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MHC Software Pre-Requisites Setup Guide - Infor CloudSuite Financials & Supply Management and Global HR Integration

Document Purpose:

The purpose of this document is to communicate the requirements and pre-requisites for customers and project teams implementing Infor CloudSuite Financials & Supply Management (referred to as CSFSM or CSF in this document; sometimes referred to as v11 by customers) in a single tenant or multi-tenant deployment and/or Global Human Resources and Talent Management (GHR) in a multi-tenant deployment integrated with MHC Document Express, MHC Document Self-Service and/or MHC Image Express software. This document does not include the configuration pre-requisites for integration with Infor Payroll (v10), regardless of deployment location.

Note: MHC Software implementations involve solutions to address unique customer requirements; sections of this documentation may not apply to each Infor CloudSuite Financials and Supply Management and/or Global HR project. In addition to unique customer requirements, differences between multi-tenant and single-tenant environment configuration (and the version of Infor functionality) will be explained in each section of this document. Each MHC project team will coordinate with the Infor implementation project team to communicate what is and is not required for each project.

Document Sections:

**All sections refer to CSFSM multi-tenant implementations other than the Appendix*

- A. Required Setup of MHC User Accounts for Infor REST API Web Services Access
- B. Required Setup for MHC Integration via ION API
- C. Requests Specific to Document Output Scope – MHC Document Express Integration
- D. Requests Specific to GHR/Self-Service Scope – MHC Document Self-Service Integration
- E. Requests Specific to Document Imaging Scope – MHC Image Express Integration
- F. Troubleshooting Tips
- G. Appendix



A. Required Setup and Shakeout of MHC User Accounts for Infor REST API Web Services Access

MHC Software products use Infor REST Web Services to access (and in some cases, create) Infor CloudSuite Financials & Supply Management and/or GHR data. Specifically, MHC uses the raw REST web services, also accessible via a browser via Infor Public API documentation pages within a CloudSuite Financials or GHR implementation. This documentation articulates MHC's request for each Infor CSFSM project team to deliver a valid user account or accounts or grant adequate CSFSM and/or GHR permissions to the MHC service account(s) in order for MHC to support access to execute the Infor REST web services.

Each MHC project team will modify the full list of required access by business class in the table below and share it with the CSFSM project team.

1. MHC requests that each customer set up a Landmark user account named **MHCUser** with the authority to execute the REST web services against the business classes listed in scope for the project below for each environment (dev/prod/etc.). MHC can use the same user credentials in dev and prod or they can be different – each Infor project team can choose how they want to create the user accounts (e.g., create new security classes to match the requirements exactly or leverage existing security classes, etc.). Note the differences related to the ACTIONS supported for each business class below. The vast majority of the access that MHC requires is READ access (Action = Find and Lists – generic), but there are certain functions that require CREATE, UPDATE and DELETE permissions for projects involving OCR and imaging.

User: MHCUser

Password: *<to be provided by Infor CSFSM project team for EACH environment>*

CSFSM Landmark Business Classes – In Scope	Access Requirement Per Business Class
PurchaseOrder PurchaseOrderLine PurchaseOrderLineSource PurchaseOrderComment PurchaseOrderLineComment PurchaseOrderAndLineAddOnCharge PurchaseOrderReceipt PurchaseOrderLineDistribution PurchaseOrderLineDistributionDetail PurchaseFromLocation AddOnCharge POCode PurchasingVendor Buyer	Action = Find Lists – generic (read lists of data)

CSFSM Landmark Business Classes – Access Requirement Per Business Class	
In Scope	
BuyerGroup TermsCode FreightTerm ShipTerm InventoryLocation Requester Requisition RequisitionLineComment Contract ContractLine ContractLineComment Supplier SupplierSourceID PayablesInvoice PayablesInvoicePayment PaymentOutputFileHeader PaymentOutputFileDetail CashCode CashLedgerTransaction Vendor VendorAddress VendorLocation PostalAddress DeliveryAddress GeneralLedgerJournalControl GeneralLedgerJournalCompany ReceivableInvoice ReceivableInvoiceDetail CashLedgerPayablesPayment BillingInvoice BillingInvoiceLine BillingInvoiceComments BillingCompany SalesRepresentative Customer CustomerBillTo CustomerShipTo CompanyCustomer	
DocumentInterfaceInvoice	All Actions (Action = Find, Create, UpdateDocument, UpdateTitle, UpdateURL, CreateInvoiceFromInterface, Update, Delete) Lists – generic (read lists of data)

CSFSM Landmark Business Classes – In Scope		Access Requirement Per Business Class
DocumentInterfaceDetail DocumentInterfaceDistribution DocumentInterfaceError DocumentInterfaceAddOnCharge DocumentInterfaceComment		All Actions (Action = Find, Create, Update, Delete) Lists – generic (read lists of data)
Configuration Console permissions		MHCUser needs permissions to make configuration changes given the scope of most MHC projects

GHR/HCM Landmark Business Classes – In Scope		Access Requirement Per Business Class
Employee EmployeeAbsenceTransaction EmployeePayment HROrganization PersonnelActionEmployee WorkAssignment		Action = Find Lists – generic (read lists of data)
Configuration Console permissions		MHCUser needs permissions to make configuration changes given the scope of most MHC projects


**For Infor Cloud single-tenant CSFSM implementations where Infor CSFSM is hosted in the Infor Cloud, refer to the appendix for alternate instructions on how to test the API connections.*

2. In order to test the validity of the user account provisioned for MHC, the Infor implementation project team can test the setup. Note: These steps will be the first steps MHC will perform once a user account is provisioned and shared with MHC. In order to test the connectivity to ION API, the Infor implementation project team can test that our calls to ION API will work using the swagger tool within the Infor ION API application in Ming.le. See the following steps on how to do this:
 - a. Log in to **Ming.le** using the account provisioned to MHC (typically MHCUser)
 - b. Click the **app menu** and click **Infor ION API**
 - c. Go to **Available APIs**
 - d. Double click **CloudSuite Financials & Supply Management**
 - e. Select the **/FSM/fsm/soap** Endpoint **Documentation**

Available APIs

Suite Name *
CloudSuite Financials & Supply Management




Description *
Provides a next generation financial management and complete source-to-settle solution that gives you full visibility into your operations.

Suite Icon *


API Context *
FSM

Deployment Information **Endpoints**

Search

Endpoint	Description	Documentation	Details
https://mingle-ionapi.inforcloudsuite.com/.../FSM/fsm/mhttp	Landmark FSM Struts services		→
https://mingle-ionapi.inforcloudsuite.com/.../FSM/fsm/soap	Landmark FSM SOAP and REST services		→
https://mingle-ionapi.inforcloudsuite.com/.../FSM/fsm/soap/rest	Defined Landmark FSM REST services		→

f. Search for the Business Class in scope for testing

Available APIs

Available APIs / CloudSuite Financials & Supply Management / LandmarkFSMSoap







Endpoint https://mingle-ionapi.inforcloudsuite.com/.../FSM/fsm/soap

Description Landmark FSM SOAP and REST services

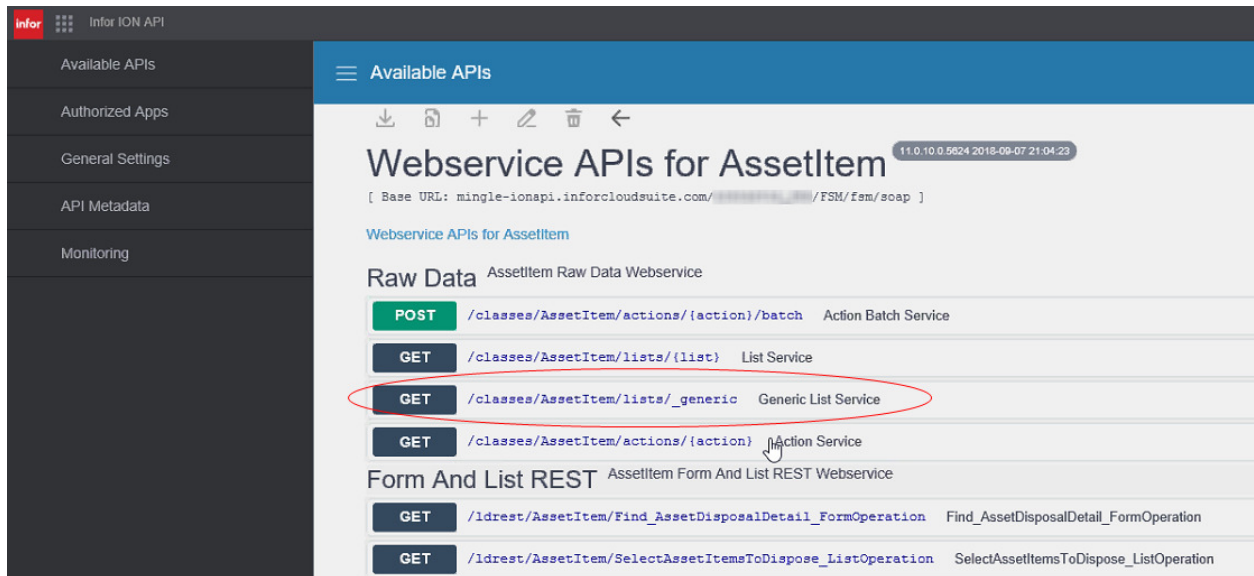
Resources **Documentation**

Download, Add, Edit, Delete, Refresh

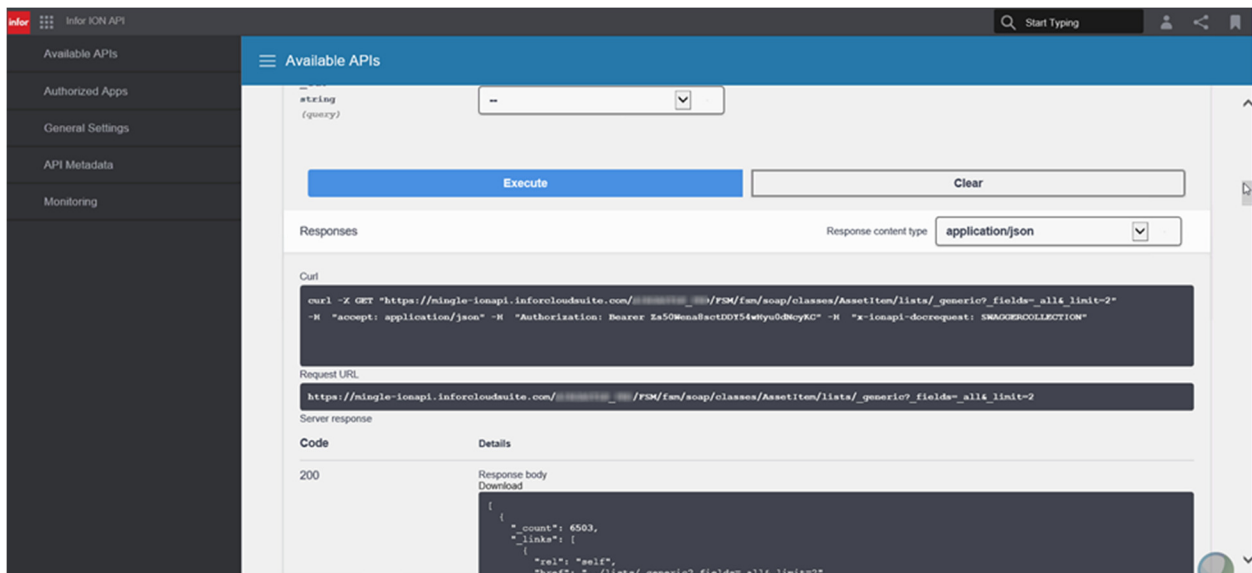
Search Item

Business Class	Description	Category	Documentation
ADBAccountMaster	ADBAccountMaster	dynamic	
ADBAggregateBalance	ADBAggregateBalance	dynamic	
ADBDailyAmount	ADBDailyAmount	dynamic	
ADBTransaction	ADBTransaction	dynamic	
AM115Am115sort	AM115Am115sort	dynamic	
AM117Am117sort	AM117Am117sort	dynamic	

g. Choose the **Generic List Service**.



- h. You may need to zoom out quite a bit, but there is a button on the right hand side to try this test execution.
- i. Choose any fields, set limit, set filter, etc., and then choose **Execute**. ***NOTE filters for _fts and _tts timestamps are in UTC time.





To test API connections outside of ION API:

Use the relative equivalent MT URL provided by the customer project team (CSFSM examples are listed below)

Syntax:

<https://fin-<tenant>-<type>.inforcloudsuite.com/<productline or suite example fsm>/soap/doco/rest/raw/home>

Example:

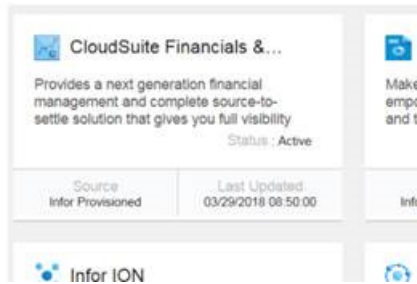
<https://fin-mhcs-trn.inforcloudsuite.com/fsm/soap/doco/rest/raw/home>

3. To test the security class access and connectivity between MHC software components on an application server and the Infor REST services is to use the MHCRestLink Library Testing Utility installed on the server where MHC software components will run. The MHC test utility mimics most closely what the software components will do and communicates back the results from an authentication, authorization and execution level. This step requires MHC involvement and will be completed once the initial shakeout tests for the user account are complete.

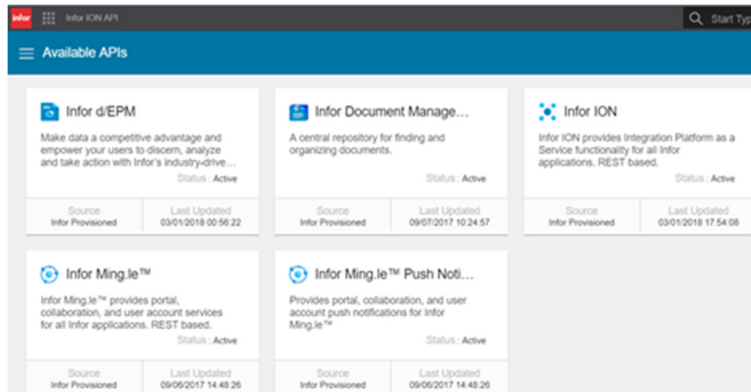
B. Required Setup for MHC Integration via ION API

This section is applicable for all CSFSM and GHR multi-tenant customers and all CSFSM single-tenant customers that require inbound and outbound requests to CSFSM to be processed through ION API. If the project is single-tenant without the use of ION API for authentication and integration, then this section can be skipped (the appendix includes references to several non-ION API setup steps). In future years, it is expected that all CSFSM and GHR implementations will include Infor OS components including ION API.

1. **Enable CSFSM and GHR REST API Access via the ION API Gateway:** Customer project team enables access to allow the CSF/GHR REST API layer to be reached via the ION API Gateway
 - Per Infor as of March 2018, the software required to enable this functionality is now available for multi-tenant customers via the deployment of a recent Critical Update (CU). MHC is unclear which tenant environments are already configured with this enablement or not based on the timing of the Infor change.
 - Within ION API Gateway, there should be a tile that reflects that CSFSM is “Active” as an Available API (as seen below):



- Here is an example where CSFSM is not yet enabled as an Available API:



- Per Infor, please refer to Infor documentation and training resources for guidance on how to complete this step. To be safe, MHC recommends that project teams open an Infor ticket to confirm this step is complete if you believe your tenant may still need the manual adjustment (e.g., *Please ensure our tenant: XXXX has the proper technical integration in place for the ION API Gateway to be able to reach the CSFSM (or GHR) REST API layer assuming the proper setup of an ION API authorized application authenticated call. At one point, there were manual steps required to enable this level of integration, and whether it is manual or automated, we would like confirmation that the integration is enabled for our tenant environments.*)
- NOTE: The **Infor ION API Administration Guide (Release 12.0.x)** is an excellent resource for information on the ION API administration and configuration. Refer to Infor documentation frequently to continue to use the most up-to-date documentation.

Current URL to guide (subject to change by Infor):

https://www.inforxtreme.com/esknowbase/root/DLPublic/47752/ionapi_12.0.x_ionapiag_en-us.pdf

Alternate access method: <https://docs.infor.com>

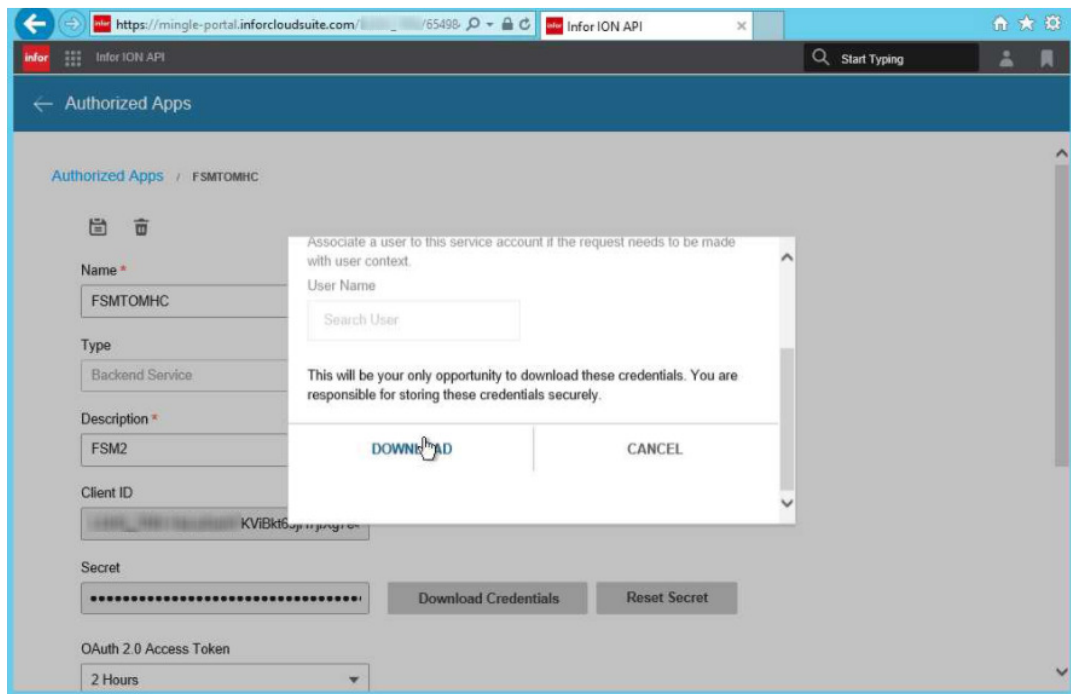


Technology > OS > Infor Operating Service Cloud Edition Version 12.0.x Index Page >
Administration Guides > Infor ION API Administration Guide > Infor Ming.le (OS) >
Infor Ming.le 12.0 > ION API > Infor ION API Administration Guide

2. **Configure CSFSM and/or GHR User Account for CSFSM and/or GHR REST API Access (and preferably, an ADFS enabled account):** Customer project team configures one or more CSFSM and/or GHR user account(s) for customer/tenant for MHC use (MHCUser) to access the CSFSM and/or GHR REST API layer (e.g., MHCUser). Also, during the course of the project, it is ideal if the MHCUser account is able to authenticate via ADFS to use that same user and log into the CSFSM and/or GHR application for troubleshooting, research, general data testing purposes and Configuration Console use.
 - Per Infor, please refer to standard Infor documentation for guidance on how to complete this step
 - In a subsequent section of this document (see Section C), the customer project team will be required to configure the MHC service account with access to select CSFSM and/or GHR business classes in Landmark, with the level of access required per the customer's scope for each business class (e.g., find, create, etc.)
 - NOTE: MHC project lead is responsible for refining the list of required business classes and permissions per each project's scope and providing it to the project team so that the MHCUser is only granted the minimum level of required permissions.
 - To increase project productivity, MHC requests that the MHCUser be configured to be able to log in via ADFS during the project timeframe. Post go-live shakeout, the ADFS enabled access can be removed, and the MHCUser account will remain as a service account with non-expiring access for ION API Gateway communications.
 - The MHCUser must also be granted the permission(s) to use Configuration Console.
3. **Register MHC as an Authorized Application in the ION API Gateway:** Customer project team registers MHC as an authorized client application in the ION API Gateway and shares the *.ionapi file generated via the process with the MHC project lead for each tenant environment. Refer to the **Infor ION API Administration Guide (Release 12.0.x)** (found in docs.infor.com) for instructions on how to register an authorized application.
 - During the process to authorize MHC as an application, choose "backend service" as the type in order to create a service account in ION and properly generate the saak and sask values in the *.ionapi file.
 - Infor ION API supports the export of the credentials file (*.ionapi) that includes the majority of the necessary information required to configure MHC integration to CSFSM and/or GHR via the ION API Gateway.

- Required fields in the *.ionapi file include:
 - Client ID (ci),
 - Client Secret (cs),
 - Service Account Auth Key (saak),
 - Service Account Secret Key (sask),
 - Authorization Server URL for tenant (pu),
 - Tenant ID API URL (ti) (which is used to construct a composite field including the ti value in the *.ionapi file + /CustomerApi/fsm), and the
 - IONAPI URL (iu).
- This information is required for EACH tenant customer environment in scope (PRD, TRN, DEV, etc.). Project teams should zip up and password protect the *.ionapi file to send it via email to MHC (with a separately emailed password) or use MHC's customer support site to share the file securely.

Screenshot of ION API Authorized Apps Configuration & *.ionapi File Creation



Sample *.ionapi file showing individual fields and values with fabricated data for illustrative purposes only:

```

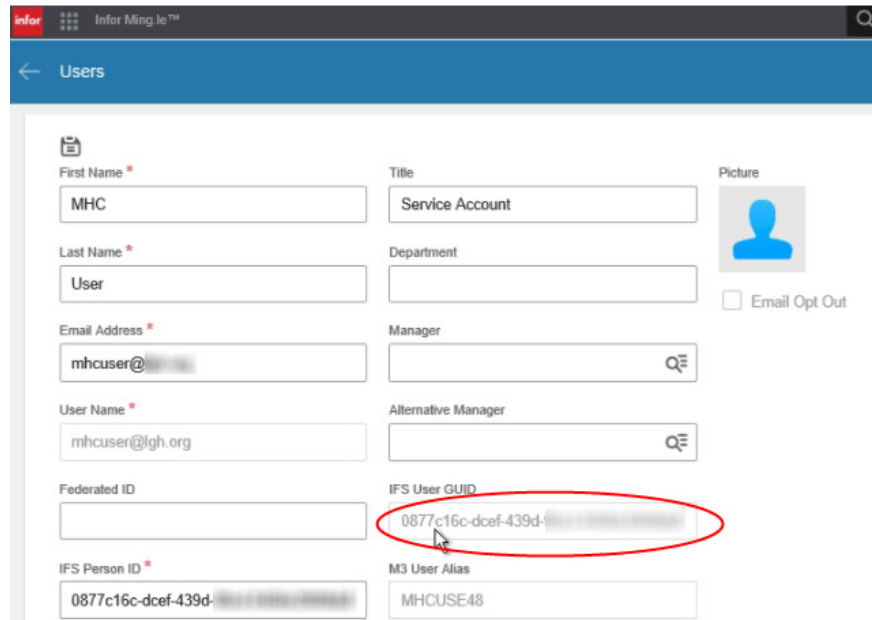
MHCEditedSample_MHCTrain.ionapi - Notepad
File Edit Format View Help
{
  "ti": "MHCS_TRN",
  "cn": "MHCTrain",
  "ci": "MHCS_TRN~mhcEDITk9RAAWt55HUMHCHyLqTHTG1Q1gnJJ2xacTaB",
  "cs": "mhcEDITyZSwMfocew9TWsaVBjP21Nn9oyarH9pFmxDG14Mz2Mp_4x1B7SgcZsMHCKjG8xdNsyd_eNGYVx50zeg",
  "iu": "https://mingle-ionapi.inforcloudsuite.com",
  "pu": "https://mingle-ssso.inforcloudsuite.com:443/MHCS_TRN/as/",
  "oa": "authorization.oauth2",
  "ot": "token.oauth2",
  "or": "revoke_token.oauth2",
  "ev": "U9478358999",
  "v": "1.9",
  "saak": "MHCS_TRN~mhcEDITdkxY0qv3Vnf_A4H871ySvhg1zMHCIfqHXu16NY4WVgX9zRMKi9IqQVprFZoFmPHP-cckk5Taq44g19w",
  "sask": "mhcEDITy1PpXchZFtdC9gG9w9OHhI6F3LDFKpXe9-Uqzmw8BspNtpdIHtMHCn97RPe8x13VDoDtDhuKY_ktT1g"
}

MHCEditedSample_MHCTrain.ionapi - Notepad
File Edit Format View Help
{
  "ti": "MHCS_TRN",
  "cn": "MHCTrain",
  "ci": "MHCS_TRN~mhcEDITk9RAAWt55HUMHCHyLqTHTG1Q1gnJJ2xacTaB",
  "cs": "mhcEDITyZSwMfocew9TWsaVBjP21Nn9oyarH9pFmxDG14Mz2Mp_4x1B7SgcZsMHCKjG8xdNsyd_eNGYVx50zeg",
  "iu": "https://mingle-ionapi.inforcloudsuite.com",
  "pu": "https://mingle-ssso.inforcloudsuite.com:443/MHCS_TRN/as/",
  "oa": "authorization.oauth2",
  "ot": "token.oauth2",
  "or": "revoke_token.oauth2",
  "ev": "U9478358999",
  "v": "1.9",
  "saak": "MHCS_TRN~mhcEDITdkxY0qv3Vnf_A4H871ySvhg1zMHCIfqHXu16NY4WVgX9zRMKi9IqQVprFZoFmPHP-cckk5Taq44g19w",
  "sask": "mhcEDITy1PpXchZFtdC9gG9w9OHhI6F3LDFKpXe9-Uqzmw8BspNtpdIHtMHCn97RPe8x13VDoDtDhuKY_ktT1g"
}

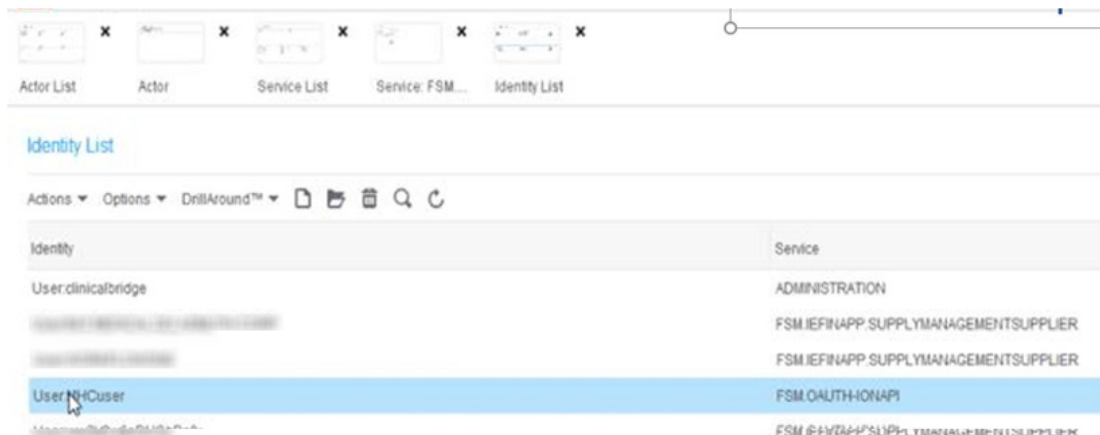
```

Note: Contact MHC if you plan to use the ION API Scopes Authorization feature.

4. **Additional Required Inputs to Support CSFSM and/or GHR Integration with MHC:** In addition to the 7 required fields found in the *.ionapi file, MHC needs to have the following 2 values:
 - the **IFS user GUID** for the MHC service account user in Mingle with permissions to access CSFSM and/or GHR business classes based on project scope (MHC project team will communicate specific business class and access levels per project scope for the user)



- the **OAuth Service Name** (a multi-tenant instance setting that is automatically created through the process: MT instance > tenant > Identity List for User.MHCUser > service value...see sample screenshot below showing where to find the value)
 - Expected to be fixed value for most multi-tenant instances as:
 - FSM.OAUTH-IONAPI
 - (or possibly HCM.OAUTH-IONAPI)



Identity	Service
User:clinicalbridge	ADMINISTRATION
...	FSM.IEFINAPP.SUPPLYMANAGEMENTSUPPLIER
...	FSM.IEFINAPP.SUPPLYMANAGEMENTSUPPLIER
User.MHCUser	FSM.OAUTH-IONAPI
...	FSM.IEFINAPP.SUPPLYMANAGEMENTSUPPLIER

5. **Registration with MHC Gateway for OCR Scope:** If integration with MHC AP Invoice Automation (OCR) or MHC AP Invoice Imaging is in scope for the project, the customer project team must:
 - Request from the MHC project team that MHC register CSFSM as a valid client application in the MHC Gateway in order to meet Infor's requirements for outbound Oauth2 authentication integration via ION API. This setup is required so that CSFSM



can call MHC's REST API services to retrieve AP Invoice URLs, image bytes and send updated invoice index data back to MHC. MHC will share the credentials file with the project team so that CSFSM and/or ION API Gateway can be properly configured.

- Also, project teams must complete all relevant steps in Section E of this document.

6. **Image Retrieval, Data Capture and Upload Functionality via Ming.le Forms:** If integration with MHC Image Express is in scope for in-context retrieval, data capture and upload of images via Infor forms (beyond AP Invoices), the customer project team should be prepared to work with the MHC project team to make configuration changes via Infor Configuration Console. The MHC project team has documentation and will guide the resource through any necessary configuration changes via a web meeting based on the customer requirements and project scope. This step is not directly related to ION API itself, but may be required for customers running versions of Infor with ION API and Ming.le 12 or later. Some project implementations will also involve the deployment of an MHC Contextual Application/Home Page/Widget in Ming.le 12 (similar to what MHC has offered with Infor 10 and Ming.le 10 and 11 for many years).

C. Requests Specific to Document Output Scope – MHC Document Express Integration

- Customer must create an MHC user account for FTP purposes (needs access to select server/network locations accessible to MHC software components and must have sufficient permissions to read/write files)
- Customer must configure an FTP file output location for Infor Process Automation (IPA) flows to secure FTP files, such as the location where AP Payment output files, Purchase Order documents, AR invoice statement files, 1099s and other files will be sent
- AP Payment Output Setup for MHC Document Express:
The steps in the PDF document referenced here can be executed by MHC or Infor CSFSM project team members to prepare for AP payment processing using MHC Document Express. The steps need to be taken in each applicable environment. Contact MHC for the updated document.
- Additional documentation specific to Document Express integration will be shared by the MHC project team members to cover additional scope and setup requirements.





D. Requests Specific to GHR/Self-Service Scope – MHC Document Self-Service Integration

- Not applicable at this time

E. Requests Specific to Document Imaging Scope – MHC Image Express Integration

- Configure the Image Express server to have a **certificate** using the machine name.
- Ensure connectivity and **proper DNS entries** between the Infor MT instance and the customer's Image Express server, including the **opening of any ports** within the customer firewall if necessary. Note that the **Image Express server with port 443 needs to be publicly available over the Internet**. Customers **may need a reverse proxy** configured to ensure proper connectivity.
- Log into Ming.le as MHCUser or an authorized administrator, navigate to Infor ION API in the App menu and configure the ION API Gateway "**Available API**" as FSM_TO_MHC to connect with the MHC Gateway for CSFSM outbound calls.
 - **Target Endpoint URL:** This points to the MHCAuthenticationGateway. It needs to be secure and use the fully qualified domain name of the server where the MHCAuthenticationGateway is installed with **/api/ixqe** at the end.
 - **Token Endpoint:** This is the same url as the Target Endpoint except it has **/as/token** at the end.
 - **Grant Type:** Resource Owner
 - **Username/Password & Client ID/Client Secret:** These values come from the file produced by the **MHCGatewayAdmin**.
- Per Infor, please refer to Infor for guidance on how to use ION API Gateway if necessary.

← Available APIs

Available APIs / FSM_TO_MHC / api/ixqe

Target Endpoint URL *

https://...org/api/ixqe

☐ Ignore Certificate Errors

Target Endpoint Description

Proxy Endpoint URL *

api/ixqe

Public Facing Proxy Endpoint

https://mingle-ionapi.inforcloudsuite.com/LGHS_PRD/Customer...

Proxy Security

OAuth 2.0

Target Endpoint Security

☐ Use Mutual SSL

Authentication Type

OAuth 2.0

Token Endpoint *

https://...org/as/token

Revoke Endpoint

Grant Type *

Resource Owner

Vendor Group Settings:

- For CSFSM Payables Invoice integration, customer must configure the Payables setup to integrate with MHC Software, including setting a document key. Customers can choose whether to save the document locally in Infor, or to always refer to the Image links in MHC. As of June 2018, other Infor CSFSM functionality does not function properly if the document is not saved locally in Infor, so MHC recommends that optional checkbox be checked. Role: Payables Administrator > Setup > Vendor Group > AP Invoice Automation tab.
- **Document Management Settings:**
 - Select the checkbox “Using Document Management System” and fill in the Document Management Settings. Note the system key is the encryption key set in IxQueryEngine.

Main	General Settings
AP Invoice Approval	Corporate Calendar: <input type="text"/>
Supplier Created Invoices	<input type="checkbox"/> Allow Distribution Entry During Invoice Approval
	Invoice Post Date Default Option: <input type="text" value="Invoice Date"/>
	<input checked="" type="checkbox"/> Using Document Management System
	Document Management Settings
	Document Management Partner: <input type="text" value="MHC Software"/>
	Document Management System Key: <input type="text" value="password1"/>
	<input checked="" type="checkbox"/> Store Document Locally

- **OAuth Record:**

Use the values from the FSM_TO_MHC ion.api file.

 - Application Key: (ci)
 - Application Secret: (cs)
 - Resource User: (saak)
 - Resource Password: (sask)
 - Authorize URL: (pu/oa)
 - Access Token URL: (pu/ot)

*O Auth	MHCOAuth
Type	Generic 20
Application Key	ciBkt69jH7jIXg7e4Wt8Nnr
Application Secret	csBthBEZUSvIXe8evNZv
Resource User	saak2RHY3NTcmdVjV6935Mn
Resource Password	saskFw1IKt81cSrtOXUjZErPlvjZ
Token Name	
Authorize URL	https://mingle-ssoinforcloudsuite.com:443/
Access Token URL	https://mingle-ssoinforcloudsuite.com:443/

○ **Configuration Parameter:**

- **Key:** MHCDOCUMENTSERVICEMT.WSI.ENDPOINT
- **Value:** ION API Target Endpoint (must have standard port)

Component	config	Predefined Component	config	Pr
Key	MTSERVICEMT.WSI.ENDPOINT	Predefined Name Key		
Type	Alpha			
Length				
Precision				
Value	https://mingle-ionapi.inforcloudsuite.com/			

Note: The Image Express value entered into the configuration parameters should reflect the MHC ION API Gateway path with a redirect to the relevant MHC API. **Only Standard ports (443) can be configured for the Target Endpoint URL.** Contact the MHC project team to work with Infor to configure the correct URL for the multi-tenant instance in the configuration parameters. Remember that the Image Express endpoint must be https.

○ **UserTemplates:**

Note: These User Templates must be added via **Rich Client**. It is not accessible yet via Ming.le in the Vendor Group setup section.

User Template

Actions ▾ Options ▾ DrillAround™ ▾

*Template Name: MHCSaveDocumentData_Template

*Business Class: PayablesInvoice

Description: MHC Software 3rd Party

*Template: Open

File Name: MHCSaveDocumentData.json

Mime Type: application/json

User Template

Actions ▾ Options ▾ DrillAround™ ▾

*Template Name: MHCGetDocument_Template

*Business Class: PayablesInvoice

Description: MHC Software 3rd Party

*Template: Open

File Name: MHCGetDocument.json

Mime Type: application/json

F. Troubleshooting Tips

3. Image Express documents are unable to interface into Infor:

- What is the error message or response visible in the MHC software attempting to interface invoices?
- Does the Landmark user account we were given create invoices via swagger rest services?
- Is the data valid? Can the data be interfaced via SoapUI or an equivalent API tool?
- Are the web.config parameters filled out correctly for the InforDataExchangeService?
- If not, what is the error message?
- Are the Configuration Parameters configured correctly in Infor?
- Is MHC set up properly as the document management system?
- Is there technical connectivity between the servers (wherever CSFSM is hosted and where MHC is hosted)? If multi-tenant, are both MHC and CSFSM registered as valid clients in each other's Gateway configuration?
- **Did Infor follow the same steps they have had to do in all environments cited in Infor ticket # 10465747 or 11415189?**
 - i. **The following steps were documented in both of these tickets:**
 - 1) Needed to add the login scheme value for both the THICKCLIENTLDAPLS and THICKCLIENTLDAPLM services and restart WAS application server
 - 2) needed to map the soap module to the LMDAPBIND web port, generate plugin, propagate plugin, restart the Web Server
 - 3) edit the LASYS DIR/environment.properties file to add the mapping from 2 so this change will not be lost
 - 4) added the host entry for the customer ADFS server
- What do the Landmark log files state (note there are different log files for Infor inbound/outbound services; the log locations and names are listed in the troubleshooting section of this document)?

4. ION API Connectivity Issues:

- Was the ION API file downloaded with the right MHCUser credentials?
- There was a mismatch on the OAUTH key between landmark and Cloud Suite Provisioning. Once the key between the two was corrected the issue was resolved.
- Xtreme incident# 12529977 from Infor:
We've cleaned up clean the tab for the Deployment information (with bogus value) that's causing the ION API calls not to work in TRN. We deleted the non-Infor version of the CSF API which allowed the Infor Provisioned API to show up again. You can refer to Xtreme incident# 12529977 for details.

5. **Requisition Document Upload Functionality does not work – Infor server cannot access the MHC InforDataExchangeService website:**
 - TCP\port – the firewall needs to give access to the MHC InforDataExchangeService port number
6. **RequisitionExtract fails – cannot download RequisitionLineComment files programmatically (Single-Tenant via port 1447):**
 - a. Incident # 12555136
 - i. To correct this last issue, they had to map ldapbind to Lawson-struts
7. **SINGLE-TENANT - CSF:** Each Infor CSFSM and/or GHR project team should confirm that the following configuration is set up properly to support access to execute the Infor REST web services. The SSO Configuration must be set up properly in order for MHC to make various action calls to the Infor REST web services programmatically. Using the example below from a single-tenant environment, verify that the following screenshot is configured specifically for the system by accessing this URL for each impacted environment:

<https://XXXXXX-lm01.cloud.infor.com:1447/ssoconfig/SSOCfgInfoServlet>

<https://<CSFLandmarkserver>:<port>/ssoconfig/SSOCfgInfoServlet>

Note: If this URL above is not accessible and/or if any of the properties values below are blank, MHC will not be able to make successful calls to the Infor REST web services and the project team must complete the proper configuration before subsequent testing can commence.

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```

▼<SSOCONFIG version="">
  ▼<PRIMARYSERVICE name="SSOPV2">
    <PROPERTY name="authen_type" value="Form"/>
    <PROPERTY name="usernamefield" value="_ssoUser"/>
    <PROPERTY name="passwordnamefield" value="_ssoPass"/>
    <PROPERTY name="loginurl" value="http://INFORXI.MHC:82/sso/SSOServlet"/>
    <PROPERTY name="httpurl" value="http://InforXI.mhc:82/lawson"/>
    <PROPERTY name="origurl_field_name" value="_ssoOrigUrl"/>
    <PROPERTY name="authurl_field_name" value="_ssoAuthUrl"/>
    <PROPERTY name="sessionto" value="60"/>
    <PROPERTY name="change_password" value="false"/>
    <PROPERTY name="passiveclientssoenabled" value="false"/>
  </PRIMARYSERVICE>
</BLACKBOXSERVICES></BLACKBOXSERVICES>
</SSOCONFIG>

```

G. Appendix

- A. Optional Scope Landmark Business Classes** – This section should include all OUT OF SCOPE business classes for the given project. This document should retain ALL possible requirements in case scope changes and additional access is required for the account used to execute the Infor RESTful web services. The assumption is that the requirements listed in the section above plus the business classes listed below comprise the full suite of possible business classes included in a full-scope CSFSM/MHC implementation.

Additional Landmark Business Class Options – OPTIONAL SCOPE	Access Requirement Per Business Class
TBD	TBD

- B. Workaround for SaveDocumentData to function when Documents are routed for approval in CSFSM – (Only needed for customers on CU28 and earlier. If customer has this active with CU28 it will break functionality)** Adding two new Configured Actions, FinalRelease and UpdateAfterMatch, for business class PayablesInvoice. The following will be added to the Exit Rules. See MHC Internal documentation ‘SaveDocumentData Infor Work-A-Round for Approvals.pdf’ for more details.

```

if (Company.VendorGroup.UsingDocMgmtSystem
and Company.VendorGroup.DocMgmtPartner.MHCSoftware
and CreationSource.ImagingSystem)
    if (MHCAuthExists)
        MHCKey = Company.VendorGroup.DocMgmtSystemKey
        MHCUser = ("Infor: " + actor)
        MHCDocID = ImageIndex
        invoke SaveDocumentData MHCDocumentServiceMT
            invoked.JSONRequest = MHCSaveDocumentDataJSON
    
```

- C. CSFSM REST API Connectivity Test - For Infor Cloud single-tenant CSFSM Implementations (Infor CSFSM is hosted in the Infor Cloud):**

- a. Modify the URL below to include the relevant server name in place of <server>. Leave all other syntax in place. See the example below.

Syntax:

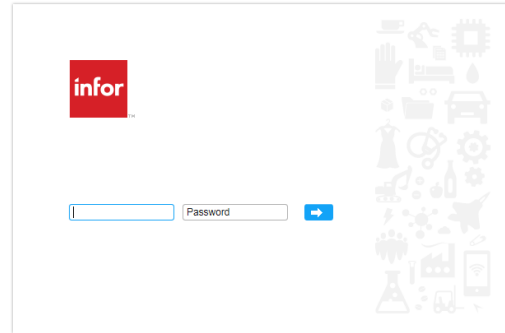
<https://<server>-lm01.cloud.infor.com:1447/lmcsf/soap/doco/rest/raw/home>

Example:

<https://MHCdev-lm01.cloud.infor.com:1447/lmcsf/soap/doco/rest/raw/home>

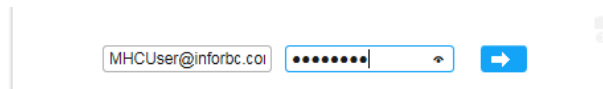
SINGLE-TENANT/ON PREMISE: Use the relative equivalent URL provided by the customer project team

- i. From within the customer network (VPN or internal), test the URL. If 1447 returns an error, try port 1443 or whatever port the customer team communicates for the rest services. The user should see a login prompt to Infor Landmark, such as:

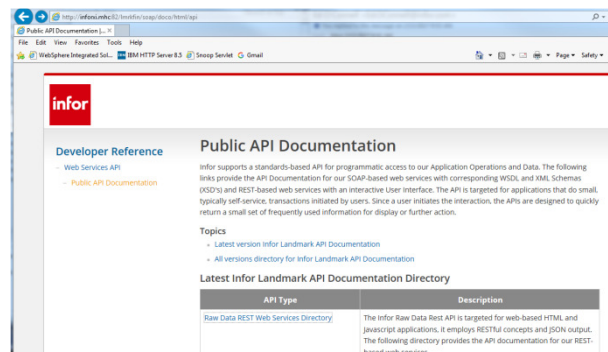


- ii. Enter the MHCUser credentials for the account using the following syntax (it is not a valid test to try to enter ADFS credentials/domain or try to access any other ADFS-authenticated URL):

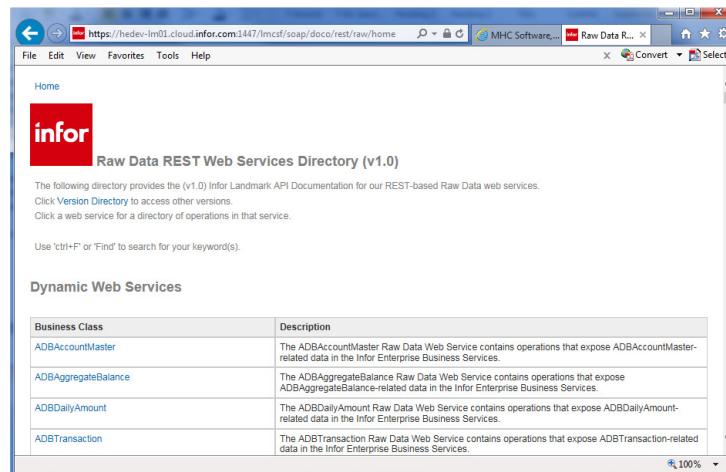
MHCUser@inforbc.com and enter the provided password and click the arrow.



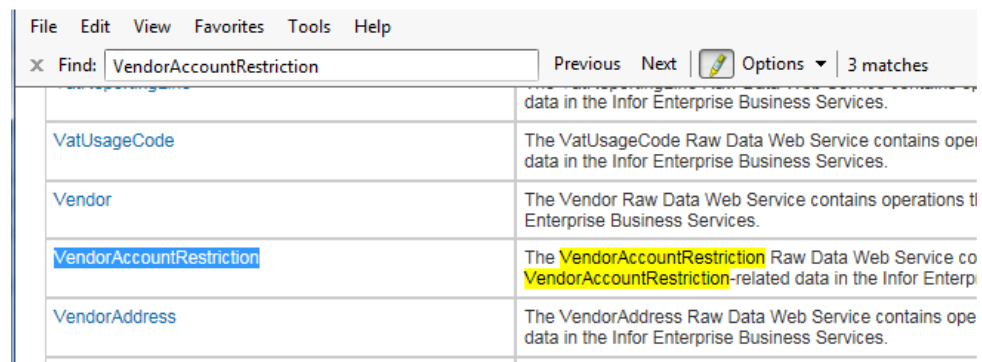
- iii. User should see a web page that looks similar to the following screenshots:
- iv. Click the Raw Data REST Web Services Directory (or equivalent link) and then the user will see the list of web services



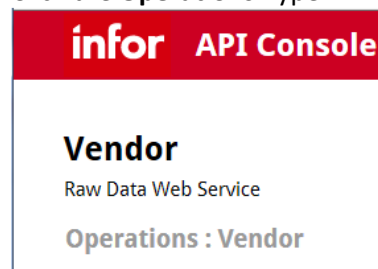
If the user receives an authentication error or is unable to log in, the user account may not be configured properly or the syntax entered for the username or password may be wrong.



- v. The user can click <ctrl> + <F> to open a browser “Find” window and can enter the following Business Class name and do a search: **VendorAccountRestriction**
- vi. Select the hyperlink for “**Vendor**” immediately above the hyperlink that was found for VendorAccountRestriction



- vii. Click the **Operations** hyperlink



- viii. Click on the hyperlink for the link that ends in **/_generic** (typically 5th from the bottom)

GET /classes/Vendor/lists/_generic

- ix. Highlight the **_all** option for the **_fields** parameter. Enter a limit if desired to limit the # of records returned (i.e. **_limit** is set to 25 rows in this example). Choose the desired **_out** option, such as CSV in this example.

GET /classes/Vendor/lists/_generic List Service

Implementation Notes
List Service

Parameters

Parameter	Value	Description	Parameter Type	Data Type
_fields	all UniqueID VendorGroup Vendor	Fields To Return	query	String
_limit	25	How many records to return.	query	String
_position		Position to value of fields. true	query	String
_filter		Filter name::value name::value name::value	query	String
_setName	Set10 Set2 Set3 Set4	Name of Index	query	String
_pageNav	true (default)	Include Paging Navigation.	query	boolean
_out	XML JSON CSV	Output Format	query	String

[Try it out!](#)

- x. Click the **“Try it out!”** button.
- xi. Below, you will see a **Request URL**, **Response Body** and a **Response Code**. The Response Code should be 200 to reflect success. The output will appear in XML, JSON or CSV format in the Response Body section and can be copied and pasted elsewhere as needed for analysis purposes.
- xii. If the Response Code is anything other than 200, troubleshooting is required. It could mean a permissions issue with the MHCUser account or it could mean that there is something else in the Landmark environment that is not configured properly. Even if 0 results are returned, the Response Code should be 200.
- xiii. This same test can be repeated for each business class in scope that the provisioned user account was configured to support AND for each Infor CSFSM environment.

D. Document Management Partner Configuration and Setup for Single Tenant CSFSM

For CSFSM Payables Invoice integration, customer must configure the Payables setup to integrate with MHC Software, including setting a document key. Customers can choose



whether to save the document locally in Infor, or to always refer to the Image links in MHC. As of June 2018, other Infor CSFSM functionality does not function properly if the document is not saved locally in Infor, so MHC recommends that optional checkbox be checked. Role: Payables Administrator > Setup > Vendor Group > AP Invoice Automation tab.

Set up Vendor Group Configuration

Main | **AP Invoice Automation** | Supplier Created Invoices

General Settings

Corporate Calendar: THE SYSTEM CALENDAR

☒ Allow Distribution Entry During Invoice Approval

☒ Using Document Management System

Document Management Partner: MHC Software

Document Management System Key: *****

☒ Store Document Locally

Invoice Post Date Default Option: Invoice Date

Customer must set up Configuration Parameters to configure to MHC endpoints for web services integration.

- **SINGLE-TENANT (and non-ION API use):** Customer should use IP address of MHC Image Express server instead of machine name to avoid network resolution issues. MHC Image Express server must have a dedicated IP address to integrate with CloudSuite Financials in an Infor Cloud environment. Role: Administration Console > Configuration Parameters tab. *NOTE: If customers choose to use the machine name of the Image Express server, they must first confirm that the "hosts" files are set up correctly in order for the Infor server to be able to communicate with the Image Express server using machine names.*

Configuration Parameter

Actions Options DrillAround™

Component config

Name MHCDOCUMENTSERVICE.WS.ENDPOINT

Type Alpha

Length

Precision

Value http://10.46.101.28:9001/API

Configuration Parameter

Actions Options DrillAround™

Component config

Name MHCDOCUMENTSERVICE.WS.WSDL

Type Alpha

Length

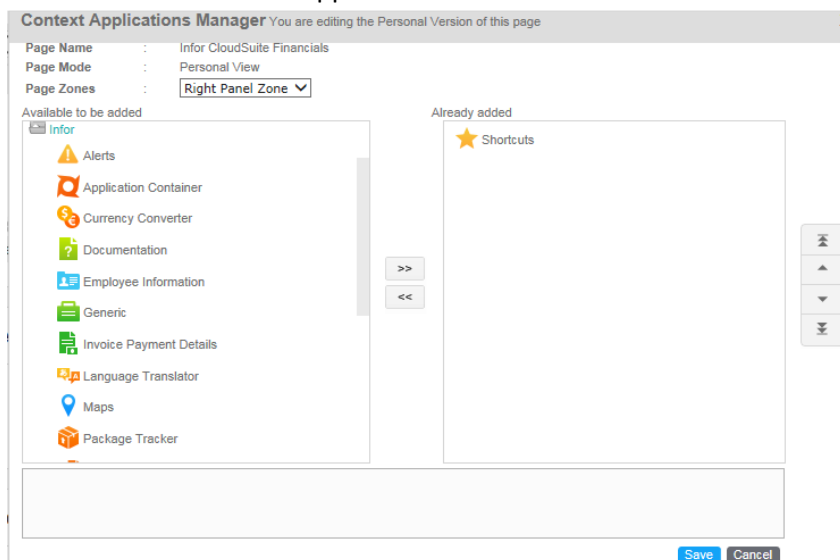
Precision

Value http://10.46.101.28:9001/API/IXDocumentService.ws

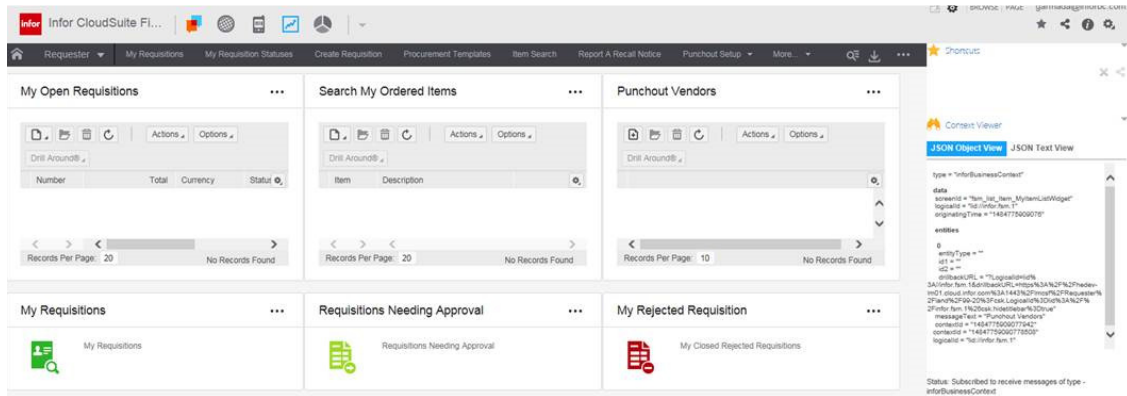
E. MHC Image Retrieval for CSFSM Ming.le 11 Implementations

* * The following section covers instructions for Ming.le 11 functionality in single-tenant CSFSM environments. Contact MHC regarding enablement of MHC's Ming.le 12 Contextual Application functionality in a multi-tenant or single-tenant ION API-enabled/Ming.le 12 environment. MHC is awaiting input from Infor who has not yet released the SDK or documentation for Ming.le 12.

- In order for customers to be able to retrieve images in MHC Image Express in context within the Ming.le 11 application (i.e., invoice images, payment images, PO images, etc.), customers must enable context messaging in their Infor implementation (customers deploying Infor CloudSuite Financials in the Infor Cloud should have context messaging enabled by default)
- Customer project teams must configure the Context Viewer contextual application via Ming.le on the SHARED Ming.le page as one of the deployed contextual applications
 - Here is a view showing no Context Viewer application available to be added as a Context Application



- Here is a view showing the successful addition of the Context Viewer application on the **shared** Ming.le page (as opposed to a personal page...see right hand margin)



- Once the Context Viewer application is added to the page, CSFSM customers should set their Ming.le ContextViewer application to subscribe to **“inforBusinessContext”** messages (Edit Web Part > modify settings)
- The Context Viewer application should show the following message at the bottom of the ContextViewer application: Status: Subscribed to receive messages of type – inforBusinessContext

