



Infor CloudSuite Business Configuration Guide for Infor ION

Infor CloudSuite 9.00.30
ION 11.x

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About this guide

This guide provides configuration and implementation information for the integration of Infor CloudSuite with Infor ION when ION is used to exchange data with another Infor product or third-party product. This document describes configuration requirements and provides setup instructions. It describes the ION connection points that are used in the integration. This document provides information about the business events or user actions in Infor CloudSuite that send Business Object Documents (BODs) to ION Connect. Except where noted, the information in this guide applies to both ION installed on-premise and ION Cloud Edition (CE).

Intended audience

This guide is intended for the system administrator or consultant who configures Infor CloudSuite for use with ION. Before you read this guide, ensure that you are familiar with the other guides listed in “Related documents.”

Required knowledge

To configure Infor CloudSuite with ION, you must have experience or knowledge in these areas:

- Understand the concepts behind Infor ION and BODs, and how the concepts relate to this product. See these topics:
 - “BOD overview” on page 37
 - “Infor ION overview” on page 15

Related documents

You can find the documents in the product documentation section of the Infor Xtreme Support portal, as described in “Contacting Infor” on page 10.

Infor ION documents

For more information about Infor ION, see these documents:

- *Infor ION Desk User Guide*, if you are using ION CE
- *Infor ION Connect Administration Guide* and *Infor ION Process Administration Guide*, if you are using ION on-premise
- *Infor ION Installation Guide*

Documents related to ION integrations

This table shows the types of documents that are related to ION integrations and their purpose:

| Document type | Purpose |
|--|---|
| <i>Infor CloudSuite Business Outbound BOD Mapping and Descriptions</i> | For each BOD that is sent from the product, this document provides the source and definition of the data in each element that is sent to ION. This document also provides details about the data that is published. |
| <i>Infor CloudSuite Business Inbound BOD Mapping and Descriptions</i> | For each BOD that the product has certified, this document provides the details about how each product receives information or processes requests from the inbound BOD. For example, the source might be an extension product, a result of a workflow, or a drill back function from Infor Ming.le. If a BOD updates a source table, the exceptions and handling are described. |
| Cross BOD mapping and descriptions for integrations between this product and another product | These documents provide end-to-end integrated BOD mapping details for BODs that are exchanged between this product and another product. They describe the exceptions and handling requirements by element. |
| <i>Infor CloudSuite Business Workflow and Alert Content Examples for Infor ION</i> | This document provides information on the event monitors and workflow models that have been created for the BODs that are published by this product. This document includes recommendations on how to customize the standard ION content to meet your requirements. |

| Document type | Purpose |
|---|--|
| Integration guides for integrations between this product and another product | These documents provide details about integrations between this product and another product. They contain requirements, configuration instructions, an overview of the integration, and any verification or troubleshooting steps. |
| <i>Infor CloudSuite Business Configuration guide for Infor Ming.le</i> | <p>This document provides prerequisites and instructions to deploy the product in Infor Ming.le, either as a plug-in or by other methods.</p> <p>The guide describes the configuration of the product to use Single Sign-On (SSO) technology through IFS/ADFS, Active Directory or other methods. It may contain a reference to another guide where the SSO setup is described more fully.</p> <p>This guide also includes instructions to configure Infor Ming.le to launch drillbacks to the product. This guide may include product-specific information that is needed to use the product within Infor Ming.le or troubleshooting information.</p> |
| <i>Infor CloudSuite Business User Guide for Infor In-Context BI</i> | This document includes the content and purpose of each report. This guide includes a reference to the <i>Infor Ming.le Installation and Configuration Guide</i> for installation instructions. |
| <i>Infor CloudSuite Business Configuration Guide for Infor Business Vault</i> | This document provides implementation information for the BOD integration between the product and Infor Business Vault for use by Infor Reporting and Infor Business Analytics. This guide describes the configuration requirements and provides setup instructions. It includes information about how to verify and troubleshoot the integration. |

| Document type | Purpose |
|---|---|
| <i>Infor CloudSuite Business Configuration Guide for Infor Federation Services (Single Sign On)</i> | This document provides product-specific requirements and implementation information for using single sign on based on Infor Federation Services. Because using single sign on is also associated with the product's web user interface, the product's configuration guide for Infor Ming.le might include additional information about single sign on or Infor Federation Services. |

Not all of these documents are required to set up this integration. For a list of documents that are required for this integration, see the integration checklist within this document.

Contacting Infor

If you have questions about Infor products, go to the Infor Xtreme Support portal at www.infor.com/inforxtreme.

If we update this document after the product release, we will post the new version on this website. We recommend that you check this website periodically for updated documentation.

If you have comments about Infor documentation, contact documentation@infor.com.

Ensure that all requirements and prerequisites are met.

Required products

Ensure that you have installed and configured these products:

- Infor Federation Services

Infor Federation Services is installed with Infor Ming.le. See the appropriate installation guide for Infor Ming.le. If you plan to use Infor Federation Services without using other Infor Ming.le functionality, see the *Infor Ming.le Installation Guide for Standalone IFS*.

Note: IFS must be installed on-premise only if ION is also installed on-premise. If you are using ION CE, then IFS is not installed on-premise.

- Infor ION Desk and Infor ION Connect

The server where ION is installed must be able to connect to the servers where you install Infor CloudSuite and other BOD-enabled products.

- If you are installing ION on-premise, see the *Infor ION Installation Guide*.
- If you are using ION CE, then ION Desk and ION Connect are not installed on-premise.
- If you are using ION CE with Infor CloudSuite Business on-premise, you must install the Enterprise Connector as part of the configuration steps in “Connecting Infor CloudSuite to Infor ION” on page 19. The Enterprise Connector should be installed on or near the application server. The server on which the Enterprise Connector is installed must have these prerequisites:
 - Windows 2012 and Windows 2012 R2
 - JDK 7 (64 bits) update 55 or later, or JDK 8 (64 bits) update 45 or later installed
- Infor CloudSuite Business 9.00.30.

If Infor CloudSuite Business is installed on-premise, see the *Infor CloudSuite Business Installation Guide*.

Required information

During the planning phase, you must provide this information:

- Name of the Infor CloudSuite instance or logical ID that is used to connect with Infor ION
- Tenant ID that is used to connect the product to ION
- Enterprise organization structure, also known as accounting entities, and the mapping of Infor CloudSuite sites to other BOD-enabled products
- Infor CloudSuite sites that are used in the integration, and which site is the bootstrap site
- Names of physical locations where your Infor CloudSuite databases exist, if your company has multiple physical locations.

Chapter 2 Integration checklist

2

Follow this checklist to integrate this product with Infor ION:

| Complete | Task | Reference |
|--------------------------|--|--|
| <input type="checkbox"/> | Collect the documents listed in the next column from Infor Xtreme. These documents are required for this configuration. | <i>Infor ION Connect Administration Guide</i> <i>Infor ION Process Administration Guide</i> |
| <input type="checkbox"/> | Review the description of the Infor CloudSuite configuration with ION. | “Integration with other products through ION” on page 16 “Concepts and definitions specific to this ION configuration” on page 16 |
| <input type="checkbox"/> | Configure Infor CloudSuite for integration with Infor ION. | “Configuring Infor CloudSuite ” on page 19 |
| <input type="checkbox"/> | Configure an Infor CloudSuite connection point, and optionally generate and activate ION document flows between Infor CloudSuite and other products. | “Connecting Infor CloudSuite to Infor ION” on page 25 <i>Infor ION Desk User Guide</i> , if you are using ION CE |
| <input type="checkbox"/> | Publish BODs. | “Publishing BODs” on page 31 |
| <input type="checkbox"/> | Verify the configuration. | “Verifying the configuration” on page 33 <i>Infor ION Connect Administration Guide</i> |

Before you complete the configuration tasks, you must understand how Infor CloudSuite integrates with other products through ION. You should also be familiar with a list of related concepts and definitions

Infor ION overview

Infor Intelligent Open Network (ION) is an enterprise messaging system that integrates Infor products with each other and with non-Infor products. Transactional and master data is passed between products as business object documents (BODs) that are routed through ION. ION also enables customers to set up workflows, design and activate business event monitors, and manage tasks and alerts across products. Infor ION includes these components:

- ION Desk is a browser-based user interface that you use to work with ION components. You can use ION Desk to configure and manage ION services, configure the routing of messages, monitor message activity, view all errors published by products, and manage other ION services.
- ION Connect is the component that you use to set up connections to various application databases and create document flows that collect and send data between products. Through ION Connect, data is shared securely between products. ION Connect routes and delivers messages to the appropriate products by using data flows that you define. It communicates with products by using message inboxes and outboxes.
- ION Workflow is the component that you use to set up workflows for automated business task routings and approvals.
- ION Event Management is the component that you use to monitor the completion of business tasks and to alert users about exceptions.
- ION Activity Deck (or Infor Ming.le) is the component that you use to view and handle tasks, alerts, and notifications, and to drill down to products.

For more information about these components, see the Infor ION documentation.

For a conceptual overview of what BODs are and how they are used, see “BOD overview” on page 37.

Integration with other products through ION

An outbound operation typically begins when a user performs an action in Infor CloudSuite that requires a data exchange with another ION-enabled product. A BOD XML message is generated by Infor CloudSuite and placed in an area designated as the Infor CloudSuite message outbox. At scheduled intervals, ION connects to the outbox and retrieves the BODs from it.

In ION, you create application connection points, which define the connections between ION and a product that can send and receive BODs. ION Connect routes BODs according to the document flows between Infor CloudSuite and other ION-enabled products.

The document flows between Infor CloudSuite and other products represent the business relationship between the databases. You use the ION Document Flow Modeler page to define these document flows.

If a document flow is defined from Infor CloudSuite to another product for a particular BOD, then at specified intervals, ION places the outbound BOD from Infor CloudSuite in the other product's designated message inbox. Products are responsible for validating and incorporating the data in inbound BODs according to their rules.

If a flow is defined from another product to Infor CloudSuite, ION retrieves BODs from the sending product's message outbox and delivers them to Infor CloudSuite's message inbox for processing. Infor CloudSuite retrieves, validates, and processes the BODs.

Drillbacks

In some integrations, users can drill back from the ION-enabled product to Infor CloudSuite. If the other product shows transactional data that was generated based on a BOD sent from Infor CloudSuite, users might be able to drill back from that product to view detailed supporting information in Infor CloudSuite for the source transactions.

For information about setting up and using the drillback functionality, see the *Infor CloudSuite Business Configuration Guide for Infor Ming.le*.

Concepts and definitions specific to this ION configuration

To configure the Infor CloudSuite tenant, logical ID, accounting entity and location correctly, you must understand these terms and how they are defined in Infor CloudSuite. Together, these terms determine where inbound BOD information is processed, or the outbound instance and location to which the BOD information should be associated.

Tenant ID

The tenant is a container for accounting entities and locations and is required in each BOD. The value of the tenant must be the same in all of the products that exchange BODs. Data is not shared or accessible between tenants.

If you are using this product in the Infor Cloud, the Infor Cloud administrator will assign a tenant ID. Otherwise, verify that all of the other products are using the default value of **infor** for the tenant ID, and if so, use that as your tenant ID.

Logical ID

The logical ID is the instance of the product that sends or receives BODs. You must provide the logical ID when you define the ION connection point for on-premise products. For cloud products, the logical ID is defined by the Infor Cloud team and is retrieved automatically when the product connection point is created in ION.

For Infor CloudSuite, a site is a logical ID.

Location

There are two meanings for location:

In a BOD, a location is the physical location that is associated with data or transactions. The location can be, for example, a warehouse, a manufacturing location, a project location, or an office. Locations are published in the Location BOD. A location is required for all transactional BODs and is usually the location from which a transaction or record is generated.

In ION CE, a location is the physical location that is associated with a connection point. Locations are used with the Enterprise Connector to associate an on-premise application with ION. Access credentials are provided for a particular location. For example, you could define a location for an Infor CloudSuite database server hostname. Then all of the connection points that you set up for sites in that database server specify that location.

Accounting entity

An accounting entity is a corporation or a subset of a corporation. It is the lowest level at which financial reports such as profit and loss statements or balance sheets are produced. The accounting entity is required on all transaction and balance BODs. It is defined within a tenant and can contain locations. The accounting entity is also used as a security element for accessing some ION-enabled products. This must be set up in Infor Federation Services.

For Infor CloudSuite, the site is used as the accounting entity.

You must set up Infor CloudSuite so that it can generate BODs and place them in a message outbox where Infor ION Connect can retrieve them.

Setting master data to standardized values

To ensure consistent master data between integrated products, use the ISO standard values where applicable.

You can map existing non-standard units of measure, currencies and countries to ISO values through these Infor CloudSuite forms:

- Currency Codes

Note: ISO currency codes are required for some integrations. ISO currencies are not defined as part of an initialized database and must be set manually.

- Countries
- Unit of Measure

Setting up a configuration that matches your local site

This information applies to an on-premise application. For cloud-based applications, the cloud administrator defines the configurations for your company.

You must specify a configuration name that exactly matches the local site name. This configuration is required to replicate BODs. For example, if your local site name is oh, you must create a configuration named oh. If your configuration name already exactly matches your local site name, skip this step.

- 1 On the Infor CloudSuite utility server, open the Configuration Manager utility and select the configuration you are currently using to access the local site.

- 2 Click **Copy**.
- 3 In the **Target Configuration** field, specify a configuration name that exactly matches the local site name, including the capitalization.
- 4 Click **OK**.
- 5 Stop and start all Infor services.

Setting up BOD replication and logical IDs, tenants, and accounting entities in Infor CloudSuite

This information applies to an on-premise application. For cloud-based applications, the cloud administrator defines the configurations, tenants, accounting entities, and logical IDs for your company.

Use these steps to configure information that is required for BOD replication in Infor CloudSuite.

- 1 If multiple sites on an Infor CloudSuite intranet will send or receive BODs, make sure that replication is set up between the sites as specified in the *Infor CloudSuite Business Multi-Site Implementation Guide*. The sites must be replicating the **Site Admin** category to each other. On the Sites/Entities form of the bootstrap site, verify that all of the sites are linked.
- 2 On the Infor CloudSuite utility server, specify the bootstrap configurations on the **Replication** tab of the Service Configuration Manager utility:
 - In the **Replicator – Configuration** field, specify a configuration that is the collection site for all outbound messages from sites on the intranet. This site's Replication Document Outbox form will collect outbound BODs for all sites on the intranet.
 - In the **Inbound Bus – Configuration** field, specify a configuration that is the collection site for all inbound messages from sites on the intranet. This site's Replication Document Inbox form will collect inbound BODs for all sites on the intranet.

These two configurations can point to the same site database if the inbound and outbound collection of BODs is performed at the same site.

Note: After you perform steps 3 – 6 on one site, the information is replicated to the other linked sites.

- 3 On the Intranets form, to create a new intranet for Infor ION (bus), specify these values:

Intranet

Specify the name to identify the intranet, for example, **InforBUS**.

Description

Specify an appropriate description, for example, Infor ION connection.

External

Select this check box.

Transport

In this field on the General tab, specify **ESB**.

- 4 On the Intranets form, select the intranet *used by your Infor CloudSuite site* and specify the tenant ID.

Tenant ID

To use the same tenant ID for all sites on this intranet, specify it here. You can also leave it blank here and specify the tenant ID on the local site records, or leave that field blank to use the default tenant ID value of **infor**. If you are using this product in the Infor Cloud, the Infor Cloud administrator will assign a tenant ID. Otherwise, you can use the default value. The tenant ID can be a maximum of 22 characters and must match the tenant ID used in ION for other connecting products. For more information about how the tenant ID is used with ION, see the *ION Connect Administration Guide*.

- 5 On the Sites/Entities form, create a logical "site" for Infor ION:

Site

Specify a name to identify this site as your ION site, for example: **InforBUS**.

Site Name and Description

Specify an appropriate site name and description.

Type

Specify **Site**.

Intranet Name

Select the intranet you created in step 3.

From Site

On the **Site User Map** tab, specify the local site, for example, **oh**. The site name is used as the accounting entity in BODs.

User Name

Specify the user ID used to send replication documents to the Infor CloudSuite outbox for ION to retrieve. This user must already be set up on the Infor CloudSuite **Users** form at the local site. We recommend that you specify the repl_user here, if it is defined. Otherwise, specify a user with Full User editing permissions. Also, the SyteLineAutomation license module must be assigned to the user that you specify here.

- 6 On the Sites/Entities form, configure the local site, for example, **oh**, to generate or receive business object documents (BODs).
 - a Specify the **Message Bus Logical ID** for the site. This identifies the Infor CloudSuite site to ION. Specify it as *tenant.syteLine.site* where *tenant* is the tenant ID, **syteLine** is the application type, and *site* is the name of the local site, for example **infor.syteLine.oh**. The logical ID must be all lowercase.

Note: The logical ID entered here must match the application type and name defined in ION Connect for this Infor CloudSuite site.

- b Optionally, specify a **Tenant ID** for the local site. If no tenant ID is specified here or on the **Intranets** form, the default tenant ID value is **infor**.
- 7 At each site that is sending or receiving BODs, including the bootstrap site, open the Replication Rules form and create a new rule. Specify this information.

Source Site

Specify the local site that you configured in Step 6.

Target Site

Specify the ION site you created in Step 5.

Category

Specify ESB.

Interval Type

Specify any option except Transactional.

- 8 At each site that is sending or receiving BODs, on the Replication Management form click **Regenerate Replication Triggers**.

Setting up information that will flow to the other product

The values that you configure in Infor CloudSuite - for example, customer, vendor or item master records, or system parameters – often depend on the product with which Infor CloudSuite will exchange information. For more information, see the appropriate product integration guide.

Verifying BOD replication

These steps apply to an on-premise application. For cloud-based applications, the cloud administrator performs these steps.

To verify that replication is set up properly:

- 1 On the Infor CloudSuite utility server, stop and start the Replication and Replication Queue Listener services.
- 2 In Infor CloudSuite, open a form whose information is being replicated to ION. For example, the Vendors form information might be replicated.

- 3 Change a value and save the record. For example, you could change the vendor address.
- 4 Check the Replication Document Outbox form to see if a BOD was generated and marked as processed. In our example, the SyncSupplierPartyMaster BOD is generated.

Chapter 5 Connecting Infor CloudSuite to Infor ION

5

These tasks must be performed in Infor ION to allow your product to communicate with ION and with other products through BODs:

- Configure a connection point for the Infor CloudSuite product.
- Optionally, set up and activate a document flow between products.

Note: Determine whether the information in this section applies to your company:

- If you are using **on-premise ION with an on-premise version of Infor CloudSuite Business**, follow the steps in this section to set up your application connection points. Use the appropriate integration guides to set up document flows between Infor CloudSuite and other applications.
- If you are using **ION CE with an on-premise version of Infor CloudSuite Business**, first see the “Enterprise Connector Application connection points” section of the *Infor ION Desk User Guide*. Use that guide to create locations and to download, install, and configure the Enterprise Connector in each of those locations.

Then follow the steps in this section to create your Infor CloudSuite connection points, one for each site, and associate each connection point with a location. Use the appropriate integration guides to set up document flows between the ERP and other applications.

- If you are using **ION CE with Infor CloudSuite Business in the cloud**, skip this section. The connection points are already set up for all of the applications by the cloud administrators. Use the appropriate integration guides to set up document flows between the ERP and other applications.

Understanding connection points and document flows

Connection points, which are defined in ION Desk, provide the information that ION uses to connect to a product’s message inbox and outbox. At least one connection point must be defined for each product instance that integrates to ION.

Each connection point defines the BOD documents that can be sent or received by the product instance. These correspond to the BODs that are listed in “BODs used in Infor CloudSuite integrations” on page 55.

In an integration between two BOD-enabled products, document flows are set up to define the BODs that flow between the product connection points.

A connection point can be reused multiple times in one or more document flows. Connection points can also be created during the modeling of a document flow as part of the details of the document flow elements. The connection points that are created during the modeling of a flow are added to the shared list of connection points, and they can be reused.

Some integrations with Infor CloudSuite use a solution XML file to set up sample document flows. When you import a document flow, if the name of the connection point in the incoming file exactly matches the name of an existing connection point, ION merges the documents with the existing connection point. Otherwise, you will need to delete the sample connection points in the sample document flow and replace them with the existing connection points.

See the *Infor ION Connect Administration Guide* or *ION Desk User Guide* for additional information about connection points and document flows.

Creating a connection point

Note: This information applies only to on-premise applications.

Create one connection point for each instance of the product.

- 1 In ION Desk, select **Connect > Model > Connection points**.

A list of existing connection points is shown.

- 2 Click **New** and specify **Infor Application** as the connection type.
- 3 Specify this information:

Logical ID

The logical ID is automatically generated based on the **Name**, **Tenant**, and **Logical ID Type** you specify. For example, if the tenant is **infor**, the logical ID type is **syteline** and the name is **Warehouse1** then the logical ID is: **lid://infor.syteline.warehouse1**. The logical ID can contain alphanumeric characters, an underscore (_) or a hyphen (-). Do not include capital letters or spaces.

This value must match the Message BUS logical ID you specified in Infor CloudSuite.

See “Setting up BOD replication and logical IDs, tenants, and accounting entities in Infor CloudSuite” on page 19 to determine how this is defined in your product.

Name

Specify the Infor CloudSuite site ID.

Tenant

Specify the tenant. This must match the Tenant value you specify for the product to which you are integrating. The value defaults to **infor**.

See “Setting up BOD replication and logical IDs, tenants, and accounting entities in Infor CloudSuite” on page 19 to determine how this is defined in your product.

Location

If you are using ION CE, specify the physical location with which this connection point is associated. You can have multiple connection points that use the same location, for example, if you have multiple sites on the same intranet or database server.

Logical ID Type

Specify **syteline**.

Database Type

Specify **SQLSERVER**.

Database

Select one of these configurations for the database address:

- **Basic:** Specify properties for the database. The properties that you specify depend on the database type that you selected. The URL to connect to the database is built automatically.
- **Advanced:** Specify the URL to connect to the database. Use this option if you require settings that are not available with the Basic option.

Host Name

Specify the host name of the server that hosts the database. This field is enabled if the **Basic** check box is selected.

Port Number

Specify the number of the port that is used to connect to the database. This field is enabled if the **Basic** check box is selected.

Schema Name

Specify the name of the database schema. This field is enabled if the **Basic** check box is selected.

URL

If you selected the **Advanced** configuration for the database address, specify the URL of the Infor CloudSuite application database. Use the syntax `jdbc:jtds:sqlserver://hostname:port/database` where *hostname:port* is the Infor CloudSuite application database server name and port, and *database* is the application database name.

If you selected the **Basic** configuration for the database address, the URL is read-only.

User Name and Password

Specify the SQL user name that ION will use to log into the Infor CloudSuite application database to retrieve replication documents from the inbox. This user must have `db_datareader` and `db_datawriter` permission for the database.

- 4 In the Polling section, set **Delete Processed Messages** to **true** if you want to immediately delete BODs from the Infor CloudSuite Replication Document Outbox after ION processes them. Set

the value to **false** if you want the processed BODs to remain in the message outbox for the number of minutes specified in the **Outbox Cleaner Expire Time** field.

- 5 Click **Test** to verify whether the connection is working. A message is displayed that indicates whether the test is successful. If the test is not successful, correct the connection details and try again.
- 6 Save the connection point.
- 7 Click **Back** to return to the list.

Connection points are not activated separately. When you activate a document flow, the associated connection points are activated.

Defining product documents for the connection point

- 1 In ION Desk, select **Connect > Model > Connection Points**.
- 2 Select an Infor CloudSuite connection point and click **Details**.
- 3 Click the **Documents** tab of your Infor CloudSuite connection point and select all of the documents that can be sent or received by this product instance for any integration. For each document, specify whether it can be sent, received, or both.

See the list of inbound and outbound documents in “BODs used in Infor CloudSuite integrations” on page 55. The list of documents that you define for this connection point must match that list.

- 4 To add a document type, click **Add Document**. You can filter the list of documents by specifying your selection criteria in the **Filter** field or by using these buttons:

| Button | Description |
|----------|---|
| Standard | Show standard documents |
| Extended | Show standard documents that are customized |
| Custom | Show custom document |

- 5 To add verbs for a document type, select the document and click **Add Verbs**. The documents and verbs are selected from the ION registry.

To remove a document or verb, select the item and click **Remove**. When you remove a document or verb that is used in a document flow, an error is reported in the document flow messages pane.

Configuring a document flow between products

This section provides general steps for setting up a document flow in ION Connect.

Note: Usually document flows are configured and activated in conjunction with integrations between this product and another product; in that case, skip this section and follow the steps in the appropriate integration guide. If you want to send BODs to another ION-enabled product but there is not an appropriate integration guide, follow the steps in this section.

See the *Infor ION Connect Administration Guide* for additional information about document flows in ION.

Defining the document flow

Every flow in the modeling canvas has a start and an end. For a new document flow, only the start and end are shown. You can add items to the flow, using this general method:

- 1 In ION Desk, select **Connect > Model > Document Flows**.
- 2 Select the product icon in the toolbox.
- 3 Click the line where the product must be added. Alternatively, drag the item from the toolbox to the line where it must be added.
An Activity box is added.
- 4 Click the Activity to view or change the properties in the Activity Task pane.
- 5 Click **Add** to add a connection point to the Activity.
- 6 Repeat steps 2-5 to add another product and its connection point to the flow.
- 7 Click the document icon between the products to define the documents that flow from the first product to the second product.
- 8 Save the document flow.

To delete an item, right-click it and click **Delete**.

Activating the document flow

A new or changed document flow can be used in Infor ION after it is activated. This section describes how to activate a document flow.

Note: If you encounter problems during this setup, you must stop and restart the ION service.

- 1 In ION Desk, select **Connect > Model > Document flows**.
- 2 Select one or more document flows.
- 3 Click **Activate**.
- 4 If you receive a message that the activation was successful, click **OK**. Your changes are effective immediately.

If you receive a warning message, the model is activated.

If you receive an error message, the model cannot be activated.

See the *Infor ION Connect Administration Guide* for information about activation errors.

Connection points are activated along with a document flow. If you are using the Enterprise Connector, and a new connection point is activated, the appropriate infrastructure – message queues and pollers – is also created. The Enterprise Connector then starts the pollers and begins the exchange of messages.

If you later deactivate a flow, the queues that were created when you activated the flow are not deleted. However, if you delete a connection point, the associated message queues are also deleted, and any remaining documents that might be in the queues will be dropped.

Message listeners

As an alternative to setting up document flows to products that are supposed to receive every published BOD, such as Infor Ming.le and Infor Business Vault, message listeners can be activated to automatically forward all BODs for specified verbs to these products. See the *Infor ION Connect Administration Guide* for information about message listeners.

Adding users and distribution groups

Set up users and distribution groups in Infor Ming.le/ IFS for Infor CloudSuite users who require access to ION in order to view or update information or to troubleshoot errors.

See the *Infor ION Connect Administration Guide* for information about adding ION Desk users and setting ION Desk authorization levels.

See the *Infor Federation Services Administration Guide* for information about configuring distribution groups.

Setting up business events and workflows

Use the *Infor ION Process Administration Guide* to create and configure ION events, alerts and workflows.

See the *Infor CloudSuite Business Workflow and Alert Content Examples for Infor ION* for examples of Infor ION alerts and events that are available for Infor CloudSuite.

This information applies only if you are using Infor CloudSuite Business on-premise.

After you define the Infor CloudSuite connection point in ION, you publish the associated BODs so that ION can retrieve them from your message outbox. You must publish BODs for general use by any product that subscribes to the BODs through Infor ION.

For an ION-based integration between this product and another product, see the appropriate integration guide to set up the document flows and to perform any additional configuration of the products that is required for that integration. Then use the steps in the integration guide to publish the BODs.

Starting products and services

Start these products, services and processes if they are not already running:

- Infor CloudSuite
- Other products with which you are communicating through Infor ION
- ION Service. Use the ION Grid Management user interface to verify that the ION Service is running. See the *Infor ION Connect Administration Guide*.
- ION Enterprise Connector Service. Use this service only if you are using ION CE with an on-premise application.

Infor CloudSuite BOD dependencies

Be aware that you must load these BODs in this order to prevent errors in the integration due to missing data:

- CodeDefinition
- ItemMaster
- Location
- CustomerPartyMaster

- BillToPartyMaster
- ShipToPartyMaster
- SalesOrder
- Shipment
- Invoice

Sending the initial data load

During normal processing, BODs are generated when a user makes a data change or completes a transaction. However, when you start a new integration with another product, you must manually generate BODs that pass the current set of Infor CloudSuite data to the other product, so that the base systems are synchronized. The BODs are placed in the message outbox, from which Infor ION retrieves them and passes them to the other product.

To perform an initial load of Infor CloudSuite data into BODs that are placed in the message outbox:

- 1 Open the Replication Document Manual Request Utility.
- 2 Select **Initial Load** so that the data is processed as an insert, that is, as new data.
- 3 Select the BODs to include in the data load. The BODs you select are different for each integration. If you select multiple Process BODs at one time, the BODs are processed in alphabetical order. However, you must load these BODs in the order specified in “Infor CloudSuite BOD dependencies” on page 31 to prevent errors in the integration due to missing data.
- 4 Click **Process** to process the selected BODs.
- 5 Continue to select and process BODs until all of the BODs are processed that are required for this integration.
- 6 Repeat this process at each Infor CloudSuite site.

When using this utility to publish BOD data, the current date is used for all Status/EffectiveDateTime elements.

After the initial data load, Infor CloudSuite sends BOD updates when users change certain data or when certain transactions occur in Infor CloudSuite.

For a list of the events that generate BODs, see “Business events that generate outbound BODs” on page 41.

Verify that the connections are set up correctly.

Verifying that BODs are generated

- 1 Use the information in “Business events that generate outbound BODs” on page 41 to determine what user actions generate certain BODs.
- 2 Perform those user actions in Infor CloudSuite.
- 3 Check the Infor CloudSuite Replication Document Outbox form to see if the BODs were generated. You can also see the XML data for the BOD.

Verifying that ION receives data

To verify that ION is receiving BODs from Infor CloudSuite, monitor these areas in Infor ION Desk:

- Select **Connect > Manage > Active Connection Points** to show the message queue counts.
- Select **OneView** from the navigation bar to show individual messages, if they are enabled.

If you encounter problems, see “Data is not flowing properly” on page 35.

Verifying the data flow between products

After you create and activate document flows to other products, you can look in the message inbox area of the other products, to ensure that data is flowing between the systems.

If multiple sites are sending BODs, verify that the expected data is available from all sites in the other product.

This section describes actions to solve ION integration problems and Infor CloudSuite BOD replication problems.

Data is not flowing properly to ION

After you complete the configuration setup, if BOD data is not flowing to ION, check these areas to determine the issue:

- ION Desk to find failures related to BOD structure, for example, a message that has an invalid format, or a message that is missing a mandatory field

For more information, see the “Error BODs” section in the *Infor ION Connect Administration Guide*.

- ION Logging to view processed BODs and to find errors due to connection problems
- Infor ION Queue Viewer to check for unprocessed messages for each integrated product in its message inbox or outbox
- Enterprise Connector log files, only if you are using ION CE with an on-premise application

To avoid business discrepancies between this Infor CloudSuite and integrated products, correct any errors as soon possible.

For more information about troubleshooting BOD flows, see the *Infor ION Connect Administration Guide*.

Receiving a timeout error in the Replication Document Manual Request Utility

If you receive either of the following errors during generation of BODs through the Replication Document Manual Request utility, then transactions are taking longer to run than the timeout values set in Infor CloudSuite or other related products and services.

- Exception from load collection: Error processing an IDO request (Protocol=Http, URL=http://jokerswild/IDORequestService/RequestService.aspx):
The remote server returned an error: (500) Internal Server Error.
- The transaction has aborted. Transaction Timeout

For a list of timeout values that can be reset, see the chapter on improving performance in the *Infor CloudSuite Business System Administration Guide*.

Deleting obsolete BODs

BODs in the Infor CloudSuite Replication Document Outbox (COR_OUTBOX_xxx tables) are removed by Infor ION. ION Desk product polling properties control the removal of these BOD messages:

- If **Delete Processed Messages** is set to **true**, messages are deleted immediately after they are successfully processed by the ION Runtime.
- If **Delete Processed Messages** is set to **false**, messages are deleted if they are older than the number of hours specified in the **Outbox Cleaner Expire Time** field, and they have either been successfully sent or they do not have any assigned routes. The ION Runtime checks for expired messages when it is started, and then checks every hour.

By default, the second option is used. By not deleting the messages immediately, ION can monitor the outbox table and report the number of processed and unprocessed messages.

ION does not remove messages from the Infor CloudSuite Replication Document Inbox (COR_INBOX_xxx) tables. If the inbox size becomes a problem, you can manually delete the records from the inbox table with a SQL Server script.

Business Object Documents (BODs) are collections of transactional or master data that are passed as XML documents between products. You should understand which product is the system of record and how BODs are processed.

BOD message structure

Infor ION messages are called Business Object Documents (BODs). These messages are based on standards that are developed by the Open Applications Group, Inc. (OAGi). BODs are XML documents that consist of a verb component and a noun component. The BOD name consists of a verb and a noun, for example, SyncPayableTransaction, ProcessLocation, and ProcessSupplierPartyMaster. A BOD XML includes these areas:

- Verbs specify the action performed on the noun, for example, Process or Sync.
- Nouns specify the business-specific data, for example, Payable Transaction or Location.
- Elements are the XML tags within the BOD that describe the data. They can be hierarchical, as shown in this example:

```
<PaymentTerm>  
<Description languageID="EN">2% in 10, Net Due in 30</Description>  
<Term>  
<ID>2/10N30</ID>  
</Term>  
</PaymentTerm>
```

- Attributes describe the elements. For example, UnitCode is the attribute in this element:

```
<Quantity UnitCode="EA">
```

- When a value in a BOD is constructed by concatenation of multiple values, an underscore (_) character is used to separate the values.
- Data that is not defined for a noun can be passed in the UserArea of a BOD. With Infor products, the only element that can be placed in the UserArea is Property. Multiple instances of Property within the UserArea can exist. Only the UserArea fields in the header, detail, and root of a noun are supported by Infor. If you require additional fields, you must define them in the UserArea.

Each Property element contains a NameValue element that holds the value being passed. The NameValue element also contains these attributes:

- @name holds the custom field name
- @type specifies the data type of the value, for example, StringType and DateType

This example shows a UserArea:

```
<UserArea>
  <Property>
    <NameValue name="MyField" type="StringType">Sample Data</NameValue>
  </Property>
</UserArea>
```

- The Document ID element is a unique identification of the represented business object. The ID is used in a BOD to reference other BODs. For the nouns SalesOrder, PurchaseOrder, and CustomerReturn, the ID is the order number. For other nouns, a naming convention is defined that makes the ID unique.
- Party ID elements identify an external entity such as a Customer, Supplier, and ShipTo. Location ID elements identify sites within the enterprise. Within a transactional BOD such as a Shipment, if the ShipToParty/PartyIDs/ID is populated, the ID points to a ShipToPartyMaster record. If the ShipToParty/Location/ID is populated, the ID points to a warehouse or other site within the enterprise.
- This table shows different ways that date and time elements in a BOD can be represented:

| Date type | Description | Example |
|---|---|------------------------|
| System-defined dates such as document dates | Represented in UTC time | 2015-08-13T15:30Z |
| Operator-specified dates for a single internal location or a single external location | Represented with a time zone offset | 2015-08-13T15:30+02:00 |
| Dates that have non-specific times | Represented without a time zone indicator | 2015-08-13T15:30 |
| Dates without a time | Represented without a time | 2015-08-13 |

System of record

A piece of information, for example, a customer address, is maintained by only one system, which is the system of record (SOR). The SOR publishes all changes for that piece of information to Infor ION through a Sync message. Other products that want to add or update that piece of information must make a request to the System of Record by using a Process message.

The system of record does not need to know which products require the information. The entire contents of the document are published in the Sync message. All products that subscribe to the message receive a copy of the message from ION.

BOD verbs

Infor uses these verbs:

- A Process message is a point-to-point message that is used to request a service from another product. The Process message is usually sent from a non-system of record to the system of record (SOR). These action codes are supported:
 - Add: Requests that the other product create a new document or record.
 - Change: Requests that the other product update an existing document or record. The elements that have a change are required.
- An Acknowledge message is a response to the Process message. The Acknowledge message notifies the requesting system whether the request was accepted or rejected. In many cases, the Acknowledge verb has additional information, such as the document's ID that is assigned by the system of record.
- A Sync message is a broadcast message that is published by the system of record. The Sync message is used to inform other products about the latest information for the noun. It is published after a business event causes a change in the data. These action codes are supported:
 - Add: Notifies other products that a document or record has been created.
 - Replace: Notifies other products that an existing document or record has been updated. The entire document or record is included in the BOD. The current state of the document or record is also shown.
- A Get message is a point-to-point message that requests information about one or more documents or records. When the GetInventoryCount BOD is sent, the inventory balance is requested for only one item. For all other Get requests, the product requests a copy of all documents from the system of record, which is generally for an initial data load or a disaster recovery.
- A Show message is a message that is sent directly to another product by the system of record as a response to a Get message. A Show message can contain multiple records or documents within one message. Show messages are used typically to reinitialize a product, rather than for general initialization.
- A Confirm message is used to notify users of an error condition. The ConfirmBOD is sent to Infor ION and can be viewed in ION Desk.

Note: The OAGIS Delete verb is supported by Infor for special tenant-level master data only. Otherwise, this verb is not supported. For auditing purposes, you should cancel documents and records and not delete them.

Message delivery

Except for the Show message that is used for initial data loads, Infor ION messages are delivered asynchronously. Products send only one document per message.

Data mapping

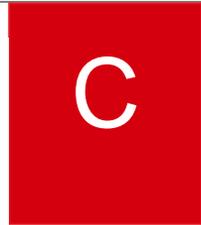
Information about how Infor CloudSuite database elements or calculations are mapped to specific BOD elements is explained in these guides:

- *Infor CloudSuite Business Outbound BOD Mappings and Descriptions*: For each BOD that Infor CloudSuite has certified, this document provides the source and definition of the data in each element that is sent through ION. If the source that is used differs based on specific criteria within Infor CloudSuite, then the document also provides the details about the data that is published.
- *Infor CloudSuite Business Inbound BOD Mappings and Descriptions*: For each BOD that the product has certified, this document provides the details about how each product receives information or processes requests from the inbound BOD. For example, the source might be an extension product, a result of a workflow, or a drill back function from Infor Ming.le. If a BOD updates a source table, the exceptions and handling are described.

These guides are organized according to the elements in each BOD.

Note: Infor reserves the right to change BOD structures. Although Infor will attempt to provide backward compatibility, custom integrations that are built on a specific version of a BOD might require modification to be compatible with newer versions of Infor components.

Appendix C Business events that generate outbound BODs



This table shows the events, which are user actions in Infor CloudSuite, that generate an outbound BOD from Infor CloudSuite:

| Verb | Noun | User action to generate the BOD |
|-------------|--------------------------|---|
| Process | AccountingBookDefinition | Run the Replication Document Manual Request Utility with AccountingBookDefinition selected. This should be done once per site. |
| Sync | AccountingChart | Run the Replication Document Manual Request Utility with AccountingChart selected. This should be done once per site, after the Chart of Accounts is set up at the site. |
| Sync | AccountingEntity | Run the Replication Document Manual Request Utility with AccountingEntity selected. This should be done once per site, after the tenant ID is set up at the site. |
| Process | AdvanceShipNotice | Perform material transactions that remove inventory tied to these types of orders: Project, Job, Customer Order, Purchase Order (with a negative quantity), RMA, Production Order or Transfer Order. Run the Multi-Site Quantity Move utility. Perform material transactions for a transfer order shipment, where the To warehouse is an external controlled warehouse and the To site is the local site. |
| Sync | AdvanceShipNotice | * Change the Status of an Advance Ship Notice, Project Advance Ship Notice, or Delivery Order to Approved. * Generate ASN on the Shipment Master. |
| Acknowledge | BankStatement | Acknowledge the receipt of a BankStatement from an external product. |

Business events that generate outbound BODs

| Verb | Noun | User action to generate the BOD |
|-------------|-------------------|--|
| Acknowledge | BillOfMaterials | Acknowledge the receipt of a BillOfMaterials from an external product. |
| Sync | BillOfMaterials | Indicate that changes have been made in the application after receipt of a Process BillOfMaterials from an external product. |
| Acknowledge | BillToPartyMaster | Acknowledge the receipt of a BillToPartyMaster from an external product. |
| Sync | BillToPartyMaster | Change any information on the Customers form. Change any information on the Ship Tos form. |
| Sync | Calendar | Add or update a shift calendar in Scheduling Shifts. Add a holiday. This creates a BOD that indicates all resources are busy on that day. |
| Sync | CarrierRoute | Select the Physically Shipped check box on the Special tab of the Delivery Orders form. |
| Sync | ChartOfAccounts | Create or update an account record in the Chart of Accounts form |
| Acknowledge | CodeDefinition | Acknowledge the receipt of a CodeDefinition from an external product |

| Verb | Noun | User action to generate the BOD |
|------|----------------|--|
| Sync | CodeDefinition | <ul style="list-style-type: none"> * Add an Absence Reason * Add or update a Billing Term * Add a Certification/License * Add a Commodity Code * Add a Customer Type * Add a Department * Add an Education Major * Add an External Expense Type * Add an Indirect Labor Code * Add an Inventory Adjustment Reason Code * Add or update an ISO U/M on the Unit of Measure Codes form * Add an Item Category * Add an Obsolete Slow Moving Reason Code * Add an Opportunity Source * Add an Opportunity Stage * Add a Payment Type * Add a Position * Add a Price Code * Add a Product Code * Add a Project Cost Code * Add a Province/State * Add a Shift ID on the Scheduling Shifts form * Add a Ship Via Code * Add a Skill * Add a Tax Code of type Exempt * Add a Tax Jurisdiction * Add a Territory * Add a Training Course * Add a unit code on the Unit Code 1 - 4 forms * Add a Work Code * Add a Work Experience |
| | | <p>BODS for some other codes, such as language IDs and cost methods, are automatically generated when the Replication Document Manual Request Utility is run.</p> |

Business events that generate outbound BODs

| Verb | Noun | User action to generate the BOD |
|-------------|----------------------------|--|
| Process | ConstrainedResource | * Insert or modify a Shift ID (creates a BOD for associated resources) |
| Acknowledge | ContactMaster | Acknowledge the receipt of a ContactMaster from an external product |
| Sync | ContactMaster | * Add or change a Contact * Create a Customer Sales Contact Cross-Reference |
| Sync | Contract | * Add or update Customer Order header * Add or update Customer Order Blanket Line |
| Sync | CreditTransfer | Create a Bank Reconciliations record for a vendor payment, employee payment, or customer payment |
| Sync | CurrencyExchangeRateMaster | Add or update a Currency Rate |
| Acknowledge | CustomerPartyMaster | Acknowledge the receipt of a CustomerPartyMaster from an external product |
| Sync | CustomerPartyMaster | * Change any information on the Customers form, Ship Tos form, or Customer Sales Contact Cross References form * Add a prospect on the Prospects form to send this BOD with a status of "Pending" |
| Sync | CustomerReturn | * Print the RMA Order Verification Report * Change the status of an RMA |
| Sync | DebitTransfer | Post a direct debit transaction from a customer on the A/R Direct Debit Posting form. |
| Sync | FinancialCalendar | * Change any information on the Accounting Periods form * Run the change Reports To Entity utility |

| Verb | Noun | User action to generate the BOD |
|-------------|---------------------|--|
| Sync | InventoryAdjustment | <ul style="list-style-type: none"> * Perform Quantity Adjustment * Perform Miscellaneous Receipt or Miscellaneous Issue * Perform Cycle Count Posting - one BOD is generated for each combination of item, warehouse, and location where the quantity on hand has changed * Perform Physical Inventory Posting - one BOD is generated for each combination of item, warehouse, and location where the quantity on hand has changed |
| Sync | InventoryCount | <ul style="list-style-type: none"> * Run the Cycle Count Posting utility * Run the Physical Inventory Posting utility <p>One InventoryCount BOD is sent for each item/warehouse combination</p> |
| Sync | Invoice | <ul style="list-style-type: none"> * Print and post an invoice through the Consolidated Invoicing form * Post an invoice through the Invoice Posting (A/R) form <p>Note: The Invoice BOD publishes one line for every order line included in the Invoice. When Line Summarization is turned on in Consolidated Invoicing, the summary invoice lines are not published; instead, each customer order line will be published as a line in the Invoice BOD.</p> |
| Acknowledge | ItemMaster | Acknowledge the receipt of a Process ItemMaster from an external product. |
| Sync | ItemMaster | <ul style="list-style-type: none"> * Create a new item on the Items form * Make a change to these fields on the Items form: Item, Description, ABC Code, Commodity, Cost Method, Material Status, Reason, Backflush, Last Change, U/M, Unit Cost, S/N Track, Lot Track, Source, Order Minimum, Order Maximum, Alternate Item * Add or change an item description on the Multi-Lingual Items form |
| Sync | Location | <ul style="list-style-type: none"> * Create a new Warehouse * Update General Parameters form (creates a Location BOD with the site as the location) |

Business events that generate outbound BODs

| Verb | Noun | User action to generate the BOD |
|-------------|--------------------|--|
| Sync | Opportunity | * Create or update a record on the Opportunities, Customer Orders, or Opportunity Tasks form |
| Sync | PayableTracker | * Post a voucher or an Adjustment through the A/P Voucher Posting form * Post a payment from any of these forms: A/P Check Printing/Posting, A/P Draft Printing/Posting, A/P EFT Posting, A/P Wire Posting |
| Sync | PayableTransaction | * Post a voucher through the A/P Voucher Posting form * Post a payment from any of these forms: A/P Check Printing/Posting, A/P Draft Printing/Posting, A/P EFT Posting, A/P Wire Posting * Set or release a Hold status on a voucher from the A/P Posted Transactions Detail form |
| Acknowledge | PayFromPartyMaster | Acknowledge the receipt of a PayFromPartyMaster from an external product |
| Sync | PayFromPartyMaster | * Change any information on the Customers form * Change any information on the Ship Tos form |
| Sync | Person | * Add or update information about a salesperson or sales manager on the Salespersons form * Update information related to a salesperson on the Employees form (for employee sales people) or Vendors form (for outside sales people) |
| Sync | Personnel | * Add or update information on these forms: Employee, Employee Skills, Employee Cert/License, Employee Education, Employee Training Courses, Employee Work Experience, or Employee Position |
| Acknowledge | PlanningSchedule | Acknowledge the receipt of a Planning Schedule from an external product. |
| Acknowledge | ProductionOrder | Acknowledge the receipt of a ProductionOrder from an external product |

| Verb | Noun | User action to generate the BOD |
|---------|-----------------|---|
| Sync | ProductionOrder | <p>* Applied filters on the Background Task generate this BOD for a firm job that is scheduled for the first time. This does not apply to jobs that have just been processed by the TriggerProductionOrderBGSyncSp Background task. You can add subsequent filters to reduce the number of BODs triggered by this task. Without filtering, after every scheduling or planning function a significant number of BODs could be created.</p> <p>* Change the status of a job or production schedule.</p> <p>* Change the Qty Released of a job or production schedule when the status is Released.</p> <p>Notes: Creating a job generates this BOD, but changes to a firm job do not generate this BOD. This BOD must be included in an initial load of ProductionOrder data.</p> |
| Sync | ProjectMaster | Create a Project or change the project status. |
| Process | PulseAlert | <p>One or more of these publications is triggered by a system event:</p> <ul style="list-style-type: none"> * CustomerCreditHoldAlert * CustomerInteractionFollowupAlert * CustomerOrderCreditHoldAlert * CustomerShipmentAlert * DCShopFloorTransactionErrorAlert * JobMaterialCostAlert * JobOperationHoursAlert * JobOverProductionAlert * JobProjectedLateForCustomerAlert * LateOrderShippingAlert * LeadAssignedAlert * LockedUserAlert * OpportunityDueAlert * OverBudgetAlert * ProjectedLateShipAlert * ProspectInteractionFollowupAlert * ScheduledMaintenanceAddedAlert * ScheduledMaintenanceAlert * TransactionAmountAlert. |

| Verb | Noun | User action to generate the BOD |
|-------------|-----------------------|--|
| Sync | PurchaseOrder | <ul style="list-style-type: none"> * Print the Purchase Order Report * Print the Builder Purchase Order Report * Change the Purchase Order status to Complete * Print a Change Order Report |
| Acknowledge | Quote | Acknowledge the receipt of a Quote from an external product. |
| Sync | Quote | * Change the Estimate status to Quoted |
| Sync | ReceivableTracker | Create an invoice, payment, credit memo, debit memo or finance charge transaction for a customer with a 'Balance Forward' balance method. |
| Sync | ReceivableTransaction | <ul style="list-style-type: none"> * Generate an invoice for customers with an 'Open Item' balance method. The status is set as Open. * Generate a debit memo/finance charge for customers with an 'Open Item' balance method. The status is set as Open. * Make a payment and apply it to an invoice for customers with an 'Open Items' balance method. The status changes to Paid. * Generate a credit memo and attach it to an invoice for customers with an 'Open Item' balance method. This changes the status to Paid. <p>(For bullet points 2, 3, and 4: If all or part of the debit memo/finance charge, payment, or credit memo is left unapplied, a second BOD is generated. Similar transactions are grouped and shown under an invoice number '0' with a status of Unapplied Cash.)</p> <ul style="list-style-type: none"> * Create an invoice, payment, credit memo, debit memo or finance charge transaction for a customer with a 'Balance Forward' balance method. The system maintains one balance under invoice number '0'. Its status is set as follows: for a debit balance, the status is set as Paid; for a credit balance, the status is set as UnappliedCash. |

| Verb | Noun | User action to generate the BOD |
|-------------|--------------------|---|
| Sync | ReceiveDelivery | <ul style="list-style-type: none"> * Perform material transactions that add inventory tied to these types of orders: Project, Job, Customer Order (with a negative quantity), Purchase Order, RMA, Production Order or Transfer Order that cause a material transaction to occur * Run the Multi-Site Quantity Move utility |
| Sync | RemittanceAdvice | <ul style="list-style-type: none"> * Post a payment from any of these forms: A/P Check Printing/Posting, A/P Draft Printing/Posting, A/P EFT Posting, A/P Wire Posting, or Print/Post Payroll Checks |
| Sync | RemitToPartyMaster | <ul style="list-style-type: none"> * Add or update Vendor information * Update the vendor's address information * Update Bank Address information |
| Acknowledge | Requisition | Acknowledge receipt of a Requisition from an external product |
| Sync | Requisition | <ul style="list-style-type: none"> * Print the requisition on either the Purchase Requisition Report or the PO Requisition Report forms * Convert a requisition to a purchase order * Convert additional items on an existing requisition (in this case, another BOD is created, replacing the original BOD) |
| Acknowledge | SalesOrder | Acknowledge the receipt of a SalesOrder from an external product |
| Sync | SalesOrder | <ul style="list-style-type: none"> * Print the Customer Order Verification Report * Change order header status to Completed |
| Sync | SecurityRoleMaster | Add or delete a Group Authorization or change the group description. |
| Acknowledge | SecurityUserMaster | Acknowledge the receipt of a SecurityUserMaster from an external product. |
| Process | SecurityUserMaster | Add or change the user status, user description or workstation login. |
| Sync | ServiceOrder | Add or update Service Order or Service Order operations or lines |

| Verb | Noun | User action to generate the BOD |
|-------------|------------------------|---|
| Sync | ShipFromPartyMaster | <ul style="list-style-type: none"> * Add or update Vendor information * Update the vendor's address information * Update Bank Address information |
| Process | Shipment | <ul style="list-style-type: none"> * For customer orders or lines that are assigned to the local site and that are assigned to an external controlled warehouse: <ul style="list-style-type: none"> - Set the Customer Order Line status to Ordered. - Change U/M, due date, or quantity ordered on CO Line. - Customer Order or Customer related to the order is put on or taken off credit hold. * For transfer orders or lines where the Ship From site is the local site and the Ship From warehouse is an external controlled warehouse: <ul style="list-style-type: none"> - Create Transfer Order Line - Change U/M, schedule ship date, or quantity required on transfer order line. |
| Sync | Shipment | <ul style="list-style-type: none"> * Perform material transactions that remove inventory tied to these types of orders: Project, Job, Customer Order, Purchase Order (with a negative quantity), RMA, Production Order or Transfer Order * Run the Multi-Site Quantity Move utility |
| Acknowledge | ShipToPartyMaster | Acknowledge the receipt of a ShipToPartyMaster from an external product |
| Sync | ShipToPartyMaster | * Change any information on the Customers form, Ship Tos form, or Customer Sales Contact Cross References form |
| Sync | SourceSystemGLMovement | <ul style="list-style-type: none"> * Run the Change Reports To Entity utility * Run the Copy Balances to Budgets utility * Modify Chart of Accounts Budget and Plan information * Run the Rebalance Ledger Period Totals utility * Run Ledger Posting for Journals * Run the Mass Journal Posting utility |

| Verb | Noun | User action to generate the BOD |
|-------------|--------------------------|---|
| Sync | SourceSystemJournalEntry | * Post journal entries to a ledger |
| Sync | SupplierPartyMaster | * Add or update Vendor information * Update the vendor's address information * Update Bank Address information |
| Sync | Transfer | * Perform a Transfer Order Ship * Perform a Transfer Order Receive * Perform a Combined Transfer Order Ship/Receive |
| Sync | WorkCenter | Add a Work Center |

Appendix D Inbound BOD usage

D

This table shows the incoming BODs that Infor CloudSuite can accept. It also indicates, when possible, what area of Infor CloudSuite shows the processed inbound data.

| Verb | Noun | Destination of processed data in Infor CloudSuite |
|-------------|---------------------|--|
| Acknowledge | AdvanceShipNotice | Transfer orders (last_external_shipment_doc_id in trnitem_mst table) |
| Process | BankStatement | Bank Statements form, and A/P automatic payments generated |
| Process | BillofMaterials | Engineering Workbench, Current Operations, Engineering Board |
| Process | BillToPartyMaster | Customers form and related forms |
| Process | CodeDefinition | Depends on type of code |
| Process | ContactMaster | Contacts form and related forms |
| Process | CustomerPartyMaster | Customers form and related forms |
| Sync | EmployeeTimesheet | Service order transactions, Attendance, Project Labor Transactions, Unposted Job Transactions (Indirect, Run or Setup) |
| Sync | ExpenseReport | prtrx table |
| Sync | InventoryAdjustment | Miscellaneous Receipt and Miscellaneous Issue forms |
| Sync | InventoryCount | Miscellaneous Receipt and Miscellaneous Issue forms |
| Process | ItemMaster | Items form and related forms |
| Process | PayFromPartyMaster | custaddr table |
| Sync | PlanningSchedule | coitem table (blanket items) |

| Verb | Noun | Destination of processed data in Infor CloudSuite |
|-------------|--------------------|--|
| Process | ProductionOrder | job table |
| Process | Quote | Estimates form and related forms |
| Acknowledge | PulseAlert | N/A |
| Sync | ReceiveDelivery | If Type="Transfer" and Status="Received" create transfer order receipt. If Type="Purchase Order" and Status="Received" create PO receipt If Type="Customer Return" create RMA receipt If Type="Sales Order" create negative CO receipt. |
| Process | Requisition | preq table |
| Process | SalesOrder | Customer Orders form and related forms |
| Sync | SecurityUserMaster | Users form and related forms |
| Acknowledge | Shipment | coitem or trnitem table (depending on record type), last_external_shipment_doc_id |
| Sync | Shipment | If Type="Transfer" and Status="Shipped" create Transfer Order Shipment If Type="Purchase Order" create Purchase Order Return If Type="Sales Order" and Status="Shipped" create Customer Order Shipment |
| Sync | ShipmentSchedule | coitem table (blanket items) |
| Process | ShipToPartyMaster | Customer Ship Tos form and related forms |

Appendix E BODs used in Infor CloudSuite integrations



This appendix contains two tables that list the BODs that are available with Infor CloudSuite in the rows. The “To products” and “From products” columns list the products where the BOD is used in Infor CloudSuite’s integration with that product. Where the product is blank, the BOD is not currently used by interfacing products, but the BOD is generated by Infor CloudSuite and is available to be processed through ION and any product that is set up to receive it..

Outbound BODs from Infor CloudSuite to integrated products

Note: All outbound BODs can be consumed by any BOD-enabled application, including Business Vault and all applications that use Business Vault data (for example, Infor Reporting and Infor Business Analytics).

| Verb | Noun | To products |
|-------------|--------------------------|---|
| Process | AccountingBookDefinition | |
| Sync | AccountingChart | Infor Local.ly Reporting |
| Sync | AccountingEntity | Infor Local.ly Reporting |
| Process | AdvanceShipNotice | SCE Warehouse Management |
| Acknowledge | BankStatement | Infor Local.ly GEMS |
| Acknowledge | BillOfMaterials | PLM Accelerate |
| Acknowledge | BillToPartyMaster | CRM (ICBOE) |
| Sync | BillToPartyMaster | CRM (ICBOE) e-Commerce SCE Warehouse Management |
| Sync | Calendar | |

BODs used in Infor CloudSuite integrations

| Verb | Noun | To products |
|-------------|----------------------------|---|
| Sync | CarrierRoute | Automotive Exchange |
| Sync | ChartOfAccounts | Infor Local.ly Reporting |
| Acknowledge | CodeDefinition | CRM (ICBOE) |
| Sync | CodeDefinition | CRM (ICBOE) Expense Management PLM Accelerate Infor Local.ly Reporting |
| Process | ConstrainedResource | |
| Acknowledge | ContactMaster | CRM (ICBOE) |
| Sync | ContactMaster | CRM (ICBOE) |
| Sync | Contract | Automotive Exchange |
| Sync | CreditTransfer | |
| Sync | CurrencyExchangeRateMaster | Expense Management |
| Acknowledge | CustomerPartyMaster | CRM (ICBOE) |
| Sync | CustomerPartyMaster | CRM (ICBOE) e-Commerce Infor Local.ly Reporting PLM Accelerate SCE Warehouse Management |
| Sync | CustomerReturn | CRM (ICBOE) |
| Sync | DebitTransfer | Infor Local.ly GEMS |
| Sync | FinancialCalendar | Infor Local.ly Reporting |
| Sync | InventoryAdjustment | |
| Sync | InventoryCount | |
| Sync | Invoice | Automotive Exchange CRM (ICBOE) e-Commerce Infor Local.ly Reporting |
| Acknowledge | ItemMaster | PLM Accelerate |

| Verb | Noun | To products |
|-------------|-----------------------|---|
| Sync | ItemMaster | CRM (ICBOE) e-Commerce PLM Accelerate SCE Warehouse Management |
| Sync | Location | CRM (ICBOE) e-Commerce |
| Sync | Opportunity | |
| Sync | PayableTracker | |
| Sync | PayableTransaction | Infor Local.ly Reporting |
| Acknowledge | PayFromPartyMaster | CRM (ICBOE) |
| Sync | PayFromPartyMaster | CRM (ICBOE) |
| Sync | Person | CRM (ICBOE) |
| Sync | Personnel | Expense Management |
| Acknowledge | PlanningSchedule | |
| Acknowledge | ProductionOrder | |
| Sync | ProductionOrder | Expense Management |
| Sync | ProjectMaster | Expense Management |
| Process | PulseAlert | Infor Ming.le |
| Sync | PurchaseOrder | EAM SCE Warehouse Management |
| Acknowledge | Quote | |
| Sync | Quote | CRM (ICBOE) |
| Sync | ReceivableTracker | |
| Sync | ReceivableTransaction | CRM (ICBOE) Infor Local.ly Reporting |
| Sync | ReceiveDelivery | EAM |
| Sync | RemittanceAdvice | Expense Management |

BODs used in Infor CloudSuite integrations

| Verb | Noun | To products |
|-------------|--------------------------|---|
| Sync | RemitToPartyMaster | |
| Acknowledge | Requisition | EAM |
| Sync | Requisition | |
| Acknowledge | SalesOrder | |
| Sync | SalesOrder | CRM (ICBOE) e-Commerce |
| Sync | SecurityRoleMaster | Infor Ming.le (IFS) |
| Acknowledge | SecurityUserMaster | Infor Ming.le (IFS) |
| Process | SecurityUserMaster | Infor Ming.le (IFS) |
| Sync | ServiceOrder | Expense Management |
| Sync | ShipFromPartyMaster | |
| Process | Shipment | SCE Warehouse Management |
| Sync | Shipment | Auto Exchange CRM (ICBOE) e-Commerce |
| Acknowledge | ShipToPartyMaster | CRM (ICBOE) |
| Sync | ShipToPartyMaster | e-Commerce CRM (ICBOE) SCE Warehouse Management |
| Sync | SourceSystemGLMovement | Infor Local.ly Reporting |
| Sync | SourceSystemJournalEntry | Infor Local.ly Reporting |
| Sync | SupplierPartyMaster | EAM PLM Accelerate SCE Warehouse Management |
| Sync | Transfer | |
| Sync | WorkCenter | PLM Accelerator |

Inbound BODs to Infor CloudSuite from integrated products

| Verb | Noun | From products |
|-------------|---------------------|--------------------------|
| Process | BankStatement | Infor Local.ly GEMS |
| Process | BillOfMaterials | PLM Accelerate |
| Process | BillToPartyMaster | |
| Process | CodeDefinition | |
| Process | ContactMaster | |
| Process | CustomerPartyMaster | Motion RW |
| Sync | EmployeeTimesheet | Expense Management |
| Sync | ExpenseReport | Expense Management |
| Sync | InventoryAdjustment | SCE Warehouse Management |
| Sync | InventoryCount | SCE Warehouse Management |
| Process | ItemMaster | PLM Accelerate |
| Process | PayFromPartyMaster | |
| Process | PlanningSchedule | Automotive Exchange |
| Process | ProductionOrder | |
| Acknowledge | PulseAlert | Infor Ming.le |
| Process | Quote | |
| Sync | ReceiveDelivery | SCE Warehouse Management |
| Process | Requisition | EAM |
| Process | SalesOrder | e-Commerce |
| Sync | SecurityUserMaster | Infor Ming.le (IFS) |
| Acknowledge | Shipment | SCE Warehouse Management |
| Sync | Shipment | SCE Warehouse Management |
| Sync | ShipmentSchedule | |
| Sync | ShipToPartyMaster | |