

Integration Troubleshooting in the SAP BTP, ABAP Environment

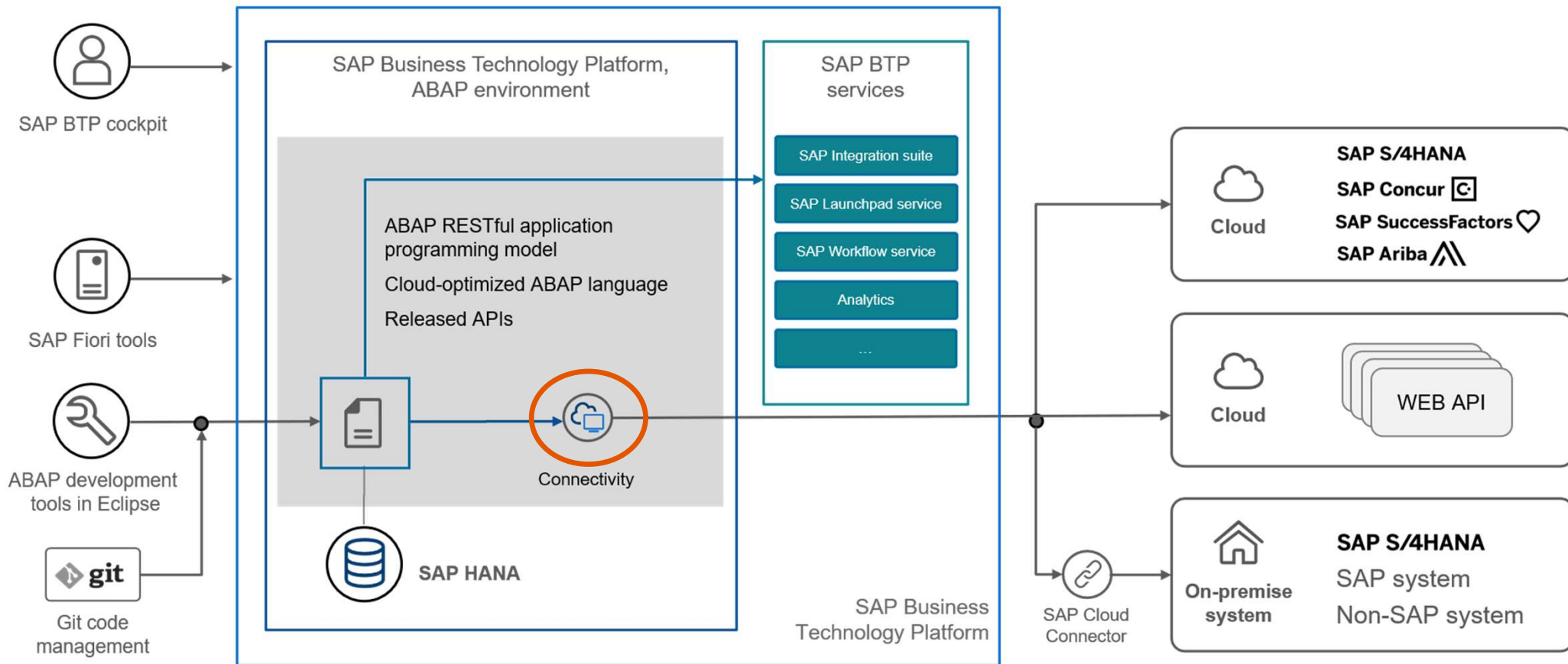
This session will offer an overview of troubleshooting capabilities within the Business Technology Platform (BTP) ABAP environment, specifically focusing on integration aspects.

You will see how to troubleshoot integration scenarios and discover different tools necessary for effectively addressing integration and security issues.

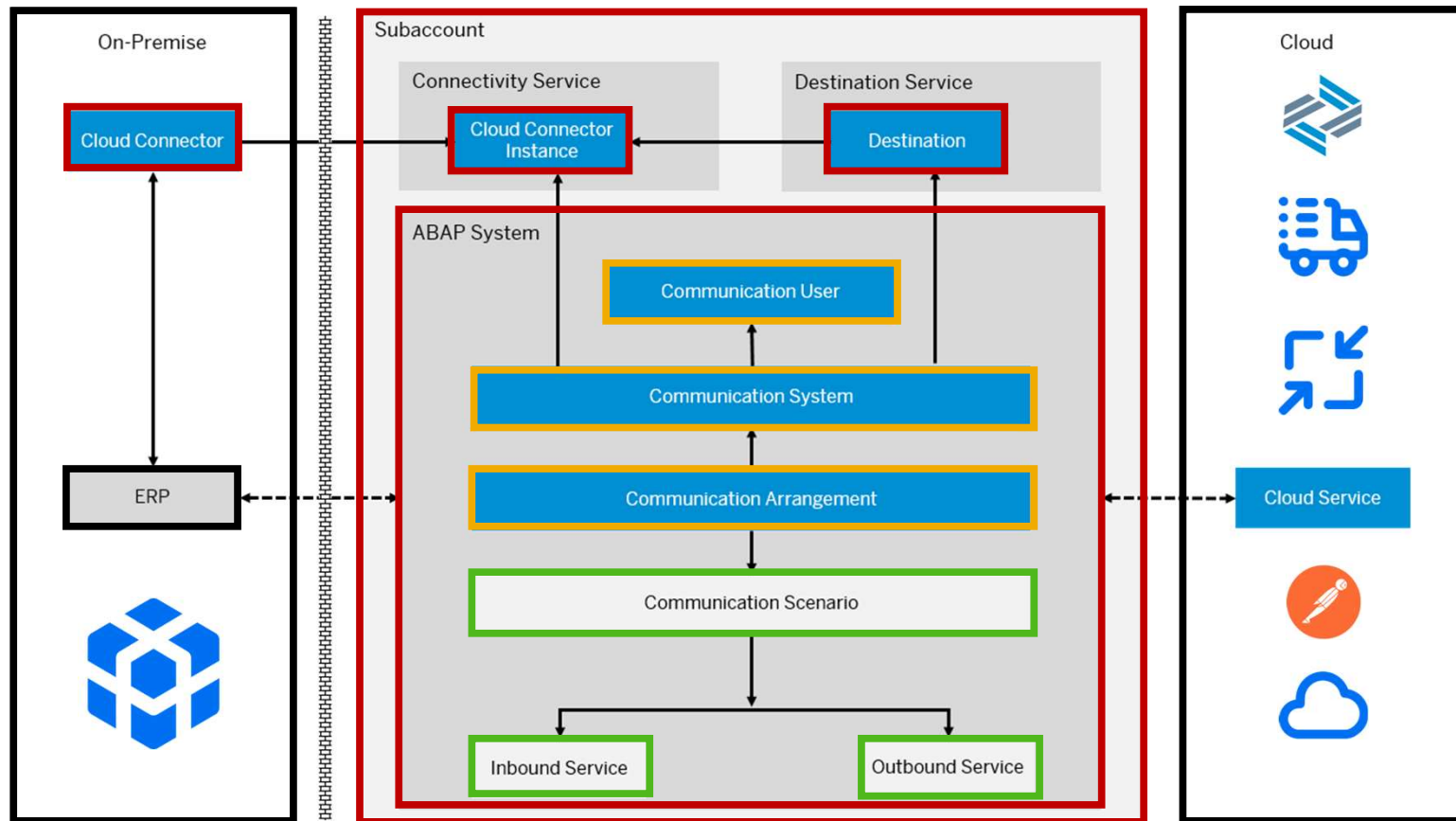
Agenda

- Overview and Basic Principals
- Troubleshooting Apps
- Inbound Scenarios
 - Basic, Certificate-based, SAML & OAuth2UserToken Authentication
- Outbound Scenarios
 - Steampunk – COTA - Steampunk
 - Steampunk – Cloud Connector – OnPremise
 - OnPremise – Cloud Connector – Steampunk
 - *Mail, SOAP, SQL Service*

Overview



Basic Principals




Steampunk – Troubleshooting/Monitoring Apps

SAP

Display Connectivity Trace

Trace Information

Display Connectivity Trace



31/2024, 23:5...

HTTP Status Code:

Client IP:

Request Method:

Request Pat

Refresh every 60 seconds.


	Request Method	Request Path	Host Header	User ID
1223, 10.0.136.2, 82	GET	/sap/bc/http/sap/zHTTP_IB_...	a78efc6c-c9f6-4a31-b5d0-a04956c71c.abap-web.itapngwss.hanavlab.ondemand.com	CB9980000049
1223	GET	/sap/bc/http/sap/zhttp_ib_test	a78efc6c-c9f6-4a31-b5d0-a04956c71c.abap.itapngwss.hanavlab.ondemand.com	CC0000000002

SAP

Display Security Audit Log

Standard

Display Security Audit Log



Datasource:

User Group:

User ID:

Application:

ABAP Source:


Application	Application Text	ABAP Source	ABAP Source Text
49 S000	System Menu	SAPMHTTP	HTTP Control
49 S000	System Menu	SAPMHTTP	HTTP Control
49 S000	System Menu	SAPMHTTP	HTTP Control
02		SAPMSSY1	CPIC and RFC Control
02		SAPMSSY1	CPIC and RFC Control

SAP

Display Authorization Trace

Trace Information

Display Authorization Trace



Access Category:

Status:

Users:

Application:

Refresh

Access Category	Authorization Check Status	User	Application
None	Successful	D041082	Display Authorization Trace
Read	Successful	D041082	IAM: Auth. Trace
Read	Filtered	D041082	IAM: Auth. Trace
None	Failed	D041082	SAP Gateway Client
None	Failed	D041082	ZCLR_IB_TEST*****CP
Write	Failed	D041082	

Steampunk – Troubleshooting/Monitoring Apps

Monitor Email Transmissions



Recipient Address:

ingo.braeuninger@sap.com


Created At:

11/29/2024, 19:11:57

Status History (1)

<input type="checkbox"/> Recipient Status	Statuscode	Response	Status Received At
<input type="checkbox"/>  Error	857	535 5.7.8 Error: authentication failed: authentication failure. Please provide the following information in your problem report: time (Nov 29 19:11:57), client (10.237.112.209) and server (mail07.wdf.sap.corp)	11/29/2024, 19:11:57

Monitor bgRFC Queues



Inbound Destination:

Status:

Go

Adapt Filters

Destinations (1)

☐ Inbound Destination

☐ BGPF

BGPF

Start Destination

...

Status

Normal

Queues (1)

Standard

Refresh

...

☐ Queue Name

☐ STANDARD

BGQC Name:

Queue Status: Queue is executable

Detail Message:

STANDARD

Queue Status

Blocking Queue

Queue is executable

-

Units (1)

Standard

Refresh

...

☐ First Function Module

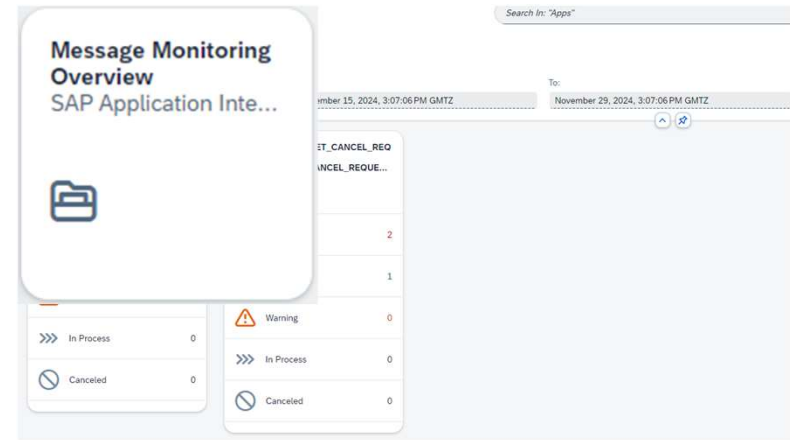
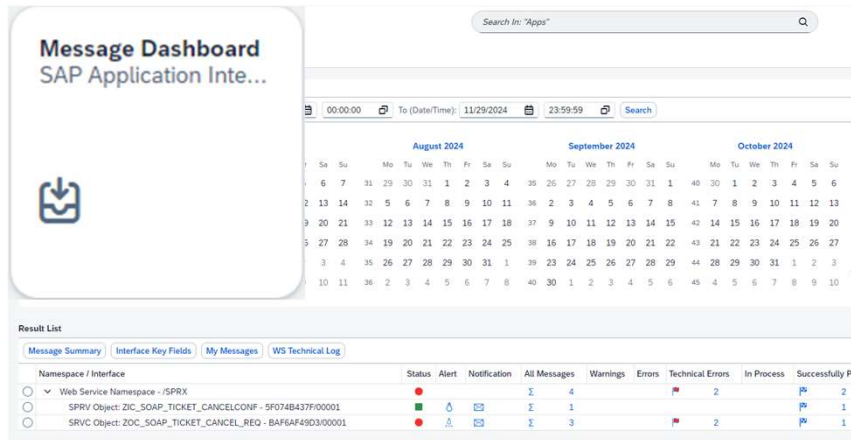
☐ FM_BGMC_PROCESS

Unit Status

Unit is being executed

Created On: 11/29/2024, 19:24:23

Steampunk – Troubleshooting/Monitoring Apps



SAP Cloud Connector

Connector

Security Status

Alerting

High Availability

Hardware Metrics Monitor

Configuration

Integration Tests Staging...

Cloud To On-Premise

On-Premise To Cloud

Monitor (Cloud to On-Premise)

Monitor (On-Premise to Cloud)

Audits

Log And Trace Files

Select Subaccount

Cross-Subaccount

Nov 29, 2024, 16:09:37 GMT+1

+ Add Subaccount

Backup

Restore

?

Connector

Connector Overview

Connector ID: F2D27A62C3E34BD5B3843C7D5DBFFC81

Local Name: ccm2.openstack.eu-de-2.cloud.sap

Local IP: 10.180.1.11

Security Status: Low risk

High Availability: Disabled

Alerts: 2

Subaccount Dashboard (1)

Status	Subaccount	Display Name	Location ID	Region	Actions
	f57f211e-2733-4cc6-b645-74f02d034a58	Integration Tests Staging (CF)	CLOUD2	cf.sap.hana.ondemand.com	

Service Channels Overview (2)

Status	Port	Type
	3381	ABAP Cloud System
	3382	ABAP Cloud System

2024-12-01 11:45:19,397 +0000#DEBUG#com.sap.core.connectivity.tunnel.client.reconnect.AbstractReconnectableClient#https-jsse-nio2-8443-exec-10# #State changed from CONNECTED to DISCONNECTING

2024-12-01 11:45:19,397 +0000#INFO#com.sap.core.connectivity.tunnel.client.reconnect.AbstractReconnectableClient#https-jsse-nio2-8443-exec-10# #Disconnecting client from a78efc6c-c9f6-4a31-b5d0-a0f4f9c6c7fc.abap.stagingaws.hanavlab.ondemand.com/3.67.126.128:443

2024-12-01 11:45:19,397 +0000#INFO#com.sap.core.connectivity.tunnel.core.impl.context.TunnelRegistryImpl#direct-tunnel-client-97-1# #Unregistered tunnel channel [id: 0xe0753aea, L:/10.180.1.11:40796 ! R:a78efc6c-c9f6-4a31-b5d0-a0f4f9c6c7fc.abap.stagingaws.hanavlab.ondemand.com/3.67.126.128:443] for tunnelId rfc://CLOUD2@a78efc6c-c9f6-4a31-b5d0-a0f4f9c6c7fc.abap.stagingaws.hanavlab.ondemand.com/f57f211e-2733-4cc6-b645-74f02d034a58/a78efc6c-c9f6-4a31-b5d0-a0f4f9c6c7fc.abap.stagingaws.hanavlab.ondemand.com and clientId F2D27A62C3E34BD5B3843C7D5DBFFC81

2024-12-01 11:45:19,397 +0000#DEBUG#com.sap.core.connectivity.tunnel.core.impl.context.TunnelRegistryImpl#direct-tunnel-client-97-1# #Closed tunnel with tunnelId rfc://CLOUD2@a78efc6c-c9f6-4a31-b5d0-a0f4f9c6c7fc.abap.stagingaws.hanavlab.ondemand.com/f57f211e-2733-4cc6-b645-74f02d034a58/a78efc6c-c9f6-4a31-b5d0-a0f4f9c6c7fc.abap.stagingaws.hanavlab.ondemand.com and clientId F2D27A62C3E34BD5B3843C7D5DBFFC81

2024-12-01 11:45:19,397 +0000#DEBUG#com.sap.core.connectivity.tunnel.client.reconnect.AbstractReconnectableClient#direct-tunnel-client-97-1# #Will skip schedule reconnect, the current state is: DISCONNECTING

2024-12-01 11:45:19,398 +0000#INFO#com.sap.core.connectivity.tunnel.client.reconnect.AbstractReconnectableClient#https-jsse-nio2-8443-exec-10# #Disconnected client from: a78efc6c-c9f6-4a31-b5d0-a0f4f9c6c7fc.abap.stagingaws.hanavlab.ondemand.com/3.67.126.128:443

2024-12-01 11:45:19,398 +0000#DEBUG#com.sap.core.connectivity.tunnel.client.reconnect.AbstractReconnectableClient#https-jsse-nio2-8443-exec-10# #State changed from DISCONNECTING to DISCONNECTED

2024-12-01 11:45:19,398 +0000#DEBUG#io.netty.buffer.PoolThreadCache#direct-tunnel-client-97-2# #Freed 28 thread-local buffer(s) from thread: direct-tunnel-client-97-2

2024-12-01 11:45:19,398 +0000#DEBUG#io.netty.buffer.PoolThreadCache#direct-tunnel-client-97-7# #Freed 27 thread-local buffer(s) from thread: direct-tunnel-client-97-7

2024-12-01 11:45:19,398 +0000#DEBUG#io.netty.buffer.PoolThreadCache#direct-tunnel-client-97-2# #Freed 27 thread-local buffer(s) from thread: direct-tunnel-client-97-2

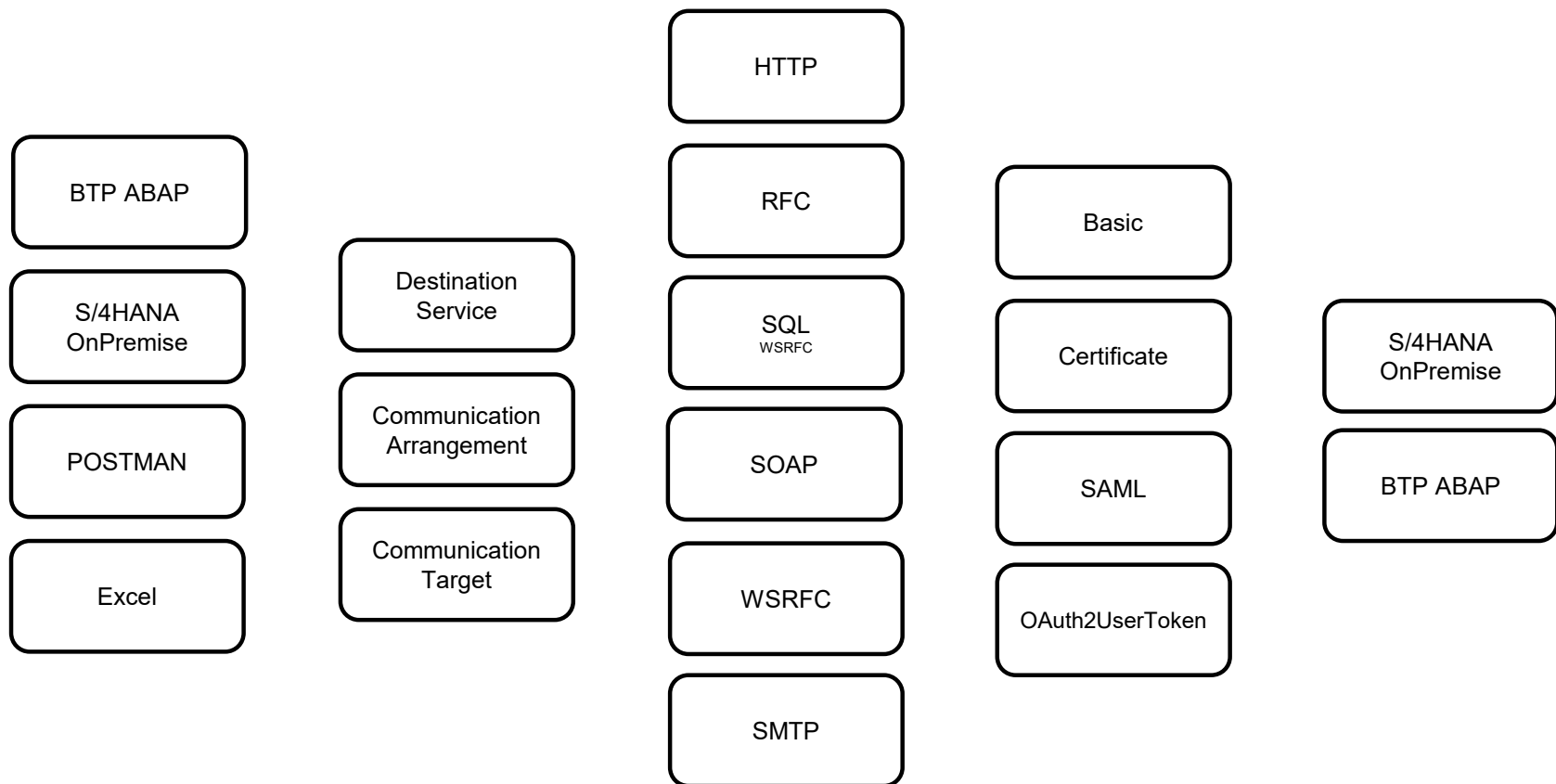
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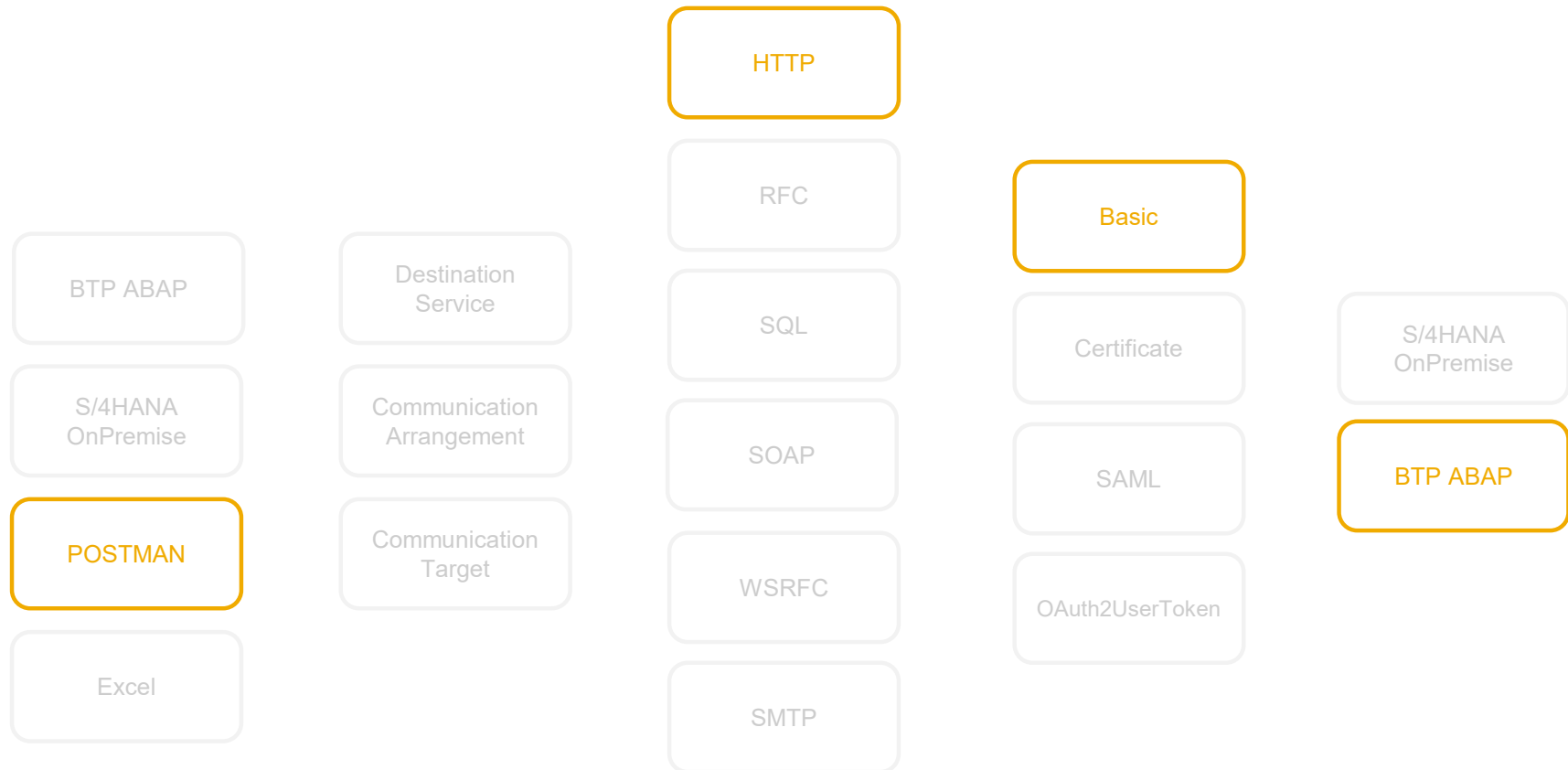
More

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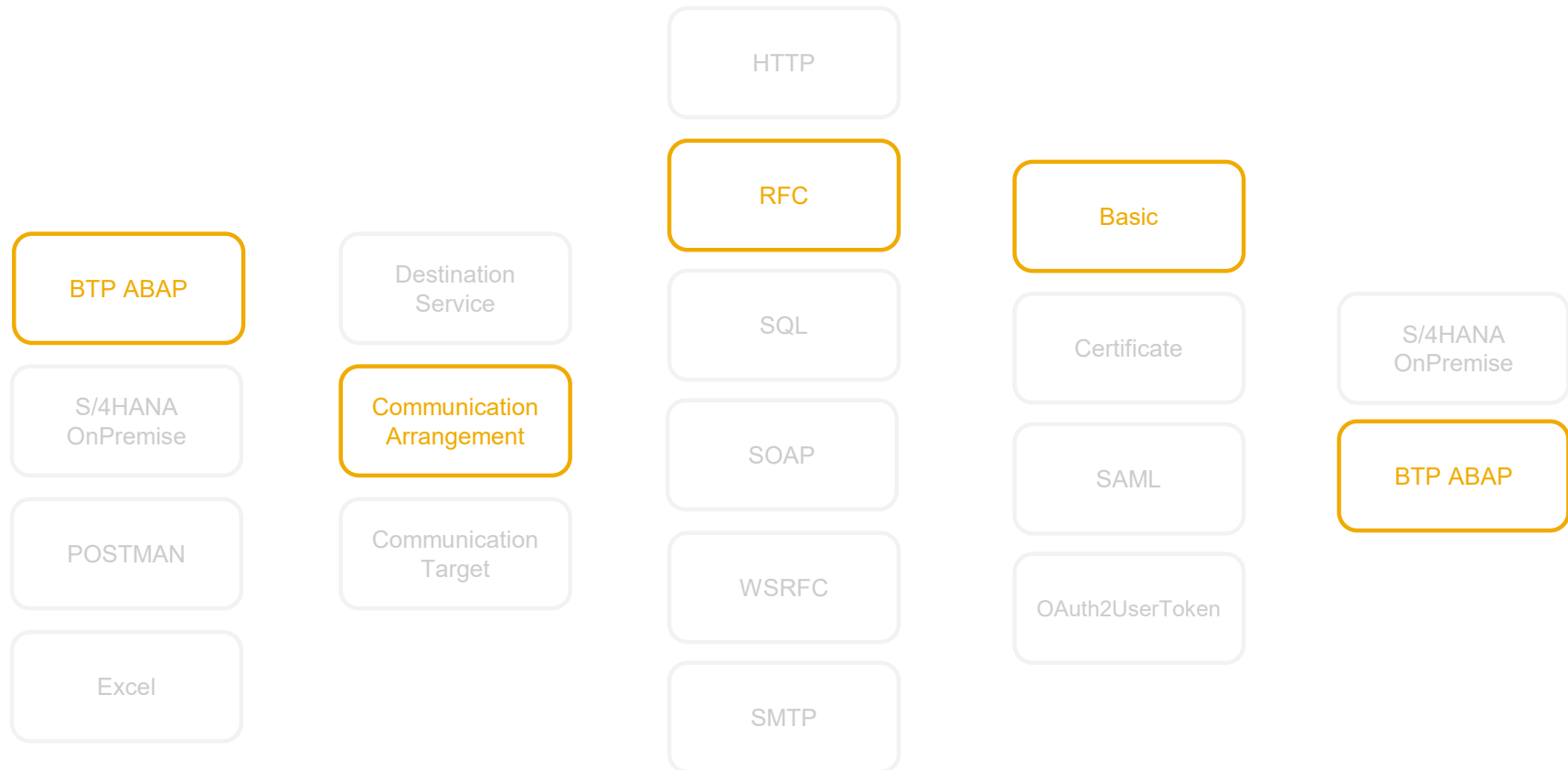
Systems – Protocols – Authentication Methods



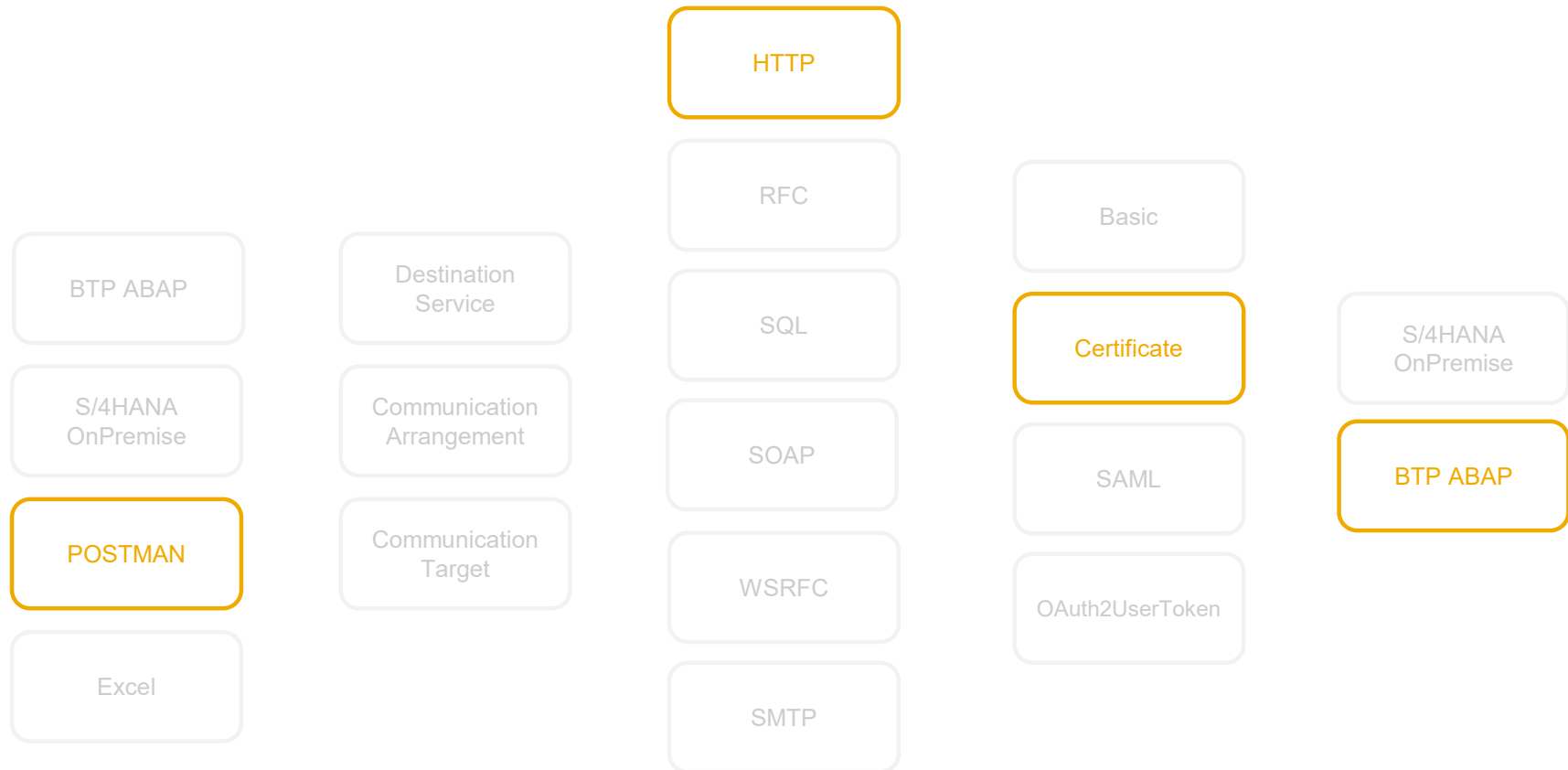
Basic Authentication



Basic Authentication – RFC & bgRFC



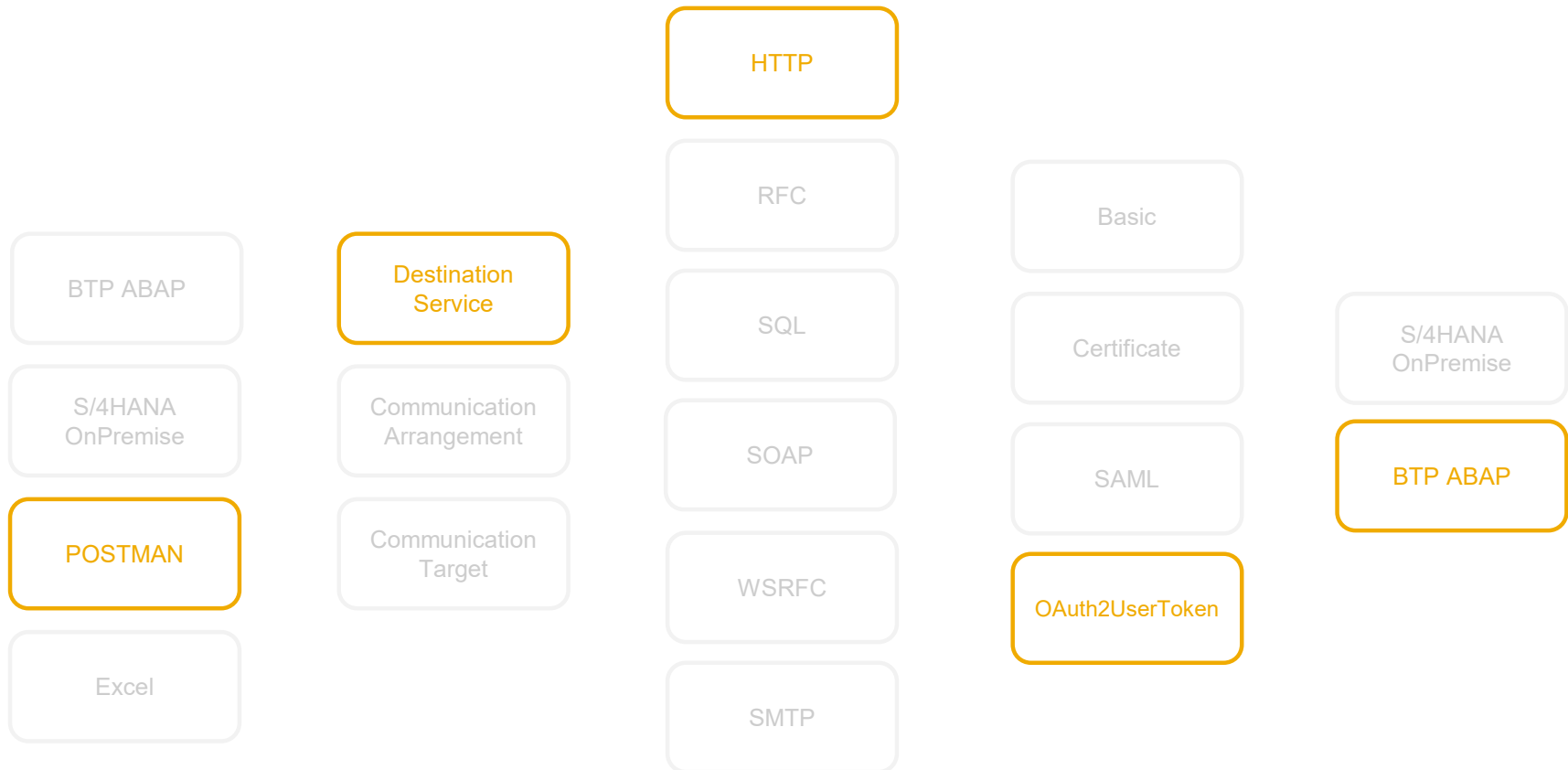
Certificate based Authentication



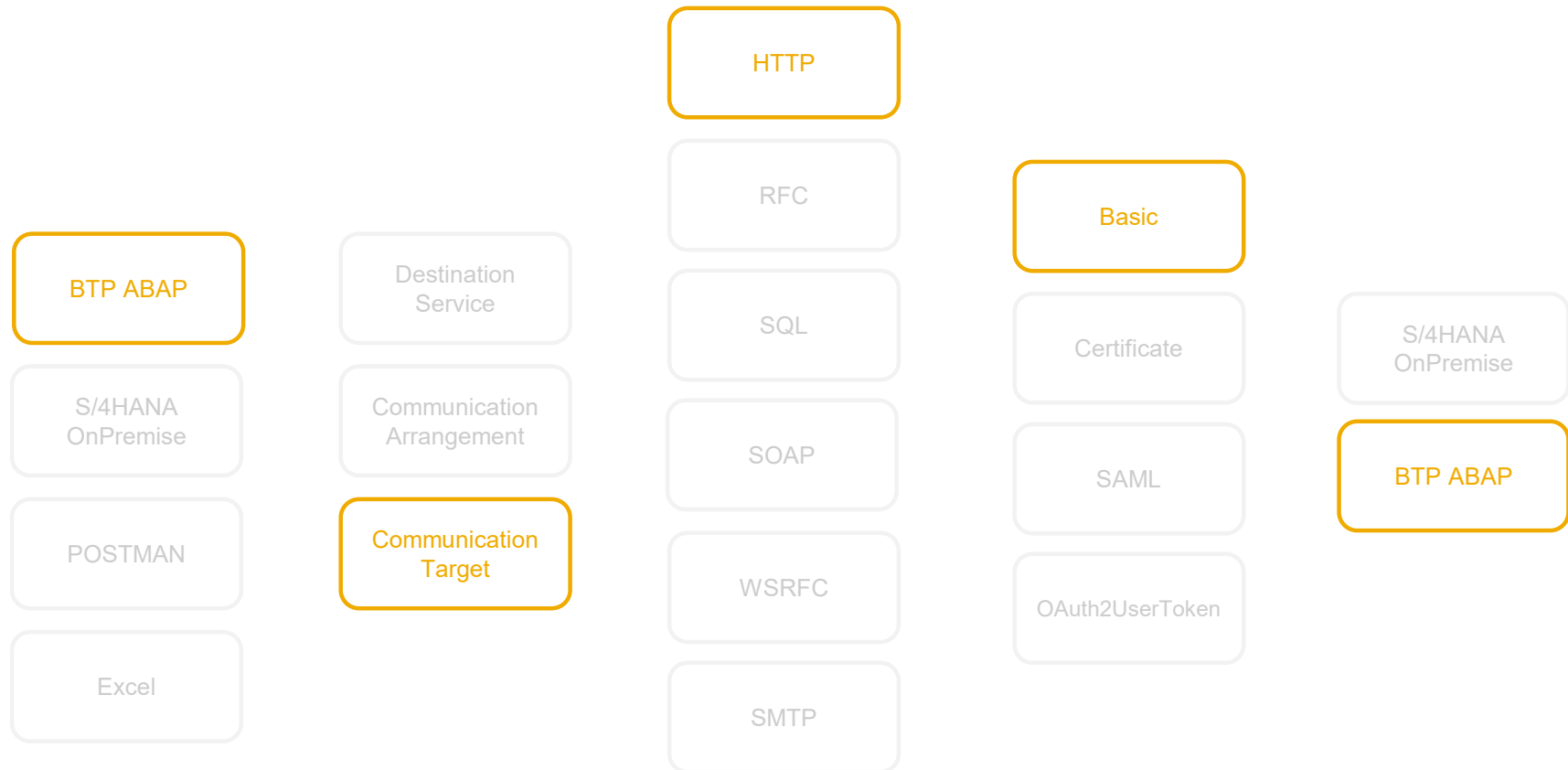
SAML



OAuth2UserToken



Steampunk - COTA - Steampunk



Communication Target

The screenshot shows the SAP Help Portal interface. At the top, there's a navigation bar with 'SAP Help Portal' and links for 'Browse by Product', 'SAP Learning Journeys', 'What's New', and 'Explore SAP'. Below this is a breadcrumb trail: 'Home > ABAP Cloud > ABAP Integration and Connectivity > ABAP Integration and Connectivity > ... > Outbound Communication > Communication Target'. The main header area contains 'ABAP Integration and Connectivity' and 'ABAP Cross-Product'. A search bar on the right says 'This document' and 'Search in this document'. A sidebar on the left lists the navigation tree, with 'Communication Target' highlighted. The main content area is titled 'Communication Target' and contains the following text:

A communication target is a development object that is referenced in your code to retrieve the correct destination from which you want to consume a service.

A communication target is a development object that is referenced in your code to retrieve the correct destination from which you want to consume a service.

The communication target is the recommended approach for HTTP outbound communication.

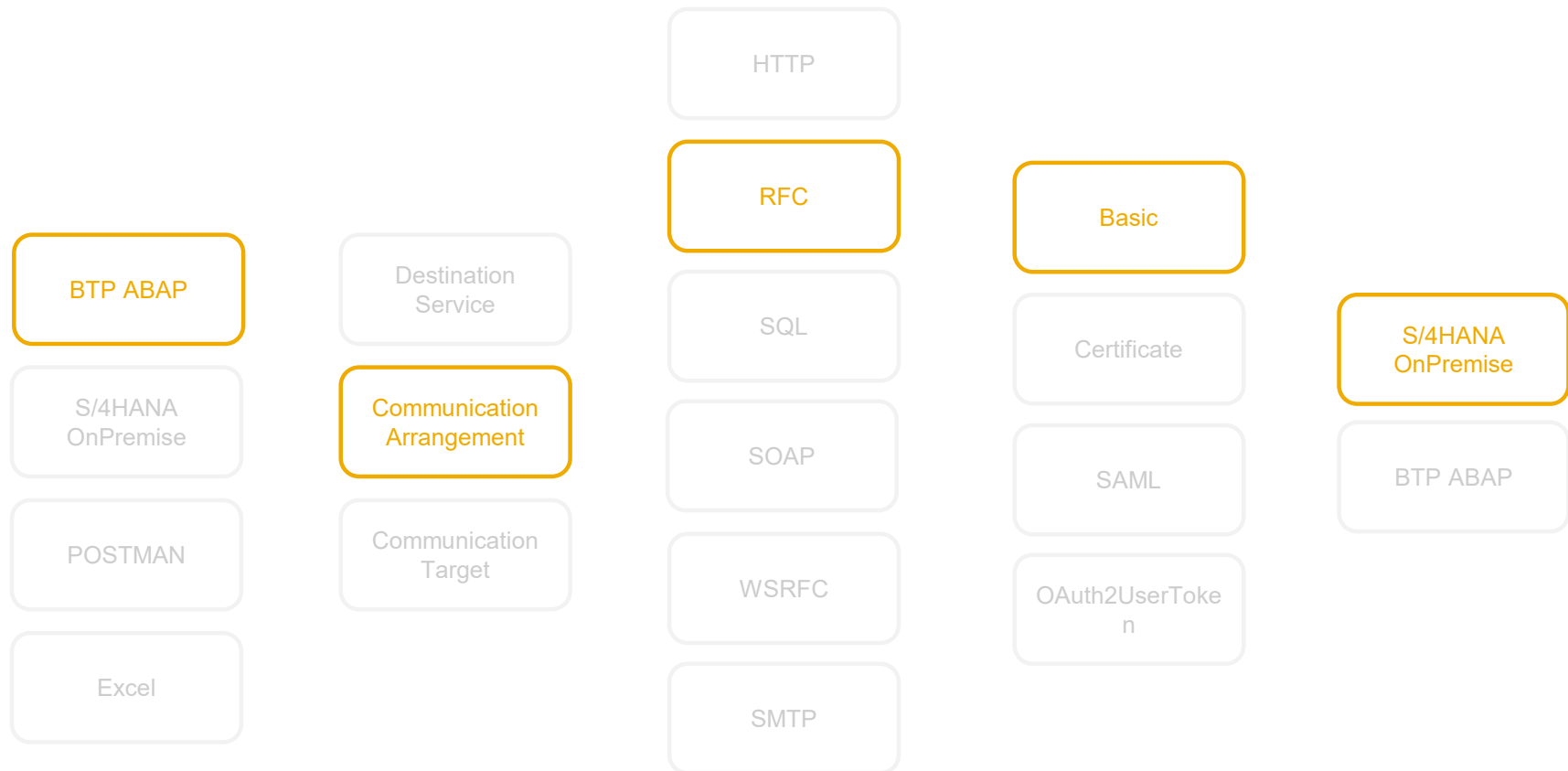
The communication target can have either multiple or only exactly one assigned application destination. To call an HTTP service via communication targets in your ABAP code, create an HTTP client from your communication target class and call its execute method.

Communication Target With Several Assigned Application Destinations

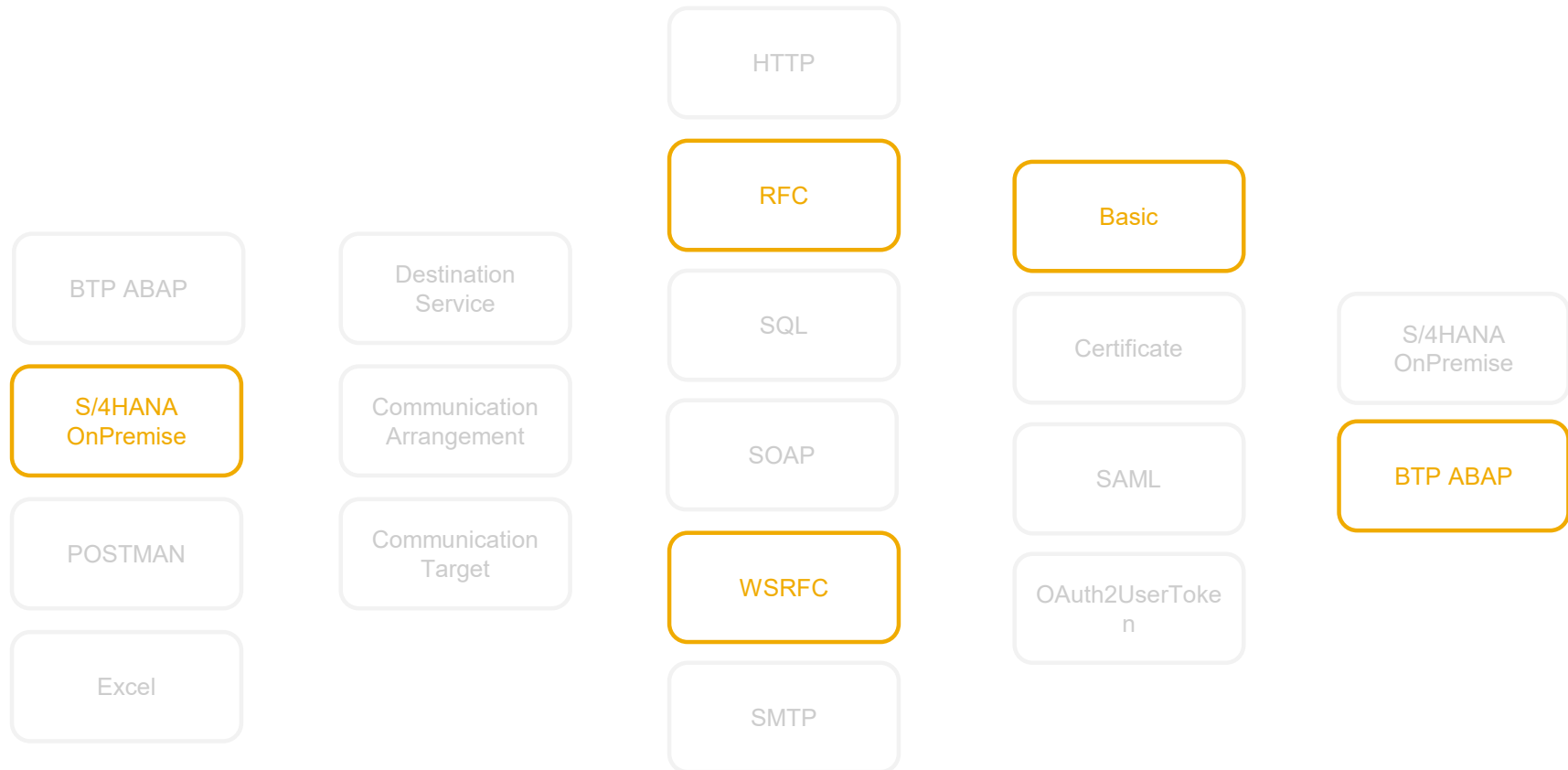
If the communication target has several assigned application destinations, additionally, the following is required:

- When creating the communication target instance, pass the name of the relevant application destination to the parameter `application_destination`.
- Before, you need to get the name of the relevant application destination. We recommend storing the application destinations assigned to a communication

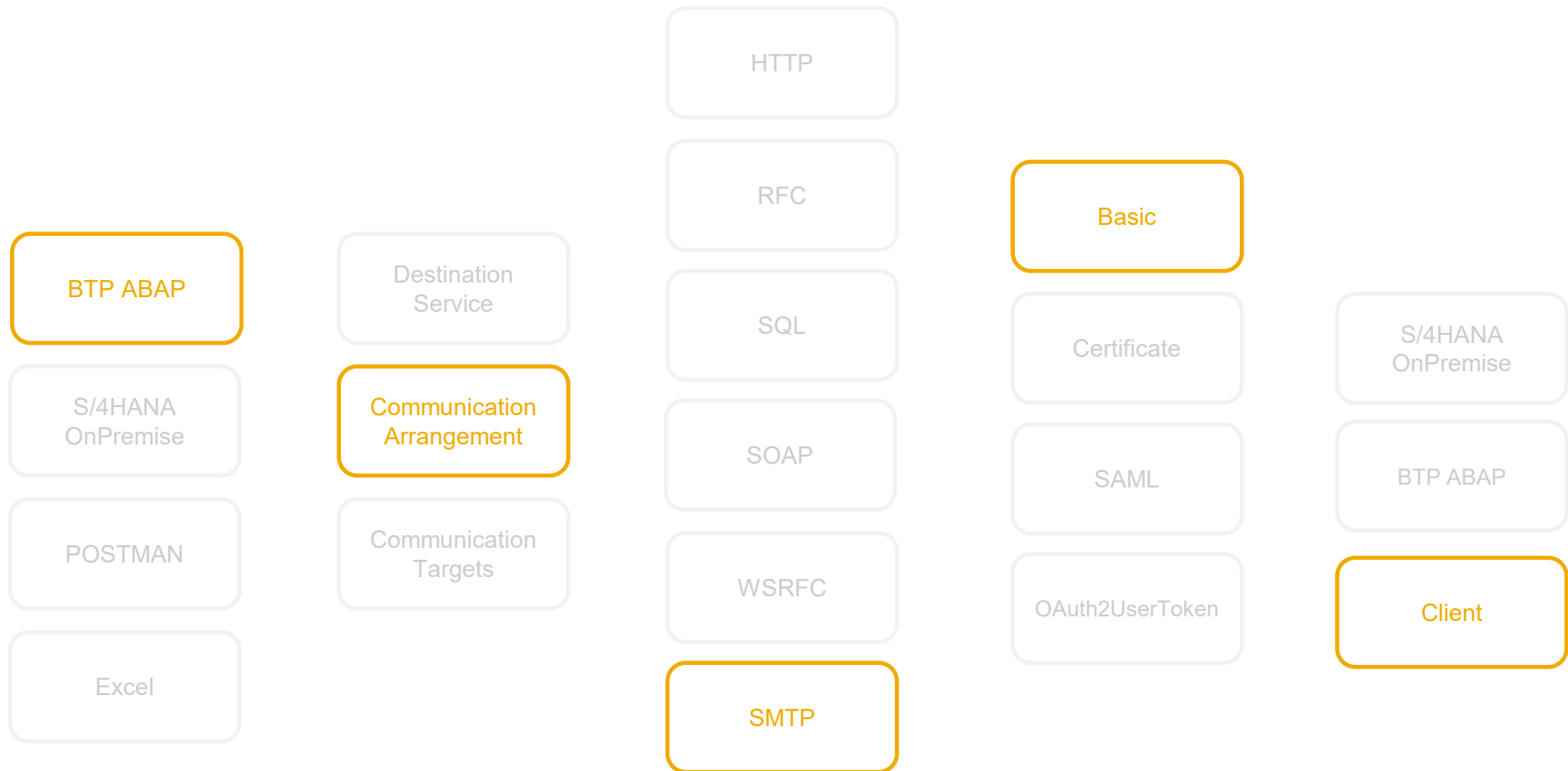
Steampunk – Cloud Connector – OnPremise



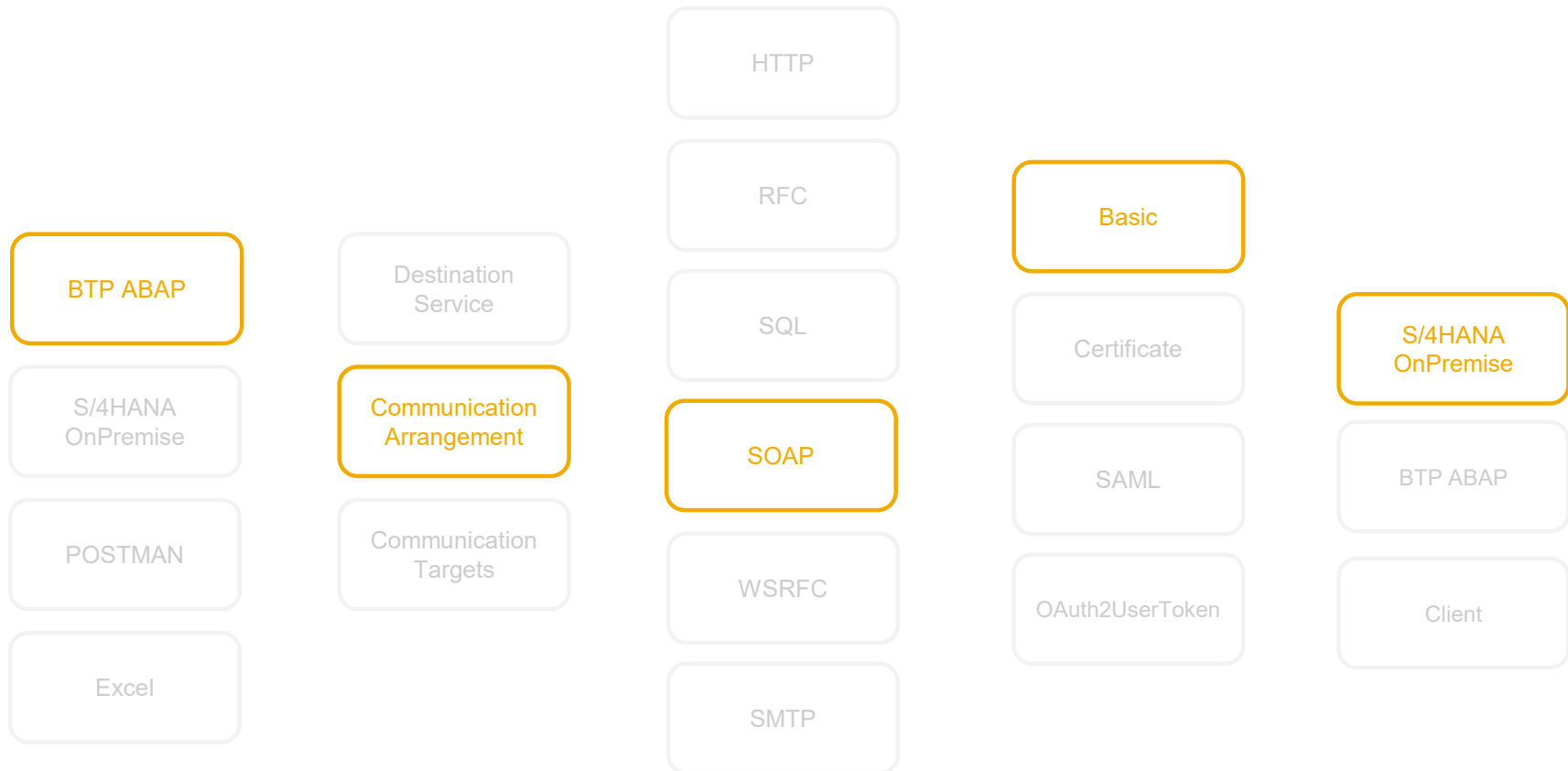
OnPremise – Cloud Connector – Steampunk



MAIL



SOAP



Basic Authentication – SQL Service



Thank you.



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