Business

Technical Appendix
Managed Middleware

Index

Business

1 Glossary

CFT (Cross File Transfer) refers to the file transfer protocol.

Standard Change refers to a change initiated by the Client or the Service Provider, implemented through a procedure validated by the Service Provider and accepted by the Client. Any change considered as Standard is defined in the list of standard changes in the change catalog, accessible through the Cloud Store Client Space. The prices for standard changes are defined and known to the Client.

Simple Standard Change refers to a Standard Change of a Token initiated by the Client or the Service Provider, requiring minimal effort or impacting a limited number of services. It is implemented through a procedure validated by the Service Provider and accepted by the Client. Any change considered as Simple is defined in the list of standard changes in the change catalog accessible through the Cloud Store Client Space.

Complex Standard Change refers to a Standard Change of more than one Token initiated by the Client or the Service Provider, requiring significant effort or impacting multiple services. It is implemented through a procedure validated by the Service Provider and accepted by the Client. Any change considered as Complex Standard is defined in the list of standard changes in the change catalog accessible through the Cloud Store Client Space.

Non-Standard Change refers to a non-standard catalog change and is quoted at the initiative of the Client or the Service Provider. It is implemented through a procedure validated by the Service Provider and accepted by the Client.

Accelerated Change refers to a Standard Simple or Complex service change requiring accelerated production at the Client's request. The price for accelerated change is double the change requested by the Client. The Client has the option to request accelerated processing of a Standard Simple or Complex change exceptionally, up to a maximum of 6 per year.

Middleware refers to a software component necessary for the operation of an application, outside of operating systems (OS) and databases.

MRC (Monthly Recurring Charge) refers to the monthly recurring fees.

OTC (One Time Charge) refers to initialization fees and corresponds to a one-time charge.

Axway Vision Gateway refers to a file transfer gateway securing the exchange of files between different networks.

2 Managed Middleware

2.1 Service Presentation

The "middlewares" are installed and configured by the Service Provider.

The operating system is always fully managed by the Service Provider, and the Client is required to subscribe to the Managed OS service.

2.2 Description

The following table lists the services provided within the scope of "Managed Middleware Services":

T1able 1: Description of "Managed Middleware Services"

Phase	Activities
Middleware Implementation	▪ Install and configure the middleware ▪ Compliance with security recommendations
Middleware Operations	▪ Administer and maintain the configuration ▪ Deployment of security updates ▪ Access control management and antivirus specificities ▪ Backup and restoration services ▪ Resource optimization ▪ Capacity management ▪ Event management

Business

2.3 Specifications

The service specifications are as follows:

Table 2: Service specifications for « Managed Middleware »

Middleware	Distribution
Web server	- Apache server - NGINX server - IIS server
Proxy server	- Squid server - HaProxy server
Application Server	- Tomcat server - Microsoft IIS + ASP.NET - PHP server - SOLR server - Web server + PHP server
DDI	- DNS server standalone - DHCP server standalone
File Server	- Samba server - Microsoft File server - Microsoft DFS server - ProFTPD server
Manufacturing Operations Management	- Kafka - Zookeeper - RabbitMQ
Managed File Transfer	Managed CFT (see attached description)

2.4 Pricing conditions

The pricing of the service consists of:

- Access fees to the "Managed Middleware" service, covering all implementation tasks.
- A monthly recurring fee covering activities related to the operational maintenance of the "Managed Middleware" service.

The Service rates do not include:
- The price of the infrastructure, which you must separately subscribe to from the IaaS provider according to their current rates.
- Change requests.

Business

3 Service Access

3.1 Prerequisites

The Managed Middleware Service relies on an IaaS (Infrastructure as a Service) which you must also subscribe to according to our recommendations. Additionally, you must subscribe to the Managed OS (Operating System) Service. The versions of the OS and Middleware software must be supported by the respective vendors.

Please note that the IaaS service corresponding to Middleware will be billed from its commissioning, without waiting for the acceptance of the Managed Middleware Service.

For a Managed Middleware Service, certain functionalities of the IaaS will not be accessible to you:

⇨ Change management, incident management, configuration management of network security rules, and cloud component upgrades.

⇨ The IaaS console and reporting in the Cloud Store are accessible in read-only mode.

Also note:

- The Client provides the license for using the CFT (Cross File Transfer) application in accordance with the terms of its licensing agreement.

- The Client is responsible for opening flows.

- Remote third parties, partners of the Client, who are not managed by the Service Provider, are solely responsible for the proper reception of files sent by the Client.

- SLAs (Service Level Agreements) will be suspended while awaiting the return of support from the vendor or the unmanaged partner.

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3.2 Deployment

The Service Provider relies on a Service Request Form (SRF), which it provides to the Client. The Client completes this document for the commissioning.

The purpose of this document is to present the standard configurations that we apply and to gather your requirements (variable elements) to finalize the architecture to be deployed.

This document collects information related to two parts:

1. Physical Architecture of the Middleware
- The minimum number of VMs
- The location of the VMs
- Sizing in terms of vCPU, vRAM, and disk for each VM
- Addressing plan for the VMs
2. Logical Elements of the Service Configuration.
- The name of each VM
- The functional level of the forest and domain
- The required OS for the Middleware

The table below presents the tasks and responsibilities associated with the implementation of the services outlined in sections 3.1 and 3.2.
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	Tasks	Service Provider	Customer
Initial Deployment			
1	Install required technical components for the Middleware.	R, A	I
2	Install the Middleware.	R, A	I
3	Apply the latest required patches.	R, A	I

Business

Tasks		Service Provider	Customer
8	Configure network access.	R, A	C
9	Configure user access.	R, A	C
10	Activate and validate the subscribed license.	R, A	C
11	Apply security recommendations.	R, A	I
16	Install and configure agents (DNS, NTP, Antivirus, Backup, Monitoring).	R, A	C
19	Configure and test monitoring.	R, A	I
20	Configure standard backup and retention policy.	R, A	I
R : Responsible – A : Accountable – C : Consulted – I : Informed			

3.3 Operational Maintenance

We manage the operations for the operational maintenance of the Middleware, in addition to the required operating systems, to deliver the service.

The measures taken within the framework of this objective may be of a preventive or corrective nature.

The table below outlines the tasks and responsibilities associated with the operation of the services presented in sections 3.1 and 3.2.

Tâches		Service Provider	Client
5	Supervise operational indicators of the Middleware.	R, A	I
8	Manage and adjust parameters.	R, A	C
9	Analyze Middleware logs.	R, A	I
10	Apply corrective patches.	R, A	C
27	Handle incidents related to critical errors in the log file.	R, A	I
28	Address incidents related to system performance issues.	R, A	I
29	Escalate incidents to the Middleware publisher.	R, A	I
30	Implement the resolution solution provided by the Middleware publisher.	R, A	I
31	Maintain relationships with publishers and manage Middleware licenses.	R, A	I
R : Responsible – A : Accountable – C : Consulted – I : Informed			

3.3.1 Monitoring

In addition to the supervision provided as part of the subscribed "Managed OS" service prerequisite, the Service Provider ensures the following supervision for your Middleware:

- The Service Provider monitors key services such as application processes and network access to Middleware.
- The Service Provider monitors key metrics and can trigger alerts in the event of critical issues.
- The Service Provider handles alerts raised by the supervision.

3.3.2 Backup

To ensure service availability in case of issues, the Service Provider performs a Middleware backup using the data dump functionality to facilitate easier restoration. The backup retention period is set to 6 days. This backup is complemented by a daily backup performed using the native solution of the chosen IaaS (Infrastructure as a Service) with a retention period of 6 days. The backup is carried out during the following time window: 22:00 to 6:00.

The Service Provider monitors the backup solution to ensure proper execution. In case of need, the Service Provider, in consultation with the Client, performs the restoration of a backup copy.

3.3.3 Administration

Based on the monitoring tools, the Service Provider tracks performance metrics and the proper functioning of the Middleware. These metrics allow us to:

- Monitor the service's behavior in real-time

Business

- Proactively initiate troubleshooting upon the detection of a supervision alert
- Track trends over longer time scales

It is the responsibility of the Client to report any changes in their architecture or Middleware workload to adjust the VM template.

4 Support

The Service Provider provides the following services for the support of a Managed Middleware.

4.1 Patch management

The installation of corrective patches provided by the publishers is conducted quarterly during business hours within a time slot agreed upon with the client. Applying these patches is crucial to ensure the proper functioning and security of the service. The client is obligated to adhere to the publishers' roadmap to guarantee access to support. Postponement is exceptional and allowed once a year. Failure to comply releases the Service Provider from service commitments.

4.2 Release management

The Service Provider applies release updates based on the recommendations of the publisher and the operational team. If the client fails to meet this prerequisite, our SLA commitments cannot be guaranteed. Release updates are not available in the change catalog and will be managed as a project.

4.3 Change management

Change management for the Managed Middleware service aligns with the common model of our managed services. A standard request catalog is available, as presented in Chapter 6.

For non-catalog requests, the operational team assesses feasibility. Two scenarios arise:
1- Easily qualifiable request:

   The operational team informs the client of the required Tokens, additional infrastructure resources (if applicable), and resulting recurrent service charges. Upon client agreement, the request is executed, and the following will be billed:
   - The number of Tokens debited based on the client's subscribed package or outside the package,
   - Additional infrastructure resources per the subscribed Cloud infrastructure contract,
   - Recurrent service charges.

2- Specific Qualification Request

   The operational team advises the client to contact their account manager.

4.4 Limitations

The following activities remain the client's responsibility:
- Verifying the proper functioning of the middleware
- Business tasks dependent on the client's application
- No client code review.

5 Managed File Transfer

5.1 Managed CFT presentation

The "Managed CFT" service allows the client to exchange files using protocols supported by CFT with up to 5 partners. This service is exclusively available for clients who have subscribed to the Managed OS service.

The offer includes:
- Integration of the CFT application with Windows or Linux servers.
- Deployment and validation of licenses provided by the client.
- Management and supervision of deployed applications.
- Configuration setup for file sending/receiving.
- Management of the installation of patches and service packs for deployed CFT applications and their deployment frequency.
- Resolution of anomalies in file transfers between the managed CFT application and the Axway Vision gateway.
- Deployment of certificates provided by the client, necessary for secure exchanges.

5.2 Description

The following table lists the services provided within the scope of the "Managed CFT" service:

Table 3: Description of "Managed CFT" Services

Phase	Activities
CFT Implementation	• Install and configure the CFT application for exchanges via the Axway Vision gateway. • Test exchanges with the partner(s). • Implement standard application monitoring. • Validate compliance with security recommendations.
CFT Operations	• Administer and maintain the CFT application. • Apply minor or major updates, patches, and service packs. • Manage antivirus security. • Supervise and analyze logs for incidents.

5.3 Prerequisites

This offer involves a mandatory analysis phase to:
- Validate the client environment and the integration of the CFT application
- Verify configurations provided by the client, in agreement with partners (remote partners and the Axway Vision gateway)
- Confirm the implementation of the service and the proper functioning of the deployed configuration on the client side.

6 Managed Middleware Change Catalogue

Managed Services: Middleware	Application Server	Application Server	Start/Restart/Stop a service [1tk]
			Modify an instance [3tk]
			Delete an instance [1tk]
	Directories	Directories	Create/Modify/Delete an Organizational Unit (OU) or group [1tk]
			Create/Modify/Delete a user [1tk]
			Administer (delegations) [2tk]
	File Services	File Services	Create/Modify/Delete an account, user, partner [1tk]
			Administer (catalog, spool) [2tk]
			Send/Receive files [2tk]
	Web Server	Web Server	Start/Restart/Stop a service [1tk]
			Modify an instance [3tk]
			Delete an instance [1tk]
	Autre	Other	Other request [3tk]

Business