP RISE domain and will be integrated with Syensqo DNS using Conditional DNS Forwarding.
  - DNS-CSN-A-HA IP - 172.16.32.14 ([vhysqirlcsna-ha.irl.sap.eu.cloud.syensqo.com](https://vhysqirlcsna-ha.irl.sap.eu.cloud.syensqo.com))
  - DNS-CSN-B-HA IP - 172.16.32.30 ([vhysqirlcsnb-ha.irl.sap.eu.cloud.syensqo.com](https://vhysqirlcsnb-ha.irl.sap.eu.cloud.syensqo.com))
  - DNS-CSN-C-HA IP - 172.16.32.46 ([vhysqirlcsnc-ha.irl.sap.eu.cloud.syensqo.com](https://vhysqirlcsnc-ha.irl.sap.eu.cloud.syensqo.com))
- Customer Gateway Server: Proxy for outbound internet connections and based on Squid Proxy application.
  - Connection Details:

| Hostname | Port |
|----------|------|
| proxy    | 3128 |

## Network Architecture

SAP RISE will be connected to Syensqo network via Azure ExpressRoute and DNS Delegation will be configured between Syensqo and SAP RISE DNS.

For more details on the network architecture and the following items, please refer to [Network and Infrastructure Architecture DD-TEC-070](#).

- ExpressRoute design.
- DNS Integration details.
- Inbound & Outbound Internet access
- Network connectivity for S/4HANA integration
- User access from internet using Zscaler

## System Landscape

The table below describes the environment and the corresponding application & SID deployed.

|        |                     | S/4HANA (HANA DB) | Web Dispatcher | SAP Cloud connector | SAP Data Provisioning Agent | SAC Agent | OpenText Connector |
|--------|---------------------|-------------------|----------------|---------------------|-----------------------------|-----------|--------------------|
| Europe | Sandbox             | ERS (HRS)         | WRS            | N/A                 | N/A                         | N/A       | N/A                |
|        | Development         | ERD (HRD)         | WRD            | CRD                 | DRD                         | SRD       | ORD                |
|        | Integration Testing | ERT (HRT)         | WRT            | N/A                 | N/A                         | N/A       | N/A                |
|        | Training            | ER2 (HR2)         | N/A            | N/A                 | N/A                         | N/A       | N/A                |
|        | QAS                 | ERQ (HRQ)         | WRQ            | N/A                 | N/A                         | N/A       | N/A                |
|        | Parallel Testing    | ER1 (HR1)         | WR1            | N/A                 | N/A                         | N/A       | N/A                |
|        | Production          | ERP (HRP)         | WRP & WRH      | CRP                 | DRP                         | SRP       | ORP                |

The following sections describes the system details for each tier. Please note the following:

- Each VM as a physical hostname (starting with hec\*) and 1 or more virtual hostname (starting with vhsq\*).
- The main hostname should be used to connect to the respective systems.

## Sandbox

| Application    | Primary Role     | SID | Instance                           | Hostname                                                                                                                                                                                                                | Ports                                                                                                        |
|----------------|------------------|-----|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| S/4HANA        | Central Instance | ERS | ASCS01<br>D00                      | vhsqersci.sap.eu.cloud.syensqo.com ( 172.16.33.12)<br>hec42v331805_irl.sap.eu.cloud.syensqo.com (172.16.33.10)<br>vhsqerscs.sap.eu.cloud.syensqo.com ( 172.16.33.11)                                                    | HTTP - 8000<br>HTTPS - 44300<br>RFC - 3300<br>RFC (SNC) - 4800<br>Dispatcher - 3200<br>Message server - 3601 |
|                | HANA DB          | HRS | ERS (tenant DB)<br>HRS (system DB) | vhsqersdb.sap.eu.cloud.syensqo.com ( 172.16.33.13)<br>hec42v331250.irl.sap.eu.cloud.syensqo.com (172.16.33.5)<br>vhsqhrrdb01.sap.eu.cloud.syensqo.com (172.16.33.8)<br>vhsqhrrdb.sap.eu.cloud.syensqo.com (172.16.33.7) | System DB - 30615<br>Tenant DB- 30641                                                                        |
| Web Dispatcher | Web Dispatcher   | WRS | 00                                 | vhsqwrrwd01.sap.eu.cloud.syensqo.com (172.16.33.9)<br><br>hec42v331253.irl.sap.eu.cloud.syensqo.com (172.16.33.6)                                                                                                       | HTTP - 8080<br><br>HTTPS - 44380                                                                             |

## Development

| Application             | Primary Role            | SID                                | Instance      | Hostname                                                                                                                                                                                                                   | Ports                                                                                                        |
|-------------------------|-------------------------|------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| S/4HANA                 | Central Instance        | ERD                                | ASCS01<br>D00 | vhsqerdc SAP.eu.cloud.syensqo.com (172.16.33.49)<br>hec42v303048.irl.sap.eu.cloud.syensqo.com (172.16.33.48)<br>vhsqerdc SAP.eu.cloud.syensqo.com (172.16.33.50)                                                           | HTTP - 8000<br>HTTPS - 44300<br>RFC - 3300<br>RFC (SNC) - 4800<br>Dispatcher - 3200<br>Message server - 3601 |
|                         | HANA DB                 | HRD (system DB)<br>ERD (tenant DB) | 06            | vhsqerddb SAP.eu.cloud.syensqo.com ( 172.16.33.51)<br>hec42v302672.irl.sap.eu.cloud.syensqo.com (172.16.33.37)<br>vhsqhrrdb01.sap.eu.cloud.syensqo.com (172.16.33.42)<br>vhsqhrrdb SAP.eu.cloud.syensqo.com (172.16.33.43) | System DB - 30615<br>Tenant DB- 30641                                                                        |
| Web Dispatcher          | Web Dispatcher          | WRD                                | W80           | vhsqwrwd01.sap.eu.cloud.syensqo.com (172.16.33.44)<br>hec42v302675.irl.sap.eu.cloud.syensqo.com (172.16.33.40)                                                                                                             | HTTP - 8080<br>HTTPS - 44380                                                                                 |
| SAP Cloud connector     | SAP Cloud connector     | CRD                                | -             | vhsqcrdcc01.sap.eu.cloud.syensqo.com (172.16.33.46)<br>hec42v302678.irl.sap.eu.cloud.syensqo.com (172.16.33.45)                                                                                                            | HTTPS - 8443                                                                                                 |
| Data Provisioning Agent | Data Provisioning Agent | DRD                                | -             | vhsqdrddpa01.sap.eu.cloud.syensqo.com (172.16.33.47)<br>hec42v302676.irl.sap.eu.cloud.syensqo.com (172.16.33.41)                                                                                                           | Agent listener port - TBC<br>Agent admin port - TBC                                                          |
| SAC Agent               | SAC Agent               | SRD                                | -             | vhsqsrdweb01.sap.eu.cloud.syensqo.com (172.16.33.38)<br>hec42v302674.irl.sap.eu.cloud.syensqo.com (172.16.33.39)                                                                                                           | HTTP - 8080<br>HTTPS - TBC                                                                                   |
| OpenText Connector      | OpenText Connector      | ORD                                | -             | vhsqordotc01.sap.eu.cloud.syensqo.com ( 172.16.33.55)<br>hec42v318041.irl.sap.eu.cloud.syensqo.com (172.16.33.54)                                                                                                          | HTTP - 8080<br>HTTPS - 8443                                                                                  |

|              |              |     |   |                                                                                                                   |     |
|--------------|--------------|-----|---|-------------------------------------------------------------------------------------------------------------------|-----|
| TM Optimizer | TM Optimizer | TRD | - | vhysqtrdgtw01.sap.eu.cloud.syensqo.com (172.16.33.53)<br>hec42v350658.irl.sap.eu.cloud.syensqo.com (172.16.33.52) | N/A |
|--------------|--------------|-----|---|-------------------------------------------------------------------------------------------------------------------|-----|

## Integration Testing

| Application    | Primary Role     | SID                                | Instance      | Hostname                                                                                                                                                                                                                     | Ports                                                                                                        |
|----------------|------------------|------------------------------------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| S/4HANA        | Central Instance | ERT                                | ASCS01<br>D00 | vhysqertci.sap.eu.cloud.syensqo.com (172.16.33.76)<br>hec42v350888.irl.sap.eu.cloud.syensqo.com (172.16.33.74)<br>vhysqertcs.sap.eu.cloud.syensqo.com (172.16.33.75)                                                         | HTTP - 8000<br>HTTPS - 44300<br>RFC - 3300<br>RFC (SNC) - 4800<br>Dispatcher - 3200<br>Message server - 3601 |
|                | HANA DB          | HRT (system DB)<br>ERT (tenant DB) | 06            | vhysqertdb.sap.eu.cloud.syensqo.com (172.16.33.77)<br>hec42v350674.irl.sap.eu.cloud.syensqo.com (172.16.33.71)<br>vhysqhrtdb01.sap.eu.cloud.syensqo.com (172.16.33.73)<br>vhysqhrtdb.sap.eu.cloud.syensqo.com (172.16.33.72) | System DB - 30615<br>Tenant DB- 30641                                                                        |
| Web Dispatcher | Web Dispatcher   | WRT                                | W80           | vhysqwrtwd01.sap.eu.cloud.syensqo.com (172.16.33.70)<br>hec42v349378.irl.sap.eu.cloud.syensqo.com (172.16.33.69)                                                                                                             | HTTP - 8080<br>HTTPS - 44380                                                                                 |

## QAS

The environment is planned to be provisioned by SAP on 1 August 2026. This document will be updated after this date.

## Training

The environment is planned to be provisioned by SAP on 1 June 2027. This document will be updated after this date.

## Parallel Run

The environment is planned to be provisioned by SAP on 1 June 2027. This document will be updated after this date.

## Production

The environment is planned to be provisioned by SAP on 1 January 2028. This document will be updated after this date.

## S/4HANA Client and Transport Strategy

Please see [DD-TEC-170 Transport Management for Release 4](#) for client details in S/4HANA.

## SAP Best Practices

As discussed in [KDD071 - Development System Approach](#), Best Practices client will be setup using alternative 1 method.

Below are the high level steps on how to setup client 050 and 100 in Sandbox and Development S/4HANA.

1. Configure /FTI/T\_NOCLN000 with client 050.
2. Copy client 000 to 050 using copy profile SAP\_U000.
3. Copy client 050 to 100 using copy profile SAP\_ALL.

For more details, please refer to [SAP help documentation](#) and [BP Activation Questionnaire](#) for the list of business function and BP objects that will be activated.

## Post Go-Live Landscape

Post release 4 Group 2 go-live a 4-tier landscape (DEV, QAS, PAR and PRD) will be maintained. SBX, INT and TRG landscapes will be decommissioned.

|  |  |                   |                |                     |                             |           |                    |
|--|--|-------------------|----------------|---------------------|-----------------------------|-----------|--------------------|
|  |  |                   |                |                     |                             |           |                    |
|  |  | S/4HANA (HANA DB) | Web Dispatcher | SAP Cloud connector | SAP Data Provisioning Agent | SAC Agent | OpenText Connector |

|        |                  |           |           |     |     |     |     |
|--------|------------------|-----------|-----------|-----|-----|-----|-----|
| Europe | Development      | ERD (HRD) | WRD       | CRD | DRD | SRD | ORD |
|        | QAS              | ERQ (HRQ) | WRQ       | N/A | N/A | N/A | N/A |
|        | Parallel Testing | ER1 (HR1) | WR1       | N/A | N/A | N/A | N/A |
|        | Production       | ERP (HRP) | WRP & WRH | CRP | DRP | SRP | ORP |

## User Access

The following table summaries how the different systems in SAP RISE will be accessed.

| System                  | Users          | Access Method                                                            |
|-------------------------|----------------|--------------------------------------------------------------------------|
| S/4HANA                 | Business users | Web                                                                      |
|                         | Support users  | Web and SAPGUI                                                           |
| HANA DB                 | N/A            | Can be requested from SAP if required.                                   |
| Web dispatcher          | Admin          | Web                                                                      |
| SAP Cloud connector     | Admin          | Web                                                                      |
| Data Provisioning Agent | N/A            | Raise request to SAP to perform changes as access is via OS command line |
| SAC Agent               | Admin          | Web                                                                      |
| OpenText Connector      | Admin          | Web                                                                      |

## Load Balancer Configuration

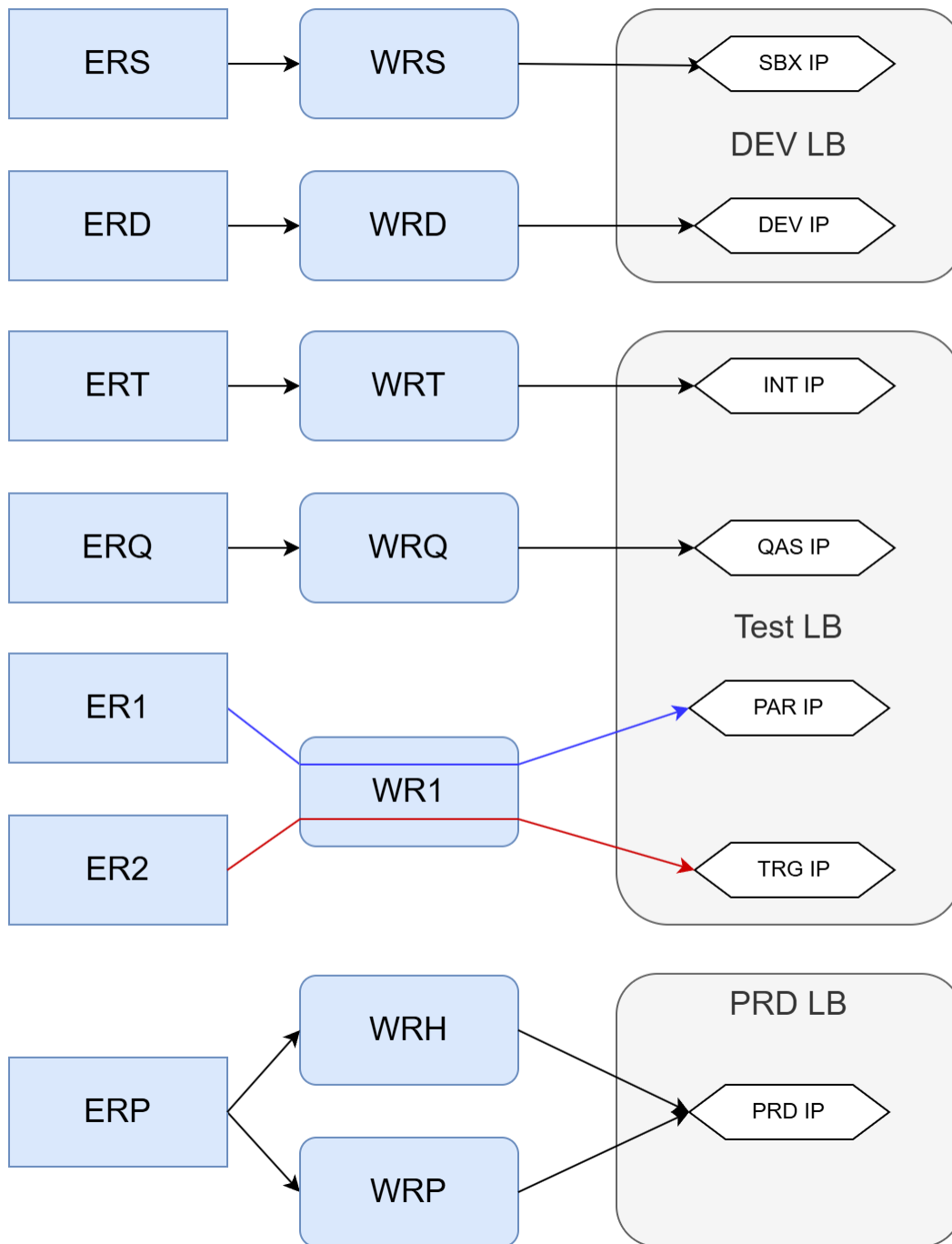
Azure load balance will be used to allow users to access S/4HANA webpages using a user friendly URL and over standard HTTP port. The following diagram describes how load balances will be deployed.

All load balancer will be configured to listen on port 80 (HTTP) and 443 (HTTPS).

## S/4HANA

## Webdispatcher

## Loadbalancer



## URL Naming Convention

User friendly URLs will be create for S/4HANA web and SAPGUI access. For SyWay the following naming convention will be adopted:

- Web URL - <App>-<ENV>.<Region>.syensqo.com
- SAPGUI Hostname - <SID>.syensqo.com

Based on the above naming convention, the following URLs will be adopted for the respective S/4HANA instances. CNAMEs will be created in Syensqo DNS to map the following

- Web URL SAP RISE load balancer hostname
- SAPGUI hostname S/4HANA message server hostnames

| S/4HANA SID | Web URL CNAME      | Load Balancer Hostname                  | SAPGUI Hostname CNAME | S/4HANA message server hostnames     |
|-------------|--------------------|-----------------------------------------|-----------------------|--------------------------------------|
| ERS         | s4-sbx.syensqo.com | vhysqwrs1b.irl.sap.eu.cloud.syensqo.com | ers.syensqo.com       | vhysqerscs.sap.eu.cloud.syensqo.com  |
| ERD         | s4-dev.syensqo.com | vhysqwrd1b.irl.sap.eu.cloud.syensqo.com | erd.syensqo.com       | vhysqerdcsc.sap.eu.cloud.syensqo.com |
| ERT         | s4-int.syensqo.com |                                         | ert.syensqo.com       |                                      |
| ERQ         | s4-qas.syensqo.com |                                         | erq.syensqo.com       |                                      |
| ER2         | s4-trg.syensqo.com |                                         | er2.syensqo.com       |                                      |
| ER1         | s4-par.syensqo.com |                                         | er1.syensqo.com       |                                      |
| ERP         | s4.syensqo.com     |                                         | erp.syensqo.com       |                                      |

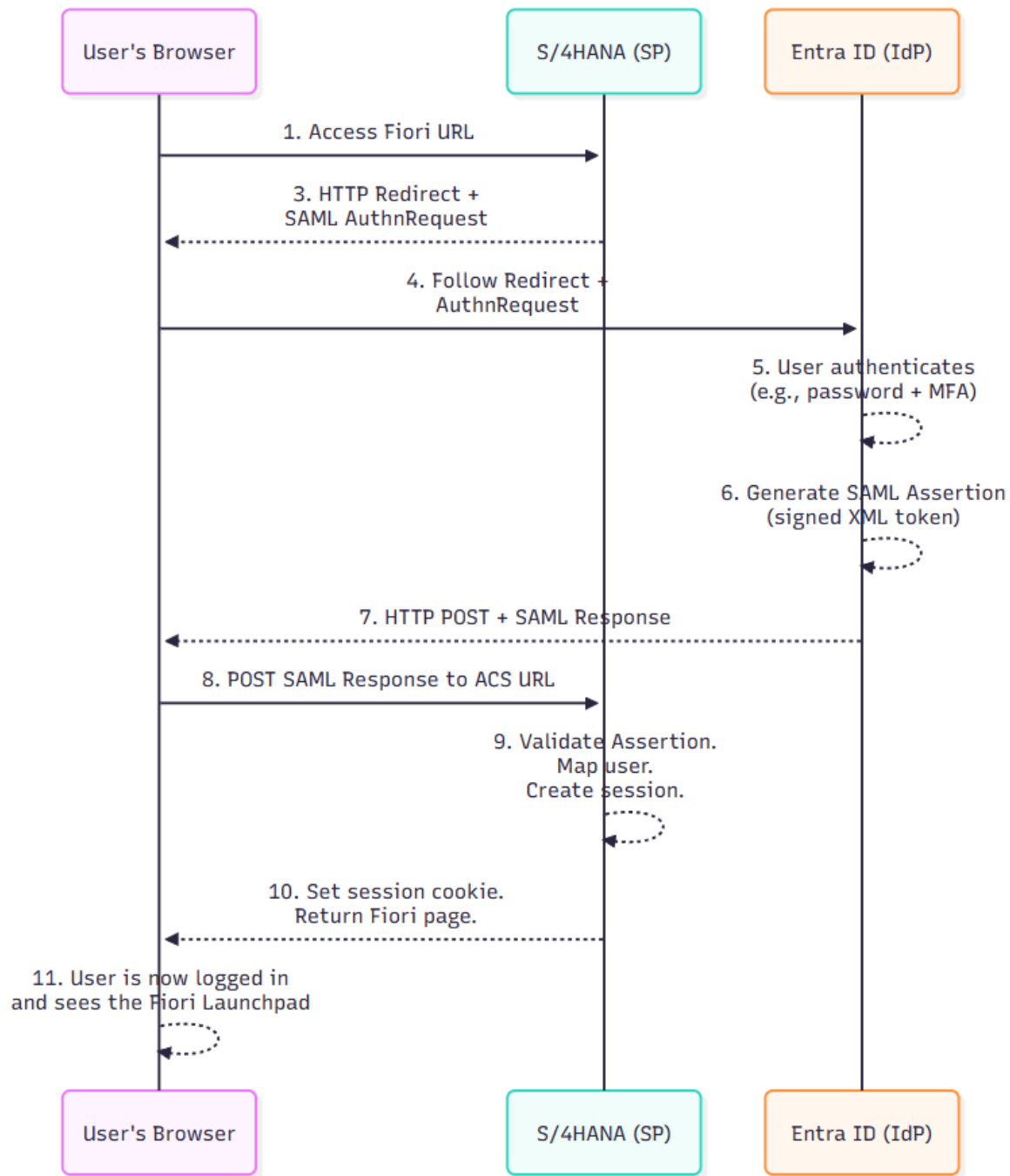
## Application Security

### Authentication

Single Sign-on (SSO) will be enabled for S/4HANA system. Since other systems in SAP RISE landscape are supporting systems that will not be accessed directly by business users, authentication will be based on user ID and password.

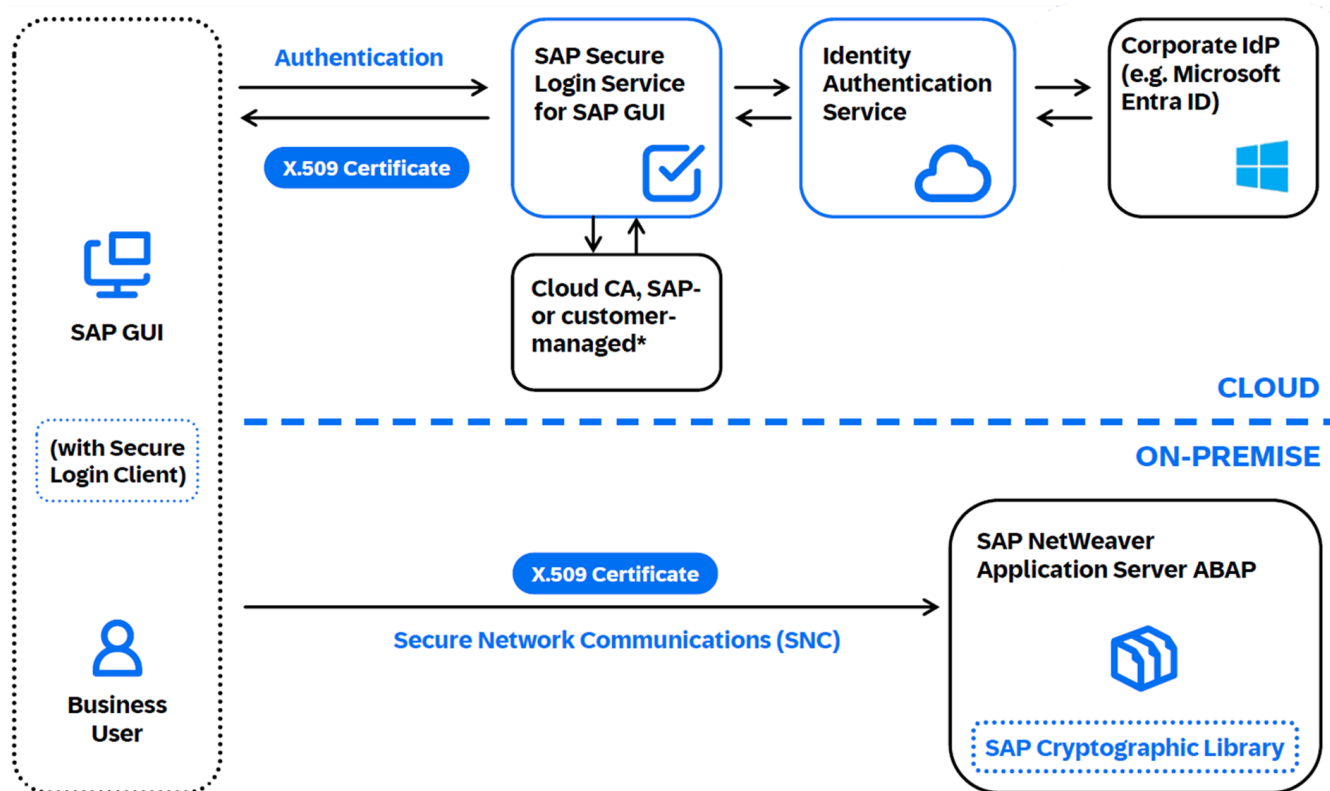
### SAML SSO - Fiori

SAML SSO will be configured between Entra ID and S/4HANA.



## SAPGUI SSO

Single sign-on based on X.509 certificates SSO method will be leveraged for SAPGUI SSO.



Following describes the authentication flow.

1. User opens an SAP GUI connection.
2. Secure Login Client (SLC) redirects user to the identity provider login page.
3. Identity Authentication Service delegates authentication to Microsoft Entra ID.
4. Users authenticates to Microsoft Entra ID.
5. After successful authentication, SAP Cloud Certificate Authority issues an X.509 certificate
6. SAP Secure Login Service returns the X.509 certificate, valid for one day, to SLC
7. X.509 certificate token is used for authenticating the SAP GUI user to the ABAP system

## Communication Security

All data in transit will be encrypted.

- SSL is used for all web traffic (Systems are configured to reject HTTP access or redirect to HTTPS).
- SNC is used for all RFC and SAPGUI communications.

See [Network and Infrastructure Architecture DD-TEC-070](#) for details on network security and internet connectivity.

## Data Security

Data encryption is enable for SAP HANA DB as part of the system provisioning.

NextLabs Data Access Enforcer (DAE) is used to enable field level encryption in S/4HANA. This will encrypt export control relevant data elements and the encrypted values will be stored in HANA DB. Data will be unencrypted on the fly when it is access by an authorized user. For more details please refer to [Application Architecture NextLabs](#).

## Other Controls

SAP provides infrastructure and server logs via its "LOGSERV" service, which can be integrated into Syensqo's SIEM. This is under discussion with Syensqo IT as of July 2025, and the agreed design will be documented in a future revision of this document.

## Operation Architecture

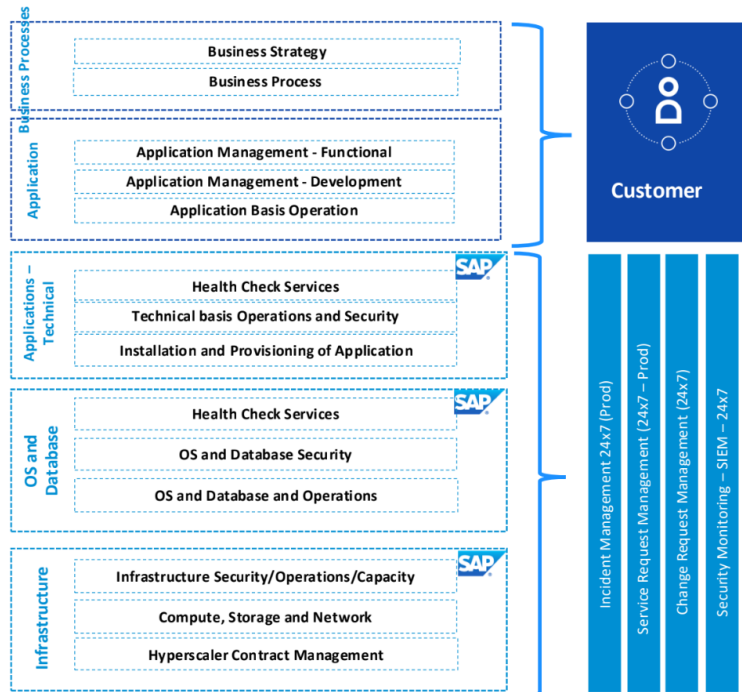
Under the shared responsibility model, SAP is responsible for the infrastructure layer to the technical basis layer as shown below. The following section will cover the operational architecture that falls under customer's responsibility.

- User, Role, Authorization
- Transport Management
- Monitor, Troubleshoot Jobs, Interfaces
- Update Termination and Locks
- Application Processing after system and client copy
- Technical Upgrade Planning

- Availability Monitoring, System Start and Stop
- Troubleshooting Technical Basis and Support
- Kernel Upgrades
- Technical execution of patches, upgrades, Releases
- Backup and Recovery
- Client Copies/System Copies

- OS and Database Patch Management
- Backup and Recovery
- Configuration Management
- Monitoring and Alerting
- OS and Database Security

- Hyperscaler Resource Management
- Networking in Cloud and Security
- Lifecycle Activities of the Infrastructure
- Monitoring key KPIs
- Capacity Planning
- Root Account Security



For the breakdown of detailed tasks and the respective roles and responsibilities, see [SAP S/4HANA Cloud, extended edition Roles and Responsibilities for Production](#).

## Change and Configuration Management

Change and configuration management in S/4HANA will be managed through SAP transports. See [DD-TEC-170 Transport Management for Release 4](#).

For non-S/4HANA systems, there will be no transport mechanism and changes will be managed manually.

## Monitoring

The following can be obtained from SAP for me portal .

- SAP RISE system availability (<https://me.sap.com/systemsprovisioning/availability>)
- Early watch reports (<https://me.sap.com/ewa/workspace>)

SAP will be monitoring from the infrastructure layer to the technical basis layer. In the event of an issue, users under [Private Cloud Contacts](#) will be notified.

## Sizing

S/4HANA sizing is based on FUE licenses as shown below. For more details, please refer to RISE with [SAP S/4HANA Cloud, private edition Service Description Guide](#) in [SAP Agreements](#).

| Usage Tier     | System Size | Database /Application | PRD System Size                           | QAS System Size                           | DEV System Size                         |
|----------------|-------------|-----------------------|-------------------------------------------|-------------------------------------------|-----------------------------------------|
| Up to 135 FUE* | XXS         | HANA DB               | 1 x 256GiB memory, 256GB usable storage   | No QAS system delivered                   | 1 x 256GiB memory, 256GB usable storage |
|                |             | App Server            | 1 x 64GiB memory                          | No QAS system delivered                   | 1 x 32GiB memory                        |
| Up to 550 FUE  | XS          | HANA DB               | 1 x 256GiB memory, 256GB usable storage   | 1 x 256GiB memory, 256GB usable storage   | 1 x 256GiB memory, 256GB usable storage |
|                |             | App Server            | 1 x 64GiB memory                          | 1 x 64GiB memory                          | 1 x 32GiB memory                        |
| Up to 1000 FUE | S           | HANA DB               | 1 x 512GiB memory, 512GB usable storage   | 1 x 512GiB memory, 512GB usable storage   | 1 x 256GiB memory, 256GB usable storage |
|                |             | App Server            | 1 x 64GiB memory                          | 1 x 64GiB memory                          | 1 x 32GiB memory                        |
| Up to 2000 FUE | M           | HANA DB               | 1 x 960GiB memory, 960GB usable storage   | 1 x 960GiB memory, 960GB usable storage   | 1 x 256GiB memory, 256GB usable storage |
|                |             | App Server            | 2 x 64GiB memory                          | 2 x 64GiB memory                          | 1 x 32GiB memory                        |
| Up to 4000 FUE | L           | HANA DB               | 1 x 1922GiB Memory, 1922GB usable storage | 1 x 1922GiB Memory, 1922GB usable storage | 1 x 512GiB memory, 512GB usable storage |
|                |             | App Server            | 2 x 128GiB memory                         | 2 x 128GiB memory                         | 2 x 64GiB memory                        |
| Up to 6000 FUE | XL          | HANA DB               | 1 x 2944GiB memory, 2944GB usable storage | 1 x 2944GiB memory, 2944GB usable storage | 1 x 512GiB memory, 512GB usable storage |
|                |             | App Server            | 4 x 128GiB memory                         | 4 x 128GiB memory                         | 2 x 64 GiB memory                       |
| Above 6000 FUE | XXL         | HANA DB               | 1 x 5700GiB memory, 5700GB usable storage | 1 x 5700GiB memory, 5700GB usable storage | 1 x 512GiB memory, 512GB usable storage |
|                |             | App Server            | 4x128 GiB memory                          | 4x128 GiB memory                          | 2 x 64 GiB memory                       |

\* For RISE with SAP S/4HANA Cloud, private edition, base option and SAP Cloud ERP Private, base, this is the only available Usage Tier.

During the course of SyWay project, FUE license will be ramped up from 60 to 1,001 and 4,001 when the project goes live. Additional infrastructure upgrades are provisioned in the BOM to ensure the following sizing and landscape is maintained at Go-Live.

For more details on infrastructure, please refer to [Network and Infrastructure Architecture DD-TEC-070](#).

## High Availability & Disaster Recovery

See [DD-TEC-140 HA/DR Architecture Design](#) for more details.

## Backup/Restore

See [DD-TEC-160 Back up and Restore Design](#) for more details.

## Maintenance Plan

The following downtime window is planned for SAP to perform maintenance work that require system downtime.

| Environment                            | Planned Downtime Window                       |
|----------------------------------------|-----------------------------------------------|
| Sandbox, Development, Integration Test | First Tuesday each month, 15:00 - 19:00 UTC   |
| QAS, Training, Parallel Run            | Second Thursday each month, 15:00 - 19:00 UTC |
| Production                             | Third Sunday each month, 03:00 - 07:00 UTC    |

## Exceptions

N/A

## Appendix

### Customer Gateway Server

Following hostnames have been configured to allow outbound internet connections.

- .python.org
- .ondemand.com
- .cloud.sap
- .alm.cloud.sap
- .applicationstudio.cloud.sap
- .hana.ondemand.com
- .hanatrail.ondemand.com
- .crm.ondemand.com
- .successfactors.com
- .successfactors.eu
- .concur.com.au
- .ariba.com
- .fieldglass.com
- .sap.com
- .sapbusinessobjects.cloud
- .hybris.com
- .abakus.me
- .s4hana.ondemand.com
- .sap-ag.de
- .support.sap.com
- .rapid.sap.com
- .apps.support.sap.com
- .servicepoint.sap.com
- .smpdl.sap-ag.de
- .deploy.static.akamaitechnologies.com
- .sapbydesign.com
- .windows.net
- .microsoft.com
- dc.services.visualstudio.com
- management.azure.com
- .sapanalytics.cloud
- .trendmicro.com
- .opentext.com
- .opentext.eu
- .opentext.cloud
- .mysap.com
- .slanalytics.net.sap
- .sapsf.eu
- .microsoftonline.com
- .amazonaws.com
- licensing.neptune-software.com

## See also

- The Lean IX factsheet for [SAP S/4HANA - \[ERP\] \(Rest of World instance\)](#)
- [KDD057 - Business System Location](#)

## Change log

| Version | Published | Changed By | Comment |
|---------|-----------|------------|---------|
|---------|-----------|------------|---------|

|                        |                           |                               |
|------------------------|---------------------------|-------------------------------|
| <b>CURRENT (v. 72)</b> | <b>Mar 10, 2026 08:28</b> | <b>MUTHUSAMY-ext, Kunalan</b> |
| v. 71                  | Feb 04, 2026 07:54        | MUTHUSAMY-ext, Kunalan        |
| v. 70                  | Feb 04, 2026 07:53        | MUTHUSAMY-ext, Kunalan        |
| v. 69                  | Jan 15, 2026 14:15        | MUTHUSAMY-ext, Kunalan        |
| v. 68                  | Jan 14, 2026 03:41        | MUTHUSAMY-ext, Kunalan        |
| v. 67                  | Dec 03, 2025 10:46        | MUTHUSAMY-ext, Kunalan        |
| v. 66                  | Dec 03, 2025 10:45        | MUTHUSAMY-ext, Kunalan        |
| v. 65                  | Nov 06, 2025 08:31        | MUTHUSAMY-ext, Kunalan        |
| v. 64                  | Nov 05, 2025 15:59        | MUTHUSAMY-ext, Kunalan        |
| v. 63                  | Nov 05, 2025 12:31        | MUTHUSAMY-ext, Kunalan        |

[Go to Page History](#)

## Workflow history

This view shows the 5 most recent entries. The complete workflow log is available from the 'Document Activity' menu item.

| Apr 15, 2026                    | Actor                  | Type  | Activity                                                                                                                                                                        | Version |
|---------------------------------|------------------------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Approved                        | WENNINGE R-ext, Sascha | State | changed state to <b>Approved</b> at 6:53 am                                                                                                                                     | v72     |
| Pending SteerCo Review          | WENNINGE R-ext, Sascha | State | <div>gave <i>Final Approval</i> approval at 6:53 am</div> <div>Updates to instance planning and technical details were reviewed by DA, but do not require re-approval</div>     | v72     |
|                                 |                        | State | changed expiry date to '29 Apr, 2026 06:53 am' at 6:53 am                                                                                                                       |         |
|                                 |                        | State | changed state to <b>Pending SteerCo Review</b> at 6:53 am                                                                                                                       |         |
|                                 |                        | State | gave <i>Stakeholder Review</i> approval at 6:53 am                                                                                                                              |         |
| Pending Stakeholder Review      | WENNINGE R-ext, Sascha | State | <div>gave <i>Stakeholder Review</i> approval at 6:53 am</div> <div>Updates to instance planning and technical details were reviewed by DA, but do not require re-approval</div> |         |
| Mar 19, 2026                    |                        |       |                                                                                                                                                                                 |         |
|                                 | WENNINGE R-ext, Sascha | State | changed expiry date to '26 Mar, 2026 09:04 am' at 9:04 am                                                                                                                       | v72     |
|                                 |                        | State | changed state to <b>Pending Stakeholder Review</b> at 9:04 am                                                                                                                   |         |
| Edited following DA Endorsement | WENNINGE R-ext, Sascha | State | gave <i>Minor change</i> approval at 9:04 am                                                                                                                                    |         |