# MediusFlow SAP Integration - Product Definition

Integration Overview

The MediusFlow integration to SAP consists of both an adapter to Medius Integration Gateway (MIG), the Medius integration engine, as well as some custom objects in SAP for master data retrieval. The integration makes it possible to transfer master data (such as suppliers, accounts etc.) from SAP to MediusFlow. It also makes it possible to post invoices from MediusFlow to SAP with a document number or error message in return to MediusFlow. Below you find an overview of how the integration works.

This product definition was last updated February 15th, 2018.
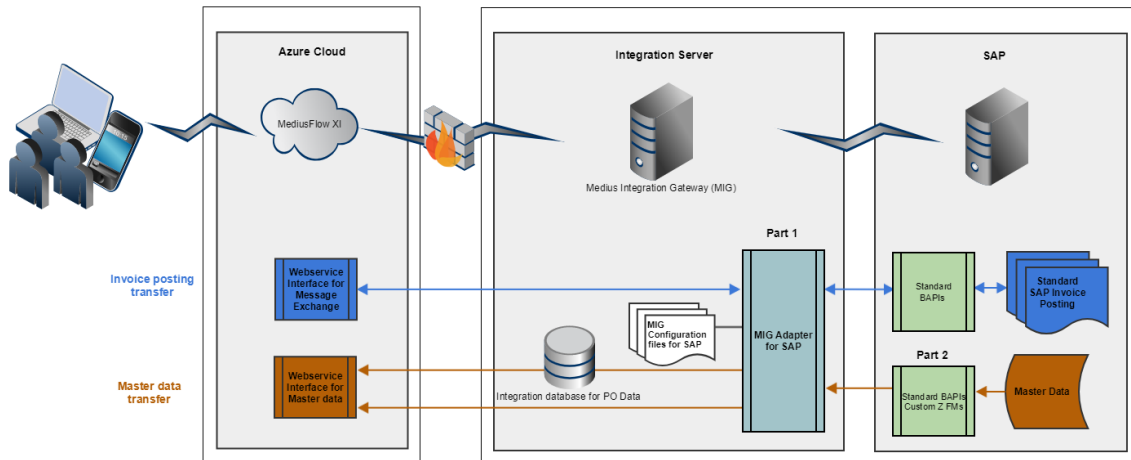
- **Part 1**
  - Code written in C# .NET
- **Part 2**
  - Custom function modules provided as txt files and corrresponding structures
  - Code written in ABAP

Version Dependencies

The below versions of SAP are supported by the integration:

- SAP ECC6.0
- SAP 4.7
- SAP 4.6 (with some limitations)

Integration Package Content

The Integration package includes the following for Medius Integration Gateway (MIG):

- Custom adapter that communicates with SAP
- Configuration files for the SAP integration

The Integration package includes the following for SAP:

- SAP custom function modules
- Excel spreadsheet with the corresponding structures exported by the functional modules

MediusFlow Modules & Functions

The functionality of the integration is based on Medius' experience and the suggested best practice of configurations between MediusFlow and SAP but does not cover all configuration settings supported by SAP.

Below you find a summary of the MediusFlow modules that are included in SAP integration standard package.

Information in column ***"Basic Setup"*** means that the feature/functionality is included in the basic deployment and is based on Best Practices.

Information in column "**Custom Setup**" means further information about the customer's processes and system(s) setup is required to implement and thus requires additional consultant configuration work.

MediusFlow module	Basic Setup	Custom Setup	Comment
Invoice	YES		Only final posting, no parking.
Match	YES		Only final posting, no parking.
Procurement	NO	YES	Match invoice against MediusFlow PO is posted as FI document. Only final posting, no parking
Contract	NO	YES	

Master Data

Below you find a summary of the different master data entities.

Master data entity	Basic Setup	Custom Setup	Description	Comment
Company	NO	NO	New company codes in SAP needs to be manually added in MediusFlow and set up for integration	
Currency rates	YES			Currency rates maintained using base currency supported but requires Custom Setup
GL Accounts	YES			Only 1 language per company code can be transferred
Fixed assets	YES		Fixed Assets are available in the the first coding segment with a prefix "A"	
Cost center	YES			
Internal orders	YES			
Profit center	NO	YES		
WBS element	NO	YES		
Trading partner	NO	YES		
Functional area	NO	YES		
Tax codes	YES			
Account restrictions	NO	NO	No support for transferring Field Status Groups per GL account.	
PaymentTerms	YES			Complex payment terms are not supported, only number of days

Vendors	YES			1 purchasing organisation per company code in standard
Supplier items	YES		Item table for cross reference in connection between PO lines and invoice lines	
Purchase order with goods receipt	YES		- Purchase order goods reciepts flagged for "goods receipt based invoice verification" (EKPO-WEBRE) - All lines with goods reciept indicator (EKPO-WEPOS) set - Lines with "Free of charge" indicator are not transferred	Purchase order goods reciepts not flagged for "goods receipt based invoice verification" (EKPO-WEBRE) supported but requires custom setup
Purchase order without goods receipt	NO	YES	- Service/Non goods receipt order matching - All lines without goods reciept indicator (EKPO-WEPOS) set	
Planned delivery costs (pricing conditions)	NO	YES		
Purchase order account assignment	YES		- Cost Center and Internal order is transferred to MediusFlow - It is not possible to modify the account assignment in MediusFlow to update it in the posting of the invoice	

Message Exchange

Below you find a summary of the different invoice posting scenarios.

Posting scenarios	Basic Setup	Custom Setup	Description
Expense invoice (FI) parking and final posting	YES		Document types KR used for debit invoices and KG for credit notes
Cancellation of parked invoices that are invalidated in MediusFlow	YES		Only applies for FI documents
Expense invoice (FI) final posting only	YES		
Assignment field for supplier and GL line (FI & MM)	YES		
Accrual postings	NO	NO	Limited by lack of standard support in SAP

PO invoice with match against GR	**YES**		Supports both GR/IV and non GR/IV flagged orders. No parking supported
PO invoice with match against PO line	**NO**	**YES**	Only of non GR/IV flagged orders. No parking supported.
Invoice match with return orders (negative receipt lines)	**NO**	**YES**	
Invoice match planned delivery costs (pricing conditions)	**NO**	**YES**	
Actual payment date update sent to MediusFlow	**NO**	**NO**	
Add link to Invoice document in SAP (Archive link)	**NO**	**YES**	

Regional compliance

The integration package is used by customers in about 20 different countries worldwide. Any country specific legal requirements, including but not limited to VAT compliance requirements, have to be analysed and identified by the parties in the project. Any additional services needed to ensure compliance with requirements not supported by the standard integration package may be provided by Medius on a time and material basis and will require a Change Order signed by the Parties.

General Integration Requirements

ⓘ These are general requirements to be able to setup MIG based integrations with Mediusflow.

Customer is responsible to set up the integration server to fulfil these requirements.

Integration Server

The ERP integration needs to send and fetch data to/from the ERP system. To do this there is a need to setup a Medius Integration Client in the local network (on premise at customer) that performs the data exchange between MediusFlow Cloud and the ERP system. The Medius Integration Client is a Windows application that can be installed on any server fulfilling the following requirements:
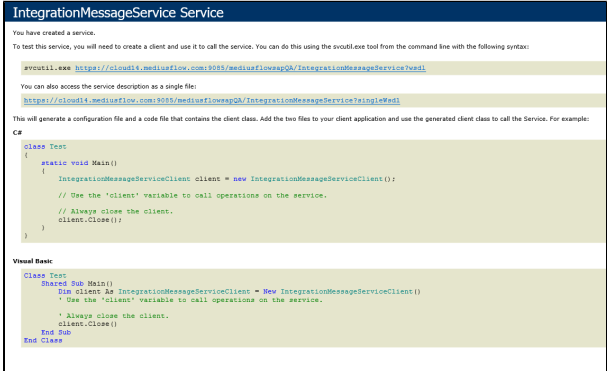
⚠ Integration server can be shared with other applications but the requirements below are for the Medius Integration Client only and does not take requirements for such application into consideration.

Component	Requirement
OS	Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2, Windows Server 2016
CPU	2 GHz
RAM	4 GB
Disk	2 GB

⚠ It would be beneficial if all servers are installed with English (US) language to facilitate for Medius consultants and, at a later stage, support personnel from Medius Service Center.

Access

Access	Comment

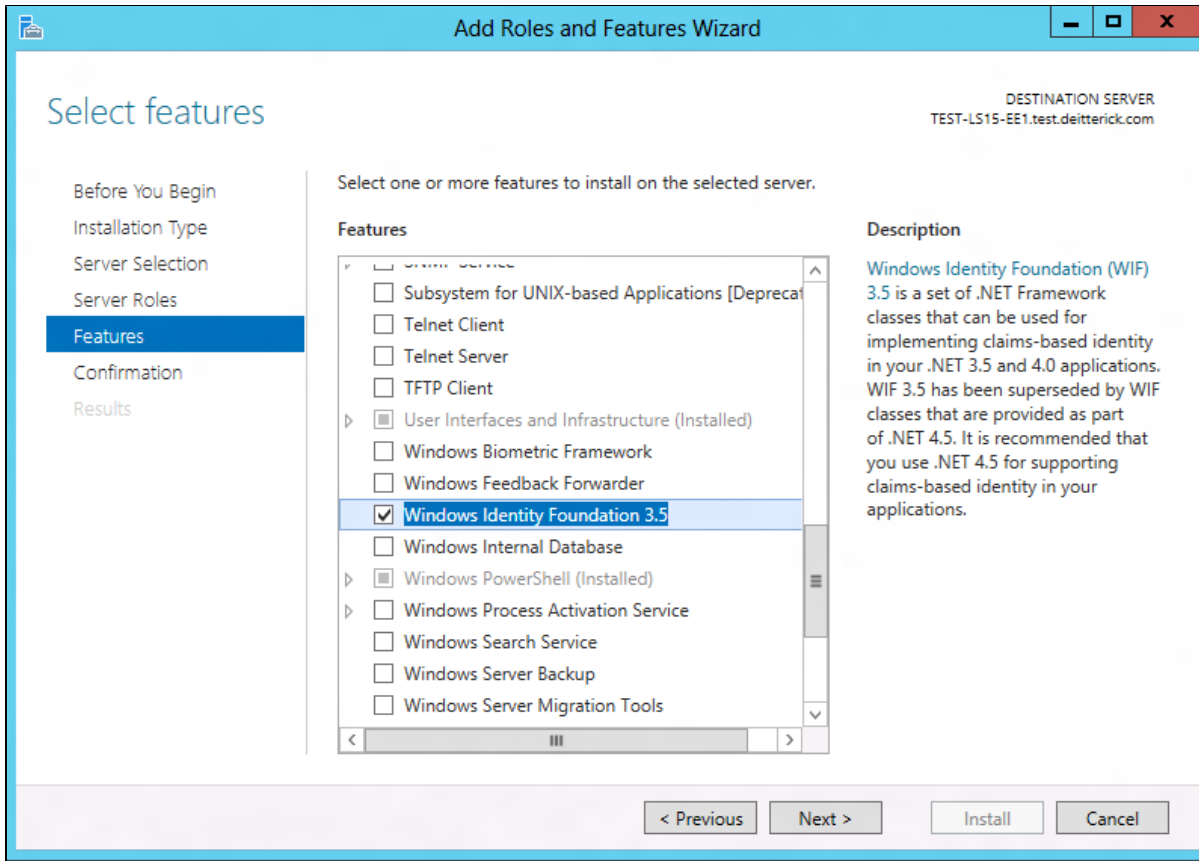| VPN	VPN credentials to integration server
Server account	Administration rights on integration server
ERP access	ERP credentials and access to ERP server/services from integration server
MediusFlow XI	Integration server needs to have access to MediusFlow XI SOAP services. • Binding: WSHttp2007RelayBinding • Connectivity mode. HTTPS, outbound • Port: 9085 Verify access on https://cloud.mediusflow.com:9085/mediusflowIBSQA/IntegrationMessageService • You should get this picture in the web browser,
FTP	Medius Consultants to transport deployment files to the Integration server Port 21 need to be opened for outbound traffic

Windows Feature Enabled

The Medius Integration Client is installed as a windows service application.

To be able to install the Medius Integration Client the server needs to have Windows Identity Foundation enabled.

ⓘ For Windows Server 2008R2, install from this link: http://www.microsoft.com/en-us/download/confirmation.aspx?id=17331

ⓘ For Windows Server 2012 and 2016, install from "Add Roles and Features Wizard"

Installed software

Software	Comment	Download
.NET Framework 4.5	To be able to run integration engine the Medius Integration Client	http://www.microsoft.com/en-us/download/details.aspx?id=30653
Powershell version 4.0 or later	Used during deployment of integration packages	http://social.technet.microsoft.com/wiki/contents/articles/21016.how-to-install-windows-powershell-4-0.aspx
Chrome	Preferred web browser for MediusFlow. This is our recommendation, any other supported browser is OK.	http://www.google.com/chrome/browser/desktop/index.html
SharpDevelop	Consultant tool for XML configuration	http://www.icsharpcode.net/OpenSource/SD/Download/
Notepad++	Text editor	https://notepad-plus-plus.org/download/v7.5.2.html
Winmerge	Consultant tool for diff configuration files during upgrades etc	http://winmerge.org/downloads/
Astrogrep	Consultant tool for efficient file content search	http://sourceforge.net/projects/astrogrep/

SAP Integration Requirements

In addition to the general integration requirements presented above, these are the SAP specific requirements that need to be fulfilled in addition to the general requirements.

Communication to SAP

MediusFlow/SAP integration mainly using RFC calls in SAP. The RFC server will be listening on Port range: 30007-39907. All inbound request to SAP system will be through this range and the default value is 30007. As SAP does not specify any specific port and this is assigned automatically it is difficult to specify any particular port.

SQL server

- SQL server 2008 R2 or higher. It can be a SQL server express installed on the integration server
  - SQL server should have collation SQL_Latin1_General_CP1_CI_AI

SAP GUI

SAP GUI needs to be installed on the integration server so that Medius consultants can ensure proper communication between integration engine and SAP as well as to verify master data and tests of invoice postings.

Access within SAP

Batch user

The MediusFlow SAP integration runs processes and access data in SAP, through BAPI:s and custom functions. This is done through an integration application on the integration server. The user for the integration application will use a SAP batch user that is specific to MediusFlow integrations and has date and decimal format specifically set according to the SAP questionnaire. Also all warning messages in FI bookings (FBV1, FBV0) must be suppressed for this user. Due to the specific needs for this user, it's important that Medius batch user is not shared with other processes.

The following is needed to be setup for the integration user within SAP.

- Transactions(TCODE) We need to be able to perform the following transactions in SAP including additional settings to make them work appropriately:
  - FBV0 - Final posting a parked FI document
  - FBV1 - Parking an FI document
  - FBV4 - Edit parked documents
  - SE91 - See error codes in SAP
  - SPRO - Archive link
- BAPI:
  - Postings:
    - RFC_CALL_TRANSACTION_USING - Calling the screen sequences for Parking and final posting FI documents
    - BAPI_INCOMINGINVOICE_CREATE - Final match a MM document
    - BAPI_PO_GETITEMS - Retrieval of PO item data in posting process
    - BAPI_ACC_DOCUMENT_POST - Posting of FI documents
    - BAPI_BARCODE_SENDLIST - For archive link if it's used, it's not available for all installations
    - ARCHIV_BARCODE_GLOBAL - For archive link if it's used, it's not available for all installations
  - Master data:
    - BAPI_GL_ACC_GETLIST - GL account export
    - BAPI_COSTCENTER_GETLIST - Cost center export
    - BAPI_PROFITCENTER_GETLIST - Profit center export(Usually not used)
    - BAPI_FIXEDASSET_GETLIST - Fixed assets export
    - BAPI_INTERNALORDER_GETLIST - Internal order export
    - BAPI_PROJECTDEF_GETLIST - Project/WBS export
    - BAPI_EXCHRATE_GETCURRENTRATES - Currency rate export
- Custom functions:
  - Z_MEDIUS_VENDOR - Supplier export
  - Z_MEDIUS_GR - Purchase order information export
  - Z_MEDIUS_VAT_CODES - VAT codes export
  - Z_MEDIUS_CostCenter - Cost centers export
  - Z_MEDIUS_GlAccounts - GL accounts export
- Table access:
  - TCURR
  - COAS
  - TO52
  - T100

Dialogue user (for Medius consultants)

Dilaogue user to be used by Medius consultants to login in SAP and verify invoice postings during test phase.

- Additional transactions in SAP
  - SHDB/OSHDB - To perform recording
  - SE37 - For troubleshooting
  - SE16 - Table browser
  - OAC5 - Check barcode settings for given types
  - OAC0 - Archive link content repository settings
  - OAM1 - Monitor linked documents
  - FB03 - Display document
  - SU03 - User authorization
  - ME23N - Display PO
  - ME33L - View scheduling agreement PO
  - XK03 - Display vendor master data
  - MIRO - Post MM invoices
  - MIR4 - Display MM invoices
  - FBL1N - List parked documents
- Additional table access:
  - TOA01
  - BDS_BAR_EX