AMT-01 Service Work Order Settlement

Interface
AMT-01 Service Work Order Settlement Summary

Project Aurora
Snaplogic
Hitachi Construction Machinery Australia and CablePrice (NZ) Limited

Date 29/03/2018

Document Control

Change History

Release Date	Version	Author	Nature of Change
30/06/2017	0.1	P. Gupta	Initial draft
17/07/2017	1.0	P. Gupta	Submitted for client review
14/08/2017	1.1	P. Gupta	Updated as per CR002 for WO5
28/03/2018	1.2	P. Trivedi	Updated as per W014 target change
29/01/2018	1.3	P. Trivedi	Updated based on Internal Review

Internal Review

Review Date	Version	Author	Title
17/07/2017	1.0	S. Wong, K.Huynh	Solution Architect, Program Manager
29/03/2018	1.2	S. Wong	Solution Architect

Client Approval

I have read this document and agree it captures the requirements to be utilised to configure the module in Snaplogic to meet the business needs of Hitachi Construction Machinery Australia and CablePrice (NZ) Limited.

By signing this document I am authorising KPMG Hands-on Systems to configure the solution on our behalf and hereby accept all associated charges.

Interface	Review Date	Version	Author	Title
AMT-01 Service Order Summary	Click here to enter a date.	#.#	P. Trivedi	Postion of Reviewer

Sign-off of this document is critical because it allows us begin work without risk of wasted effort.

We ask for your assistance in this by providing timely review and approval. If there are any gaps, deficiencies issues, or any reason that you do not want to approve then we ask you to formally raise these issues as soon as possible. We have developed our project deadlines and allocation of resources on the basis that we will receive timely feedback. If we have not received any feedback within 5 working days we will reserve the right to release allocated resources, which may impose delays and/or additional costs on the project

Disclaimer

Inherent Limitations

This document has been prepared by KPMG Hands-on Management Pty. Limited (KPMG) in accordance with our Work Order dated 25th November 2016 (Agreement). The services provided in connection with this engagement comprise an advisory engagement, which is not subject to assurance or other standards issued by the Australian Auditing and Assurance Standards Board and, consequently no opinions or conclusions intended to convey assurance have been expressed.

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This document is solely for the purpose set out in the Scope Section and for Hitachi Construction Machinery Australia and CablePrice (NZ) Limited information, and is not to be used for any other purpose or distributed to any other party without KPMG's prior written consent.

This document has been prepared at the request of Hitachi Construction Machinery Australia and CablePrice (NZ) Limited in accordance with the terms of the Agreement. Other than our responsibility to Hitachi Construction Machinery Australia and CablePrice (NZ) Limited neither KPMG nor any member or employee of KPMG undertakes responsibility arising in any way from reliance placed by a third party on this document. Any reliance placed is that party's sole responsibility.

Contents

1 Context

1.1 Purpose

This document outlines the key components and requirements for this interface and provides a common reference point for functional owners and technical implementation teams providing the solution. The integration approach defined in this document is based on providing application integration between two or more applications, with the purpose to keep the selected application data consistent.

1.2 Document Scope

The scope of this document consists of defining:

- Interface Purpose
- High-level Interface Flow
- Integration Pattern
- Interface Data Mapping between Source and Target
- Frequency and Volumes
- Security Requirements
- Error Handling
- Unit Test Scenarios

This document is **not** meant to:

- Define infrastructure details (e.g. capacity planning, infrastructure diagram, physical file location, etc.)
- Define solution for impacts to existing applications and/or integrations.
- Define business rules and/or logic that is required to be setup to process the data at the source and/or target application.
- Define business exceptions to be thrown by source and/or target application.

Define operations procedures to maintain the interfaces post go-live

1.3 External Reference

Architecture: "Integration Blueprint V1.4.pdf", Section 2.2.2.

HLSD: "High Level Solution Design – Integration and Interfaces.docx", Section 16.6.2.

AX Design: "AMT-01 Service Order Summary", Section 2.7.1

AMT Design: "AMT System Integration – Workorder Settlement", Section 2.2.1 & Section 3.1

1.4 Open Items

ID	Definition	Priority	Owner	Date Raised	Status	Comments
1	Please provide volumes for this interface.	Low	Malcolm H	30/06/2017	Close	PT[13/03] – Volume of 1000 per day
2	Please provide the Web Service and Method URLs for Test env.	Low	Malcolm H	13/03/2018	Open	
3	Confirm the "Planning_workorder_Completion" field Confirm Lookup values for "Work Order Group" and "Planning_Status Fields"	Low	Steven W./Suma m P.	13/03/2018	Open	PT[28/03] – Suman confirmed that Lookup values not required for, they should just be pass through.
4	Confirm the Server location and method for /Landing /Error and /Processed Folders	Low	Malcolm H	15/03/2018	Close	PT[28/03] – Hitachi confirmed that this will be a amounted E:\ drive from separate file server.
5	Provide the Email address for notification	Low	Malcolm H	28/03/2018	Open	

1.5 High Level Architecture

The AMT system is used by HCA to manage contracts, maintenance plans, billing information and job scheduling. An interface will be created that exports customer master data from AX to AMT for all active customers.

A financial snapshot of work orders is calculated and sent from AX to AMT as a service order settlement summary via this interface.

1.6 Interface Details - AMT01 Service Order Summary

1.6.1 Overview

Integration Source	Microsoft Dynamics 365 for Operations
Integration Target	AMT
Real-Time/Batch	Batch
Pattern	File to Web Service
Synchronous / Asynchronous	Asynchronous
Integration Pattern	zipped XML to XML
Full vs Delta	Full
Frequency	Daily 1am.
Volume	~1000/Day

1.6.2 Source Endpoint

Service Purpose	Get Service Order File
Security	oAuth 2.0
File Name	<filename>.zip, AMT settlement summary.xml
File Format	Zip XML Batch File
File Polling Location	https://<environmentname>.cloudax.dynamics.com/api/connector/dequeue/<Activity-id> https://<environmentname>.cloudax.dynamics.com/api/connector/download/<Activity-id>

Environment	Implementation environment: To be confirmed during build phase Testing environment: To be confirmed during testing phase Production environment: To be confirmed during testing phase

1.6.3 Target Endpoint

Service Purpose	Write Service Order Settlement to Web Service
Service Name	Web Service : Workorder Method : ImportWorkorderSummary
Service Type	Web Service
Service Format	XML
Security	Basic Authentication
Retry	3x
Retry Interval	15s
Timeout	60s

1.6.4 Pre-Conditions

The following are expected steps:

- Microsoft Dynamics 365 for operations services are available;
- AMT Web Service is available;
- Snaplogic is available;
- File Server Drive is available;

1.6.5 Post-Conditions

The following are expected steps:

- Target payload successfully submitted to Workorder Service through ImportWorkorderSummary Method.

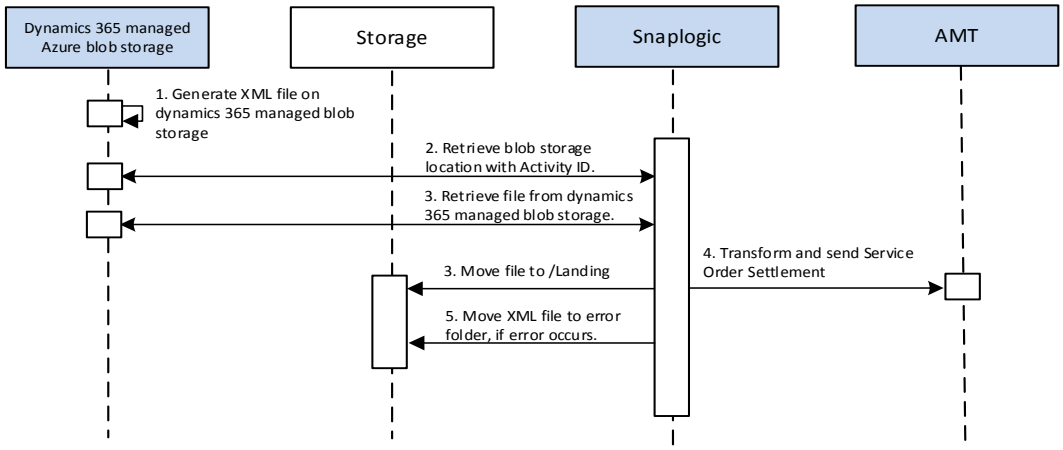
1.6.6 Filtering and Validation

N/A

1.6.7 Encryption

N/A

1.6.8 Message Flow



1. Firstly, Microsoft Dynamics 365 for Operations will generate Service Order file on Dynamics 365 managed blob storage. This file is Batch XML stored as base 64 string.
2. Snaplogic will retrieve the blob storage location URL by using Activity ID on pre-defined interval
3. Snaplogic will read the file from Dynamics managed blob storage
4. Snaplogic will write xml file to "Landing" folder. This step ensures a copy of file is placed on storage for troubleshooting purposes. Dynamics 365 managed blob storage has limitation that file cannot be retrieved again.
5. Snaplogic will transform and enrich file as per data mapping and send message to Webservice to AMT.
6. Snaplogic will move the Batch XML file to processed folder.
    - If any error occurs, file will be moved to Error folder.

1.6.9 Directory Structure

System	Folder Name	Folder Location	Description
Windows File Server E:\ drive	Landing	/data/AMT01ServiceOrderSummary/landing	Area designated for all incoming files.
Windows File Server E:\ drive	Processed	/data/AMT01ServiceOrderSummary/processed	For all successfully processed incoming files.

System	Folder Name	Folder Location	Description
Windows File Server E:\ drive	Error	/data/AMT01ServiceOrderSummary/error	If an error has been identified during file processing, the incoming files will be placed in the error folder for ops troubleshooting.

1.6.10 Data Mapping

The following section describes the relevant message format for this service. This data mapping is done based on the samples (Appendix 2) provided in AMT Web service documentation and AX sample.

AMT 01 Data Mapping.xlsx

1.6.11 Error Handling

ID	Error Description	Error Log Level	Continue Processing?
1	Target Web Service Not Reachable	Critical	No
2	AX blob storage Account has expired / incorrect	Critical	No
3	Target Web Service Authentication Error	Critical	No
4	Error During Transformation	Critical	Yes

Once error is captured in Snaplogic, it would call Hitachi's Common Error Handling service. For more details related to the common runtime services, refer to section Common Runtime Services in the Integration Blueprint document.

1.7 Third Party Requirements

RPM are the third-party AMT partner for Hitachi, and they will be required to design, develop, test and implement the AMT side of the change required of this interface.

2 Appendix

2.1 AMT Sample File

AMT Sample File - Workorder Settlemen

2.2 AX XML Sample File

AMT settlement summary.xml

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