



DEPLOYING SYMPHONY COMPONENTS ON-PREMISE

PF VILQUIN
TECHNICAL ACCOUNT MANAGEMENT

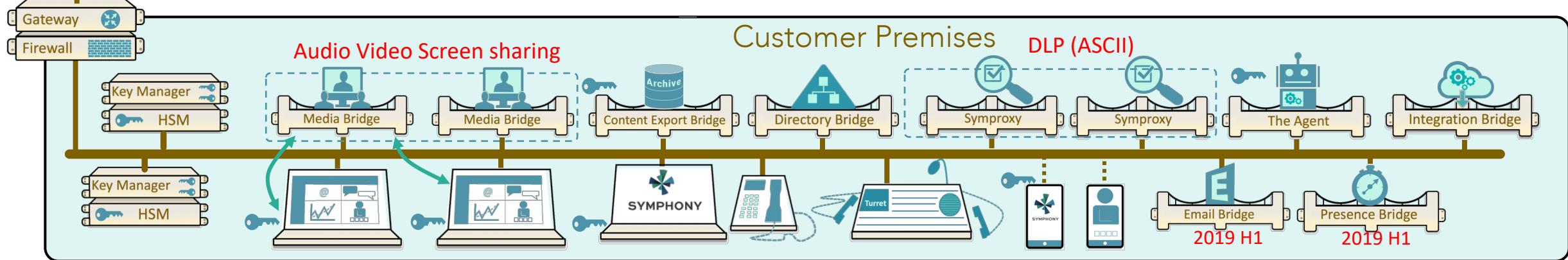
Symphony Architecture for Secure Team Collaboration



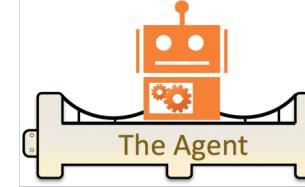
Symphony
Cloud Service (Pod)



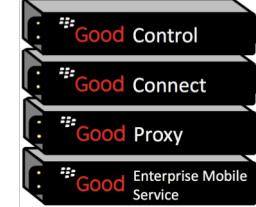
Communicate securely and effectively with integrated messaging, file sharing, audio/video conferencing and screen sharing.
Protect your data with end-to-end encryption and comply with global regulations both within and across enterprises.



Key Symphony on-premise components

Content Export	Key Manager	Directory Bridge	Agent API Bridge	Integration Bridge	Desktop Client
					
Used to download and decrypt compliance conversation transcript log history for ingestion into customers digital safe	Proprietary software that utilizes OpenSSL and Safenet Client APIs to interface between the Symphony clients (on-premise) and to either SoftSMs or HSMs to request and then wrap encryption keys	Provides synchronization between customers LDAP/Active Directory and Symphony to automate Identity Management and User Provisioning	Responsible for encrypting and decrypting the payloads of messages and files sent and received by an API caller so that the caller does not need to implement encryption itself	Provides a secure interface into the Symphony platform for external services such as SFDC, Jira, Zapier and provides support for a Universal Webhook	Stand-alone package written in either Paragon or Electron to self-contain the symphony web application.
Installed in Cloud by Default	Installed in Cloud by Default	Not installed by Default	Installed in Cloud by Default	Installed in Cloud by Default	Not installed by Default

Key Symphony on-premise components

Media Bridge	Symproxy	Mobile MDM*
		
Combined signaling servers and selective Forwarding Units(SFUs) and are responsible for audio/video/screen share session setup and teardown	Core DLP process used to apply multiple criteria dictionaries against complex scenario and regulated personnel. ASCII only.	Control and proxy services to allow mobile devices access to internal network infrastructure and components, example used is GOOD but we also support MobileIron, Airwatch and many more...

* Airwatch, Blackberry, Mobile Iron, In-tune (in dev) or native app

Not installed by Default

Not installed by Default

Customer managed

Key Manager and Content Export Bridge

Key Manager (KM)

- Recommended Configuration
 - **Minimum** two (2) KM instances (behind internal Load Balancer)
 - All Active
- Supported Server OS:
 - CentOS/RHEL 7 (Recommended)
 - CentOS/RHEL 6.5 (minimum)
- Client responsible - Preloaded Software
 - Oracle Java JRE version 8 (JDK Recommended) is installed on the server (NOTE: ORACLE version of JAVA ONLY is supported)
 - Ensure Java Cryptography Extension is installed (JCE)
- Symphony Provided Software:
 - Key Manager (Relay) Software - Java
 - Apache Tomcat Version 8
 - JCK Truststore (*for clients using SSM*)
- Luna Software (*for clients using an HSM*):
 - Luna Client driver, provided with Luna SA 7000 or 1700 license
- Server HW Specifications (minimum):
 - Cores: 4
 - Memory: 8 GB
 - Storage: 250 GB

Content Export Bridge (CEB)

- Recommended Configuration
 - One Active ; One Standby (optional)
- Server OS:
 - CentOS/RHEL 7 (Recommended)
 - CentOS/RHEL 6.5 (minimum)
- Client Responsible - Preloaded Software:
 - Oracle Java JRE version 8 (JDK Recommended) is installed on the server (NOTE: ORACLE version of JAVA ONLY is supported)
 - Ensure Java Cryptography Extension is installed (JCE)
- Symphony Provided Software:
 - CEC tool Software - Java
 - Apache Tomcat Version 8
- Server HW Specifications (minimum):
 - Cores: 4
 - Memory: 8 GB Memory
 - Storage: 250 GB

Directory Bridge and Media Bridge (RTC)

Directory Bridge (LDAP Sync)

- Recommended Configuration
 - One Active ; One Standby (optional)
- Server OS:
 - CentOS/RHEL 7 (Recommended)
 - CentOS/RHEL 6.5 (minimum)
- Client Responsible - Preloaded Software:
 - Oracle Java JRE version 8 (JDK Recommended) is installed on the server (NOTE: ORACLE version of JAVA ONLY is supported)
- Symphony Provided Software:
 - Directory Bridge Software - Java
- Server HW Specifications (minimum):
 - Cores: 4
 - Memory: 4 GB
 - Storage: 25 GB

Media Bridge

- Recommended Configuration
 - Two instances of each
- Supported Server OS:
 - CentOS/RHEL 7 (Recommended)
 - CentOS/RHEL 6.5 (minimum)
- Client responsible - Preloaded Software
 - Python v2.6+
 - Oracle Java JRE version 8 (JDK Recommended) is installed on the server (NOTE: ORACLE version of JAVA ONLY is supported)
 - Ensure Java Cryptography Extension is installed (JCE)
- Symphony Provided Software:
 - MediaBridge software - Java
 - Lua and Luarocks (in QuickInstaller.zip)
- Server HW Specifications (minimum):
 - Cores: 8
 - Memory: 8 GB
 - Storage: 500 GB
- Network connection: 1Gbps (minimum config) or:
 - 2 x 1-Gigabit ethernet adapter
 - 1x dual 10-Gigabit ethernet adapter, failover mode
 - 2 x 10-Gigabit ethernet adapter

API Agent and Integration Bridge

Agent Server (API Agent)

- Recommended Configuration
 - One Active ; One Standby (optional)
 - When front ended with a Load Balancer, the LB must be configured with Sticky Sessions
- Server OS:
 - CentOS/RHEL 7 (Recommended)
 - CentOS/RHEL 6.5 (minimum)
- Client Responsible - Preloaded Software:
 - Oracle Java JRE version 8 (JDK Recommended) is installed on the server (NOTE: ORACLE version of JAVA ONLY is supported)
 - Ensure Java Cryptography Extension is installed (JCE)
- Symphony Provided Software:
 - API Bridge Software - Java
- Server HW Specifications (minimum):
 - Cores: 4
 - Memory: 4 GB
 - Storage: 25 GB

Integration Bridge (IB)

- Recommended Configuration
 - One Active ; One Standby (optional)
- Server OS:
 - CentOS/RHEL 7 (Recommended)
 - CentOS/RHEL 6.5 (minimum)
- Client Responsible - Preloaded Software:
 - Oracle Java JRE version 8 (JDK Recommended) is installed on the server (NOTE: ORACLE version of JAVA ONLY is supported)
- Symphony Provided Software:
 - Integration Bridge - Java
- Server HW Specifications (minimum):
 - Cores: 2
 - Memory: 16 GB
 - Storage: 250 GB

Symphony Proxy aka SymProxy for DLP*

- Recommended Configuration
 - Two instances
- Supported Server OS:
 - CentOS/RHEL 7 (Recommended)
 - CentOS/RHEL 6.5 (minimum)
- Client responsible - Preloaded Software
 - Oracle Java JRE version 8 (JDK Recommended) is installed on the server (NOTE: ORACLE version of JAVA ONLY is supported)
 - Ensure Java Cryptography Extension is installed (JCE)
- Symphony Provided Software:
 - SymProxy software - Java
 - Apache Tomcat Version 8
- Server HW Specifications (minimum):
 - Cores: 4
 - Memory: 8GB
 - Storage: 250 GB

***Support for Ascii only at the moment**

Summary table of on premises components

Considering a redundant setup

Component	Minimum # of Instances (Recommended)	Mode	Cores	Memory	Storage	Server OS	Oracle Java 8	Oracle JCE	Apache Tomcat 8	Python 2.6+	Load Balancer with Sticky session required
Agent Server	Two	Active / Active	4	4 GB	25 GB	CentOS/RHEL 6.5+	JRE version 8	Yes			Yes *
Content Export Bridge	Two	Active / Standby	4	8 GB	250 GB	CentOS/RHEL 6.5+	JRE version 8	Yes	Yes		N/A (only 1 active)
Directory Bridge	Two	Active / Standby	4	4 GB	25 GB	CentOS/RHEL 6.5+	JRE version 8	Yes			N/A (only 1 active)
HA proxy	Two	Active / Active	8	8 GB	50 GB	CentOS/RHEL 6.5+	JRE version 8	Yes		Yes	No
Integration Bridge	Two	Active / Standby	2	16 GB	250 GB	CentOS/RHEL 6.5+	JRE version 8	Yes			No
KeyManager	Two	Active / Active	4	8 GB	250 GB	CentOS/RHEL 6.5+	JRE version 8	Yes	Yes		No
Media Bridge	Two	Active / Active	8	8 GB	50 GB	CentOS/RHEL 6.5+	JRE version 8	Yes		Yes	No (from 1.53)
SymProxy	Two	Active / Active	4	8 GB	250 GB	CentOS/RHEL 6.5+	JRE version 8	Yes	Yes		No

* Possibility to do without Sticky Session with specific development architecture

Deployment Phases (Typical)

Starting point / Dev pod – Week 1-2

Component	Phase 1	Phase 2	Phase 3
Objective	Tech/ Implementation Users	Compliance Integration & Testing	Full Production Use
Pod Setup			
Connectivity	Internet	Internet (Whitelisting)	Internet (Whitelisting)
Symphony Desktop App / Chrome			
Single Sign On (Optional)		●	●
Content Export Bridge (Cloud SFTP)			
Directory Bridge (Optional)	Manual/CSV	●	●
Key Manager (Cloud)			
SoftHSM (Cloud)			
HSM			
Mobile (Optional)	●	●	●
API Agent (Cloud)			
Integration Bridge (Cloud)	●	●	●

Deployment Phases (Typical)

* DC: Cloud Provider Direct Connect

** Pod whitelisting

Full On Premise components with Hardware Security Module (HSM)

Component	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Objective	Tech/ Implementation Users	Compliance Integration & Testing	Non- Regulated User Testing	Pilot Regulated User Testing	Full Production Use
Pod Setup					
Connectivity	Internet	Internet **	Internet**	Internet**/  DC*	/  DC*
Desktop Client/Browser					
Single Sign On					
Content Export Bridge (On Premise)					
Directory Bridge (On Premise)	Manual/CSV				
Key Manager (On Premise)	Cloud	Cloud			
SoftHSM (On Premise)	Cloud	Cloud			
HSM (On Premise)					
Mobile (Optional)					
API Agent (Recommended)	Cloud				
Integration Bridge(Optional)					

Deployment Phases (Typical)

Full On Premise components with Soft Security Module (SSM)

* DC: Cloud Provider Direct Connect

** Pod whitelisting

Component	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Objective	Tech/ Implementation Users	Compliance Integration & Testing	Non- Regulated User Testing	Pilot Regulated User Testing	Full Production Use
Pod Setup					
Connectivity	Internet	Internet**	Internet**	Internet**/  DC*	/  DC*
Desktop Client/Browser					
Single Sign On					
Content Export Bridge (On Premise)					
Directory Bridge (On Premise)	Manual/CSV				
Key Manager (On Premise)	Cloud	Cloud			
SoftHSM (On Premise)	Cloud	Cloud			
HSM (On Premise)					
Mobile (Optional)					
API Agent (Recommended)	Cloud				
Integration Bridge(Optional)					

Deployment Phases (Typical)

Option 2: Enterprise On Premise SoftSM & Components

Component	Phase 1	Phase 2	Phase 3	Phase 4
Objective	Tech/ Implementation Users	Compliance Integration & Testing	Non-Regulated & Regulated User Testing	Full Production Use
Pod Setup				
Connectivity	Internet	Internet	Internet	Internet/DC
Desktop Client/Browser				
Single Sign On				
Content Export Bridge (On Premise)				
Directory Bridge (On Premise)				
Key Manager (On Premise)	Cloud	Cloud		
SoftHSM (On Premise)	Cloud	Cloud		
HSM (On Premise)				
Mobile (Optional)		●	●	●
API Bridge (Optional)			●	●