



Infor WebTop for IBM i Consulting Services Handbook

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About this guide

This document describes the internal details of the Infor WebTop for IBM i™. It contains information on using the underlying technologies in general, troubleshooting, and customization. This document is internal and confidential to Infor.

Intended audience

This is an Infor-internal handbook for Infor Consulting Services personnel only. This document contains proprietary information and is not to be distributed to non-Infor personnel.

Related documents

For related information, refer to the *Infor WebTop for IBM i™ System Administrator's Guide*.

You can find this document in the product documentation section of the Infor Xtreme Support portal, as described in "Contacting Infor" on page 5.

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.

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Chapter 1 Integration with Infor Ming.le Enterprise

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Infor WebTop for IBM i™ contain features specific to Infor Ming.le Enterprise that require custom configuration for a client to take full advantage of the Infor Ming.le environment. This chapter describes the configuration screens and processes to be used during such customization.

Overview

Infor Ming.le Enterprise is a multi-application portal, of which Infor WebTop for IBM i is only one participant. Infor Ming.le Enterprise enables inter-application communication via JavaScript messaging, and applications may also communicate via BODs that enable the application to communicate within Infor Ming.le Enterprise. Figure 2-1 identifies some of the interrelated components of this environment.

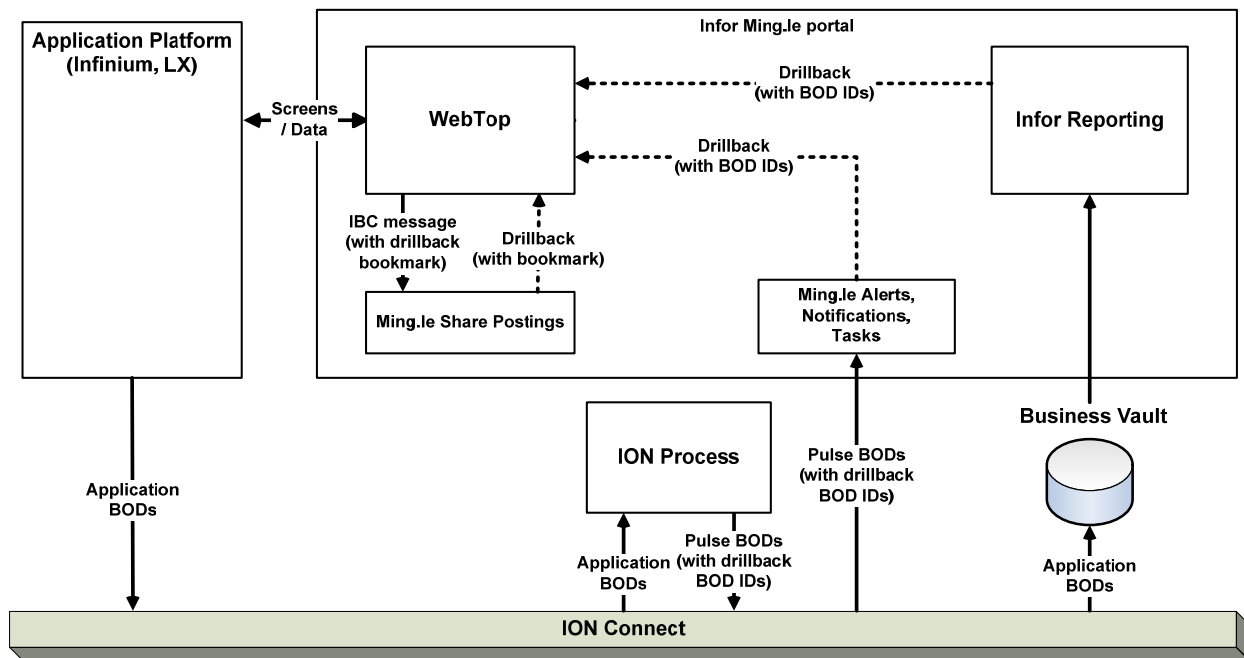


Figure 2-1. The Infor WebTop for IBM i and Infor Ming.le Enterprise Environment

The flow of information between these components is as follows:

- 1 Infor WebTop for IBM i displays the screens of platform applications (such as those in the Infinium suite) within the Infor Ming.le Enterprise web portal.

- a For application screens that contain proper decorators, WebTop also publishes context messages to Infor Ming.le Enterprise. One of these messages is the Infor Business Context message, which describes the business entities referred to by the current screen.

Each of these business context entities may in turn contain a reference to a Business Object Document (BOD) that describes that entity and/or a drillback URL query string for the WebTop screen that will display that business context entity.

For example, on the Infinium PL Invoice display, decorators create business context entities for the invoice itself and for the vendor. Each of these business context entities contains a drillback link to the appropriate WebTop display screen.

In this case, WebTop uses internal bookmarks for drillback query strings.

- b When a WebTop screen is shared with other Infor Ming.le Enterprise users (via an Infor Ming.le “Share” posting), the drillback URL query strings in the Infor Business Context message are changed into an actionable drillback link in the display of the Share message.
 - c Clicking a Share drillback link opens WebTop in Infor Ming.le Enterprise and sends WebTop a drillback message containing the drillback URL query string (bookmark). WebTop opens a new tab and displays the screen according to the instructions in the bookmark received, provided application security allows it.

Note: If the user is not logged onto WebTop before the drillback is performed, it may be necessary to click the Infor Ming.le icon after logging onto WebTop to get the drillback operation to take effect.

- 2 When work is done in a WebTop-supported platform application such as Infinium, data may also be propagated by Business Object Documents (BODs) to Infor ION Connect, which distributes these BODs to other systems.
- 3 One system that listens to BODs is Infor ION Process. The ION Process Event Management and Workflow configurations are used to analyze application BODs and generate PulseAlert, PulseNotification, and PulseTask BODs in response to incoming BODs of interest.

The Pulse BODs encode a drillback URL query string for WebTop if properly configured. See the “Configuring drill back links for ION ActivityList web part” and “Pulse settings for hyperlinks configuration” sections in the *Infor ION Connect Administration Guide*, and for Infinium applications, see the “ION Event Management and Workflows” appendix in the *Infor Infinium Adapter Guide to Integration*. This drillback URL query string adopts an Infor-standard format for the BOD in question, based on its “Drillback View Definition,” instead of containing a bookmark.

- a Pulse BODs are displayed in Infor Ming.le Enterprise as alerts, tasks, and notifications containing actionable drillback links.
 - b Clicking an alert, task, or notification drillback link opens WebTop in Infor Ming.le Enterprise and sends it a drillback message containing the standard drillback query string for the drillback view in question. WebTop opens a new tab, but since the drillback query string is not a bookmark, a backend drillback resolution process is invoked to create a bookmark from

the BOD-based data. Then normal bookmark processing displays the screen in question, if application security allows.

Note: If the user was not logged onto WebTop before the drillback is performed, it may be necessary to click the Infor Ming.le icon after logging onto WebTop to get the drillback operation to take effect.

- 4 Another example of a system that listens to BODs generated by the WebTop platform applications is the Infor Business Vault. Business Vault data is displayed inside Infor Ming.le Enterprise by the Infor Reporting application.
 - a Infor Reporting also uses drillback view definitions to create drillback links using BOD-based data.
 - b Clicking an Infor Reporting drillback link should open WebTop in Infor Ming.le Enterprise and send it a drillback message containing the standard drillback query string for the drillback view in question. WebTop opens a new tab, but since the drillback query string is not a bookmark, a backend drillback resolution process is invoked to create a bookmark from the BOD-based data. Then normal bookmark processing displays the screen in question, if application security allows.

Configuring WebTop for BOD-based drillback (as described in items 3 and 4 above) is discussed first. Then the process for configuring Infor Business Context messages is described, and finally the process for configuring other Infor Ming.le Enterprise context messages is described.

Configuring drillback

This section primarily focuses on BOD-based drillback, but drillback configuration for Infor Business Context Messages is also discussed, since it is a subset of what must be done to handle BODs.

Infor Ming.le Enterprise provides the following standard information about a BOD during drillback. This information is formatted as an URL query string.

Parameter name	Description
ViewId	Required view identifier. In general, this is a variation of the BOD name; for example, drillback on a PayableTransaction BOD is via the view "PayableView."
LogicalId	Required logical ID of the system sending the BOD. Note that this must also be the logical ID of the WebTop application subsite configured within Infor Ming.le Enterprise or WebTop would not have received this drillback message.
AccountingEntity	Optional accounting entity value; although, if the BOD contains an AccountingEntity value, it will be provided.
Location	Optional location value; although, if the BOD contains a Location value, it will be provided.

Parameter name	Description
ID1	Required. The document ID of the BOD, often from the element DocumentIDs/ID.
RevisionID	Optional revision ID from the BOD; although, if the BOD contains a RevisionID value, it will be provided.
ID2-ID15	Optional IDs that might be configured in the Infor Ming.le Enterprise drillback view definition.

Table 2-1: Standard Infor Ming.le Enterprise Drillback URL Query String Parameters

The sample ION Process drillback configuration files supplied with Infor Infinium Adapter (IA) use only these standard parameters for drillback. Furthermore, they use only ID1, not ID2-ID15, although WebTop is capable of processing any of the parameters above during drillback resolution.

Setting up drillback configurations

To set up a drillback configuration used to resolve BOD-based drillback:

- 1 Log onto WebTop with a profile that is authorized to access Designer Mode when running WebTop Server.
Refer to the “Accessing change font and designer mode” section of the *Infor WebTop for IBM i™ System Administrator’s Guide* for instructions on authorizing access for designer mode.
- 2 From a WebTop application screen (not the Home tab or a System Command screen), select the Attachment Rules icon (the paperclip) on the toolbar.
- 3 Select option 1 (Select) on Drillback Maintenance. A subfile list of drillback configurations is displayed.
- 4 Press **F6** (Create) to create a new drillback configuration.
- 5 Use the information below to complete the fields on this page.

Platform

Specify the name of the WebTop platform that will use this drillback configuration (for example, **INFINIUM** or **LX**).

Drill Back Name

Specify the unique name for this drillback. Generally, for drillback configurations that process BOD-based drillbacks, this name should be set to the View ID that will be received from Infor Ming.le Enterprise. That is, this name indicates which kind of drillback request this configuration is to process into a bookmark. For example, the drillback configuration for PayableTransaction BODs should set the Drill Back Name to the View ID for these BODs, for example, **PayableView**.

Drill Back URL

Enter a bookmark to the screen that should be shown when this view is received. Note that this is a raw bookmark to a screen containing one specific business object. The next steps convert this raw bookmark into a bookmark template indicating where data from the drillback should be inserted to create the actual bookmark to be used during drillback.

- 6 Press **F17** (ID Fields) to identify the data entry fields in the bookmark. This step replaces actual business data IDs with generic identifiers of the form **(ID#)** (for example, **(ID1)**, **(ID2)**, and so on.)

If you know that some fields in this bookmark should be blank or contain a constant value, remove the appropriate generic identifier and renumber those remaining. For example, if the first ID field should be blank, remove **(ID1)** and change **(ID2)** into **(ID1)**, **(ID3)** into **(ID2)**, and so on.

- 7 Press **F8** to configure substitution expressions for field values. Substitution expressions specify how the generic identifiers, **(ID#)**, should be replaced with the BOD-based drillback query string parameters shown in Table 2-1. A subfile list of substitution expressions is displayed.
 - a Press **F6** to create a new substitution expression.
 - b Use the information below to complete the fields on this page. You must know the structure of the relevant BOD document ID, accounting entity, and location, as well as the data required by the fields in your WebTop bookmark to complete this step.

Sequence

Specify the position that this instruction should appear in sequence. Note that sequence numbers are automatically recalculated after a drillback configuration is saved. The number you enter indicates only the relative position in which this substitution is evaluated with regard to the others. A good practice is to use a sequence with gaps, like "10," "20," "30,"

Add Substitutions

Specify a generic identifier, **(ID#)**, and an expression to replace it, separated by an equal sign (=). Replacement expressions may contain any of the following:

- A constant string, enclosed in single quotation marks.
- A drillback query string parameter from Table 2-1.
- A tokenization call, of the form `TOKEN(<separator>, <drillback parameter>, <index>)`. This separates the drillback parameter value into segments delimited by the separator character, and returns the segment indicated by the 1-based index.
- A substring call, of the form `SUBST(<drillback parameter>, <start index>, <length>)`. This returns the substring of the drillback parameter value from the 1-based start index to the end index, inclusive.
- A concatenation of multiple values, separated by plus signs ("+").

Examples of substitution expressions include:

```
* (ID1) * = '5'
```

```
* (ID2) * = TOKEN('.', AccountingEntity, 3)
```

```
*(ID1)* = SUBST(ID1, 8, 4)
```

Note: *(ID1)* on the left side of a substitution expression indicates the first generic identifier in the drillback bookmark URL, while ID1 on the right side of a substitution expression indicates the document ID parameter received from the drillback URL query string. This can be confusing, as in the third example above.

Three examples of actual substitution expressions can be found in the CustomerView drillback configuration for CustomerPartyMaster BODs. The structure of a CustomerPartyMaster BOD document ID generated by Infor Infinium Adapter is "INF.AR.", plus the AR company ID, plus a period, plus the customer ID; for example, "INF.AR. 002. 2000". Note that blank characters are significant in this document ID. To open an AR customer display, we bookmark the results of using the AR **Customer/Nat'l Acct Maintenance > Display All Customer Controls** screen, which requires three fields of input: a view option ('1'), the AR company, and the AR customer ID. Thus, our substitution expressions come to be:

```
*(ID1)* = '1'
```

```
*(ID2)* = TOKEN('.', ID1, 3)
```

```
*(ID3)* = TOKEN('.', ID1, 4)
```

The first substitution expression uses a constant value for the view option. The second substitution expression uses a tokenization operation to carve out the AR company ID as the third segment in the BOD's document ID when separated by the period character. The third substitution does the same to carve out the customerID as the fourth segment.

Alternatively, the second substitution expression could have used a substring operation to extract the fixed-length company ID from the BOD's document ID, ignoring the fixed-length 'INF.AR.' prefix and the customer ID, as follows:

```
*(ID2)* = SUBST(ID1, 8, 5)
```

- c** Press **Enter** to create another substitution expression.
 - d** Press **F3** to exit.
 - e** Select **Save** and press **Enter** to save the last substitution expression.
 - f** Press **F12** to return to first drillback screen.
- 8** Press **F3** to exit.
- 9** Select **Save** and press **Enter** to save your changes.

Note: To set up a drillback configuration that is used only to drillback from Infor Business Context messages, not to resolve BOD-based drillback, follow steps 1-6, 8, and 9 above. Substitution expressions need only be configured for BOD-based drillback.

Setting up drillback override configurations

Sometimes a given drillback view must be redirected to different WebTop panels, depending on details of the BOD involved. For example, a ReceivableTransaction BOD, which always drills back into WebTop as a ReceivableView, may represent either an AR Obligation or an AR Cash Receipt. Since each drillback configuration represents only a single bookmark, conditional drillback is provided by drillback override configurations.

Drillback override configurations specify what drillback configuration to use for a given view based on a series of tests. The first drillback override configuration for a view that passes all its tests specifies the drillback configuration to use in creating a bookmark for this view. If no drillback override for a view passes its tests, the drillback configuration whose **Drill Back Name** matches the view ID is used.

In the case of ReceivableTransaction, we could set up two drillback configurations, named “AR Obligation View” and “AR Cash Receipt View,” and two drillback override configurations, one of which would test the drillback URL query string parameters for a BOD that came from an AR Obligation and direct it to use the “AR Obligation View” drillback configuration for its bookmark, while the other drillback override configuration would test for a BOD that came from an AR Cash Receipt and directed it to use the “AR Cash Receipt View” drillback configuration for its bookmark. In this case, we do not want to have a drillback configuration named “ReceivableView,” because if both of these drillback overrides fail to pass their tests, then this BOD was not derived from an AR Obligation or Cash Receipt and cannot be drilled back on successfully.

To set up a drillback override configuration used to resolve BOD-based drillback:

- 1 Log onto WebTop with a profile that is authorized to access Designer Mode when running WebTop Server.

Refer to the “Accessing change font and designer mode” section of the *Infor WebTop for IBM i™ System Administrator’s Guide* for instructions on authorizing access for designer mode.
- 2 From a WebTop application screen (not the Home tab or a System Command screen), select the Attachment Rules icon (the paperclip) on the toolbar.
- 3 Select option 1 (Select) on Drillback Override Maintenance. A subfile list of drillback override configurations is displayed.
- 4 Press **F6** (Create) to create a new drillback override configuration.
- 5 Use the information below to complete the fields on this page.

Name

Specify the name of the drillback view ID that this override should intercept, for example, ReceivableView. Note that there are generally multiple drillback overrides with the same name, each overriding the same drillback view.

Description

Specify a description for this drillback override.

Drill back key

Specify the drillback configuration to be used if the tests on this drillback override pass.

- 6 The system also displays a subfile list of the tests that determine if this drillback override configuration should be used. Press **F6** to create a new test.
- 7 Use the information below to complete the fields on this page. You must know the structure of the relevant BOD document ID, and possibly its accounting entity and location, as well as how to distinguish the BODs that should use this drillback override.

Override Seq

Specify the position that this test should appear in sequence. (Note that sequence numbers are automatically recalculated after a drillback override configuration is saved. The number you enter only indicates the relative position in which this test will be evaluated with regard to the others. A good practice is to use a sequence with gaps, like "10," "20," "30," ...)

Override Test

Specify a comparison expression between two values, separated by the equal sign. If the two values are equal, this test passes.

Test comparison expression values may contain any of the following:

- A constant string, enclosed in single quotation marks.
- A drillback query string parameter from Table 2-1.
- A tokenization call, of the form `TOKEN(<separator>, <drillback parameter>, <index>)`. This separates the drillback parameter value into segments delimited by the separator character, and returns the segment indicated by the 1-based index.
- A substring call, of the form `SUBST(<drillback parameter>, <start index>, <length>)`. This returns the substring of the drillback parameter value from the 1-based start index to the end index, inclusive.
- A concatenation of multiple values, separated by plus signs ("+").

For example, the drillback override test that would identify a ReceivableTransaciton BOD generated from an Infinium AR Obligation is:

```
TOKEN('.', ID1, 4) = 'OH'
```

And the drillback override test that would identify a ReceivableTransaciton BOD generated from an Infinium AR Cash Receipt is:

```
TOKEN('.', ID1, 4) = 'PH'
```

- a Press **Enter**.
 - b Press **F12** to return to first drillback override screen.
- 8 Press **F3** to exit.
 - 9 Select **Save** and press **Enter** to save your changes.

Configuring Infor Business Context messages

The Infor Business Context (IBC) message contains the information shown in Figure 2-2. For any given screen, a list of business context entities that are visible on that screen is presented to Infor Ming.le Enterprise. The information about each entity includes its type, ID(s), name, description, drillback URL, and a reference to any BOD for this business entity. This information is provided to Infor Ming.le Enterprise via the BC decorator on a WebTop panel.

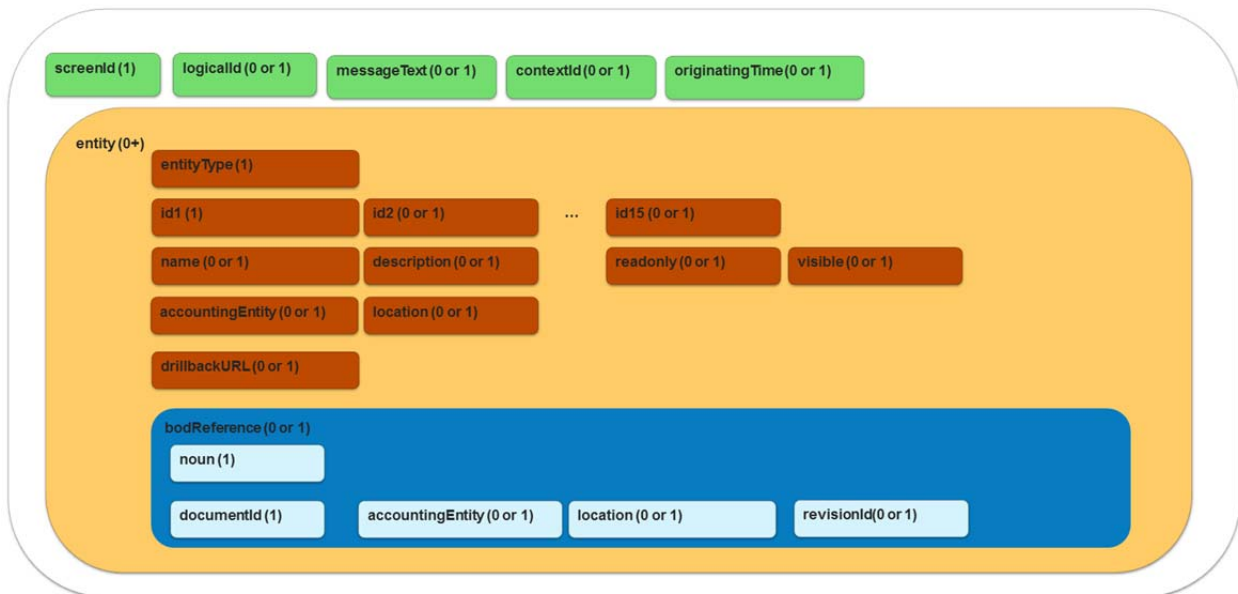


Figure 2-2. The Infor Business Context Message

The configuration tasks in this section describe first how defaults are established for various parts of the BC decorator, and then how the BC decorators are attached to a panel and actual decorator values are provided for each business entity.

The result of the BC decorator is to create a JavaScript function that is executed when the decorated panel is displayed to extract panel information into an Infor Business Context message and to send that message to Infor Ming.le.

The steps of this process are:

- 1 Create a drillback configuration, if this business entity type supports drillback.
- 2 Create a BOD Reference configuration, if this business entity type is also represented by an Infor ION Business Object Document (BOD) published by the application platform.
- 3 Create a Business Entity configuration for this business entity type.
- 4 If necessary, set up program API calls to obtain information that is not available to the panel's RPG program for use in the BC decorator.
- 5 Attach the BC decorator to a panel and provide actual panel field names from which data for the IBC message is extracted and the final expressions by which those field values are assembled into the IBC message fields.

- 6 If necessary, set up additional fields to be exported from the panel's RPG program variables for use in the BC decorator. This requires WebTop Studio 4.6 and re-weblication of the underlying program.

Setting up BOD Reference configurations

BOD Reference configurations contain *default* BC decorator value expressions for referring to a BOD based on panel field names. These default values are replaced with the actual expressions in terms of a panel's real field IDs when a BC decorator is attached to that panel.

Before creating a BOD Reference configuration, collect the following information:

- Identify the structure of the following elements and attributes of this BOD as generated by the platform application, and the data needed to complete these structures.
 - Document ID
 - Accounting Entity
 - Location
 - RevisionID
- Identify the display form/field IDs of the data required to fill out the BOD elements above.

See the extended example below for details.

To set up a BOD Reference configuration:

- 1 Log onto WebTop with a profile that is authorized to access Designer Mode when running WebTop Server.

Refer to the "Accessing change font and designer mode" section of the *Infor WebTop for IBM i™ System Administrator's Guide* for instructions on authorizing access for designer mode.

- 2 From a WebTop application screen (not the Home tab or a System Command screen), select the Attachment Rules icon (the paperclip) on the toolbar.
- 3 Select option 1 (Select) on BOD Reference Maintenance. A subfile list of BOD Reference configurations is displayed.
- 4 Press **F6** (Create) to create a new BOD Reference configuration.
- 5 Use the information below to complete the fields on this page.

Bod Reference

Specify the name of the BOD noun for this configuration, for example, PayableTransaction.

Document ID

Specify a JavaScript expression for creating the document ID of this BOD from screen panel field data. Constant strings must be enclosed in quotation marks. Concatenation of values is expressed with the plus sign ('+'). One enhancement to JavaScript is allowed: values of the form <panel>/<field> extract the value of that panel's field.

Accounting Entity

Specify a JavaScript expression for creating the accounting entity of this BOD from screen panel field data, if and only if this BOD contains an accounting entity value.

Location

Specify a JavaScript expression for creating the location ID of this BOD from screen panel field data, if and only if this BOD contains a location value.

Revision ID

Specify a JavaScript expression for creating the revision ID of this BOD from screen panel field data, if and only if this BOD contains a revision ID value.

- 6 Press **F3** to exit.
- 7 Select **Save** and press **Enter** to save your changes.

For example, the Infor Infinium Adapter sends a PayableTransaction BOD with its key values structured as follows:

- accountingEntity: 'INF.PL.' + *PL company ID*
- location: 'INF.PL.' + *PL company ID* + '.' + *PL division ID*
- ID: 'INF.PL.' + *PL company ID* + '.' + *PL invoice internal reference number (IREF)*
- RevisionID: *none*

On the PL Invoice display screen, the following panel fields contain the data required in the example above:

- *PL company ID*: DSP01/VHVECO
- *PL division ID*: DSP01/VHDIVN
- *PL invoice internal reference number (IREF)*: DSP01/VHIREF

Putting these together, allows you to fill out a BOD Reference configuration for the PayableTransaction BOD as follows:

- BOD Reference: **PayableTransaction**
- Document ID: **'INF.PL.' + DSP01/VHVECO + '.' + DSP01/VHIREF**
- Accounting Entity: **'INF.PL.' + DSP01/VHVECO**
- Location: **'INF.PL.' + DSP01/VHVECO + '.' + DSP01/VHDIVN**
- Revision ID: *blank*

Note the use of *<panel>/<field>* expressions to represent values from panel fields. This is an extension of the JavaScript language.

Remember the following points:

- These values are only *default templates*. Your primary goal is to inform the person filling out the fields of a BC decorator of this BOD's ID structure and to suggest what fields the required data may be in. If possible, you also should save them time by using actual panel field IDs, but this is secondary to the goal of communicating what the person applying the decorator should do.

- These values are templates for *JavaScript code*. Specifically, you need to remember to quote all string values, but in general, you need to know what is and is not allowed in JavaScript code.
- If a field name contains a special character, that is “\$”, “@” or “#”, replace it with the letter “D,” “A,” or “N” respectively.

Setting up Business Entity configurations

Business Entity configurations contain *default* BC decorator value expressions for a specific business entity type. These default values are replaced with the actual expressions in terms of a panel’s real field IDs when a BC decorator is attached to that panel. A Business Entity configuration also contains optional links to a drillback configuration and a BOD Reference configuration.

Before creating a Business Entity configuration, collect the following information:

- Identify the structure of any accounting entity and location used in a BOD for this business entity as generated by the platform application and the data needed to complete these structures.
- Identify the display form/field IDs of the data required to fill out the accounting entity and location structures.

See the extended example below for details.

To set up a Business Entity configuration:

- 1 Log onto WebTop with a profile that is authorized to access Designer Mode when running WebTop Server.

Refer to the “Accessing change font and designer mode” section of the *Infor WebTop for IBM i™ System Administrator’s Guide* for instructions on authorizing access for designer mode.

- 2 From a WebTop application screen (not the Home tab or a System Command screen), select the Attachment Rules icon (the paperclip) on the toolbar.
- 3 Select option 1 (Select) on Business Entity Maintenance. A subfile list of Business Entity configurations is displayed.
- 4 Press **F6** (Create) to create a new Business Entity configuration.
- 5 Use the information below to complete the fields on this page.

Type

Specify the Infor business entity type for this configuration, for example, **InforPayableTransaction**.

See the following Infor internal web page for a complete list of business entity types:

<http://development.home.infor.com/companyon/Lists/Infor%20Standard%20Entity%20Types/Standard%20View.aspx>.

See the following Infor internal web page for a list of Infor business entity types associated with Business Object Document (BOD) nouns:

<http://development.home.infor.com/companyon/Lists/Infor%20Standard%20Entity%20Type%20o%20BOD%20Mappings/AllItems.aspx>.

Generally, the business entity type for a BOD is the BOD noun prefixed by “Infor”.

Name

Specify a JavaScript expression for the name to be used by Infor Ming.le Enterprise for business entities of this type. This can be a constant string, such as **‘PL Invoice’** or it could be an expression involving data from the screen, such as **‘PL Invoice ’ + DSP01/VHINVN**, which would display the invoice number in this business entity’s name. As shown here, values of the form `<panel>/<field>` extract the value of that panel’s field, constant strings must be enclosed in quotation marks, and concatenation of values is expressed with the plus sign (+’).

Description

Specify a JavaScript expression for a description of this business entity.

Drill back key

Specify a drillback configuration to use to drill back to this business entity type.

Accounting entity value

Specify a JavaScript expression for creating the accounting entity of this business entity from screen panel field data. Complete this field if, and only if, this business entity is associated with a specific accounting entity. As a best practice, use the accounting entity ID structure of your platform application’s BODs.

Location

Specify a JavaScript expression for creating the location ID of this BOD from screen panel field data, if and only if this business entity is associated with a specific location. As a best practice, use the location ID structure of your platform application’s BODs.

BOD Reference

Specify a BOD Reference configuration to use for this business entity type.

Read only flag

Specify if this business entity is to be marked as read-only to Infor Ming.le Enterprise (**1**) or not (**0**). Refer to Infor Ming.le Enterprise documentation for the effect of this flag.

Visible flag

Specify if this business entity is to be marked as visible to Infor Ming.le Enterprise (**1**) or not (**0**). Refer to Infor Ming.le Enterprise documentation for the effect of this flag.

- 6** The system also displays a subfile list of the ID(s) that are associated with this business entity type. At least 1 ID (ID1) is required. Press **F6** to create a new ID configuration.
- 7** Use the information below to complete the fields on this page. You must know the structure of the relevant BOD document ID, accounting entity, and location, as well as how to distinguish the BODs that should use this drillback override.

ID sequence #

Specify the position that this ID should appear in sequence. Note that sequence numbers are automatically recalculated after a drillback override configuration is saved. The number you enter indicates only the relative position in which this ID is included with regard to the others, but the

lowest numbered ID configuration generates ID1, the next ID2, and so forth. A good practice is to use a sequence with gaps, like "10," "20,"

ID value

Specify a default JavaScript expression for this ID value. Constant strings must be enclosed in quotation marks. Concatenation of values is expressed with the plus sign ('+'). One enhancement to JavaScript is allowed: values of the form `<panel>/<field>` extract the value of that panel's field.

a Press **Enter**.

b Press **F12** to return to Business Entity Maintenance screen.

8 Press **F3** to exit.

9 Select **Save** and press **Enter** to save your changes.

For example, the Infor Infinium PL associates payables ledger invoices have the business entity type 'InforPayableTransaction', and are associated with an accounting entity and location (in PayableTransaction BODs) as follows:

- accountingEntity: 'INF.PL.' + *PL company ID*
- location: 'INF.PL.' + *PL company ID* + '.' + *PL division ID*

On the PL Invoice display screen, the following panel fields contain the data required in the example above:

- *PL company ID*: DSP01/VHVECO
- *PL division ID*: DSP01/VHDIVN

Putting these together, allows one to fill out a Business Entity configuration for the PL invoice as follows:

- Type: **InforPayableTransaction**
- Name: **'PayableTransaction'**
- Description: **'Payable Invoice'**
- Drill back key: **PayableView**
- Accounting Entity: **'INF.PL.' + DSP01/VHVECO**
- Location: **'INF.PL.' + DSP01/VHVECO + '.' + DSP01/VHDIVN**
- BOD Reference: **PayableTransaction**
- Read only flag: **1**
- Visible flag: **1**
- ID1 (same as BOD document ID): **'INF.PL.' + DSP01/VHVECO + '.' + DSP01/VHIREF**

Note the use of `<panel>/<field>` expressions to represent values from form fields. This is an extension of the JavaScript language.

Remember the following points:

- These values are only *default templates*. Your primary goal is to inform the person filling out the fields of a BC decorator of this business entity's field structure and to suggest what panel fields the required data may be in. If possible, you also should save them time by using actual panel

field IDs, but this is secondary to the goal of communicating what the person applying the decorator should do.

- These values are templates for *JavaScript code*. Specifically, you need to remember to quote all string values, but in general, you need to know what is and is not allowed in JavaScript code.
- If a field name contains a special character, that is “\$”, “@” or “#”, replace it with the letter “D,” “A,” or “N” respectively.

Attaching Business Context (BC) decorators

Business Context decorators specify exactly how an Infor Business Context (IBC) message is generated for a panel. Only panels with BC decorators generate an IBC message, and each BC decorator identifies the specific panel fields which are used to provide the data for a single IBC business entity. The business entity configuration given at decorator attachment time provides default value expressions for the business entity’s fields, but the person attaching the BC decorator to a panel must modify these defaults to work with the specific panel in question.

Best Practice: Define the first Business Context decorator on a panel as the primary business object displayed by that panel. For example, on a Payable Invoice panel, the first Business Context decorator (Entity-01) should be the invoice itself (an InforPayableTransaction business entity), with subordinate business objects (vendor, etc.) being defined in subsequent BC decorators.

Before attaching a Business Context (BC) decorator to a panel, collect the following information:

- Select the business entity type to be attached to this panel by this decorator.
- If this business entity type contains a drillback configuration, identify the display form/field IDs of the data on this panel required to fill out all drillback fields.
- If this business entity type contains a BOD Reference configuration, identify the display form/field IDs of the data on this panel required to fill out all BOD Reference fields.
- Identify the display form/field IDs of the data on this panel required to fill out all Business Context fields.
- If information necessary to fill out all Business Context fields is not available in panel’s fields, identify any application program variables required to supply that information.
- If information necessary to fill out all Business Context fields is not available in either the panel’s fields or in the application program displaying the panel, see the “Setting up Program Attachment decorators” section in this guide to call an external API program to provide the missing information.

To set up a Business Entity configuration:

- 1 Log onto WebTop with a profile that has Designer Mode access and Web Designer administrator authority. This enables the Designer Mode icons to appear on application screens and allows decorators to be applied to all users, not just your user profile.

Refer to the “Accessing change font and designer mode” section of the *Infor WebTop for IBM i™ System Administrator’s Guide* for instructions on authorizing access for designer mode.

Refer to the “Establishing Web Designer status” section of the *Infor WebTop for IBM i™ System Administrator’s Guide* for instructions on authorizing a profile as a Web Designer administrator.

- 2 From a WebTop application screen (not the Home tab or a System Command screen), select the Designer Mode icon (the magic wand) on the toolbar to enter Designer Mode.
- 3 Select the scope of the decorator (your profile or all users). In most cases, select **All Users**. If you are not prompted for the decorator's scope, stop and obtain Web Designer administrator authority; otherwise, your decorators apply only to your user profile.
- 4 The system displays all panel fields surrounded by border boxes. Select a field on the panel, other than a radio button, check box, or date field, by clicking inside its box.
- 5 Right-click in the selected field to add a decorator.
- 6 From the **Decorators** dropdown list, select **Business Context**.
- 7 If other Business Context decorators exist on this panel, the system displays a subfile list of them – one for each Infor Business Context entity attached to this panel. If the subfile list is displayed, press **F6** (Create) to create a new Business Context Entity decorator; otherwise, proceed to the next step.
- 8 In the **Type** field, press **F4** (Prompt) to select the Infor business entity type for this decorator. The system displays a subfile list of Business Entity configurations.
- 9 Enter **1** in the option field to select a business entity type configuration.
- 10 Press **Enter**. The system returns to the Business Context decorator screen and displays the default **Drill back key** and **BOD Reference** configurations for this business entity type.
- 11 If required, override the **Drill back key** configuration for this decorator by prompting in that field.

This is necessary when the default drillback configuration leads to an inappropriate WebTop bookmark. For example, a BC decorator for an InforReceivableTransaction entity that is attached to an AR Obligation panel would refer to one drillback configuration whose bookmark displays obligation data, while the same decorator attached to an AR Cash Receipt panel needs to refer to a different drillback configuration whose bookmark displays cash receipts.
- 12 Select the **Next** icon (or press **Enter**).
- 13 The system displays the Substitution Entry screen, a scrollable list of all Infor business entity fields for this business entity type with default values from the Business Entity, Drillback, and BOD Reference configurations. Use the information below to complete the fields on this page. Be sure to scroll through all Substitution Entry fields.

Note: Each of these fields contains JavaScript expressions. Values of the form `<panel>/<field>` extract the value of that panel's field. Constant strings must be enclosed in quotation marks. Concatenation of values is expressed with the plus sign ('+'). Values of the form **PGM**<field> include data from Additional Fields or program attachment decorators return fields.

IBC Base Fields

The following fields contain basic business context entity data.

Name

Specify a JavaScript expression for the name to be used by Infor Ming.le Enterprise for this business entity. A default for this field is provided from the Business Entity configuration, but may be changed here, and must be changed to use only panel field IDs from the current panel.

Description

Specify a JavaScript expression for a description of this business entity. A default for this field is provided from the Business Entity configuration, but may be changed here, and must be changed to use only panel field IDs from the current panel.

Acct entity

Specify a JavaScript expression for creating the accounting entity of this business entity from screen panel field data field, if this business entity is associated with a specific accounting entity. A default for this field is provided from the Business Entity configuration, but may be changed here, and must be changed to use only panel field IDs from the current panel.

Location

Specify a JavaScript expression for creating the location ID of this BOD from screen panel field data, if this business entity is associated with a specific location. A default for this field is provided from the Business Entity configuration, but may be changed here, and must be changed to use only panel field IDs from the current panel.

IBC ID Fields

The following fields contain business context entity ID data.

ID-1 (and optionally ID-2 to ID-15)

Specify a default JavaScript expression for each ID value set up in this business entity. A default for each ID is provided from the Business Entity ID configuration(s), but may be changed here, and must be changed to use only panel field IDs from the current panel.

IBC Drillback Fields

The following fields contain a substitution expression for each drillback substitution ID in the selected drillback configuration.

(*ID1*) (and optionally (*ID2*) to (*ID15*))

Specify a JavaScript expression for each substitution ID value set up in the selected Drillback configuration. A default for each ID is provided from the bookmark field code that this substitution completes. These default values are unlikely to match the field ID on the panel or any other configuration setting. Therefore, these ID values *must be changed* to use panel field IDs from the current panel.

IBC BOD Fields

The following fields contain BOD Reference data for this business entity type.

Document ID

Specify a JavaScript expression for creating the document ID of this BOD from screen panel field data. A default for this field is provided from the BOD Reference configuration, but may be changed here, and must be changed to use only panel field IDs from the current panel.

Accounting Entity

Specify a JavaScript expression for creating the accounting entity of this BOD from screen panel field data, if this BOD contains an accounting entity value. A default for this field is provided from the BOD Reference configuration, but may be changed here, and must be changed to use only panel field IDs from the current panel.

Location

Specify a JavaScript expression for creating the location ID of this BOD from screen panel field data, if this BOD contains a location value. A default for this field is provided from the BOD Reference configuration, but may be changed here, and must be changed to use only panel field IDs from the current panel.

Revision ID

Specify a JavaScript expression for creating the revision ID of this BOD from screen panel field data, if this BOD contains a RevisionID value. A default for this field is provided from the BOD Reference configuration, but may be changed here, and must be changed to use only panel field IDs from the current panel.

- 14 If information necessary to complete some Substitution Entry field is not available in the panel's fields but is available in the application program displaying the panel, use the following steps to obtain additional fields of data from the application program.

WARNING: Configuring additional program fields for a decorator requires a license for Infor WebTop for IBM i™ Studio 4.6 must be installed. The decorated application panel program requires re-weblication and compilation as type SQLRPGLE.

- a Press **F16** (Program Fields) to enter additional fields. The system displays a list of fields with which to enter program field names and their data types. Use the information below to complete the fields on this page.

Program Fields

Enter the individual application program variable names to be retrieved in separate fields.

If necessary, and this should be very rare, use the code ***ALL** to obtain *all* application program fields; this option makes this panel run slower, so use sparingly.

Field Type

Specify the data type of the program variable, either **C** for character data or **N** for numeric data. Do not fill this field in when using the ***ALL** option.

- b Press **Enter** to return to the Substitution Entry panel.

- c On the Substitution Entry panel, refer to additional fields with **PGM/**<program-field> expressions.

Note: After configuring additional fields, the application program must be re-weblicated for these fields to become available. Solution Record S1426611 must be installed. Also, the application program must be given the type SQLRPGLE, since additional field processing is implemented with SQL. See the *Infor WebTop for IBM i™ Studio Guide to Web Conversion Tools* for directions.

Hint: Additional program fields, and fields from Program Attachment decorators, can be viewed by right-clicking the Attachment Rules icon (the paperclip) on the toolbar.

- 15 Select **Next** to finish and add this decorator.
- 16 Verify that you see the “Decorator added” message; otherwise, the decorator has not been added and must be corrected or it will be lost.
- 17 If the Business Context decorator subfile list is displayed, press **F3** to exit.
- 18 From a WebTop application screen, select the Designer Mode icon (the magic wand) on the toolbar to exit Designer Mode.

If you exit and reenter the panel that was just decorated, WebTop publishes the revised Infor Business Context message for this panel. You must also clear the browser’s cache of “Temporary Internet files” before reentering the panel.

Note: The business context message that WebTop publishes can be displayed in the Infor Ming.le Enterprise Context Viewer. Configure your Infor Ming.le Enterprise portal to display the Context Viewer context application, and configure the Context Viewer context application to display “inforBusinessContext” messages.

Tip: This configuration is case-sensitive; be sure the message type begins with a lower-case letter “i”.

For example, the Infor Infinium PL invoice header display panel accessible via PL Analytical Inquiry can attach a Business Context decorator for the InforPayableTransaction business entity type and use most of the default values; although, it must override the default values provided for the drillback substitution parameters. The entries on the BC decorator Substitution Entry screen would be as follows:

- System Key: PL / xx / xx
- Library: PL2000
- Display: PLDIED
- Format: DSP01
- Decorator Type: BC Business Context
- IBC Base Fields
 - Name: '**PayableTransaction**'
 - Description: '**Payable Invoice**'
 - Acct entity: '**INF.PL.**' + **DSP01/VHVECO**
 - Location: '**INF.PL.**' + **DSP01/VHVECO** + **'.' + DSP01/VHDIVN**
- IBC ID Fields

- ID-1: **'INF.PL.' + DSP01/VHVECO + '.' + DSP01/VHIREF**
- IBC Drillback Fields:
 - (*ID1*): **DSP01/VHVECO**
 - (*ID2*): **DSP01/VHIREF**
- IBC BOD Fields
 - Document ID: **'INF.PL.' + DSP01/VHVECO + '.' + DSP01/VHIREF**
 - Acct entity: **'INF.PL.' + DSP01/VHVECO**
 - Location: **'INF.PL.' + DSP01/VHVECO + '.' + DSP01/VHDIVN**
 - Revision ID: *blank*

Attaching a BC decorator for this business entity type to a different application panel would require that the format and field ID values in these expressions be changed.

Remember the following points:

- The default values provided are only templates. It is your responsibility to make these templates match the actual data fields on the panel being decorated.
- These values are *JavaScript code*. Specifically, you must remember to quote all string values, but in general, you need to know what is and is not allowed in a JavaScript expression.
- If a field name contains a special character, that is “\$”, “@” or “#”, replace it with the letter “D,” “A,” or “N” respectively.

Setting up Program Attachment decorators

Sometimes neither a panel nor its underlying program contains the data needed to describe the business context entities on the panel. In this case, a call to an external RPG API program to provide that data is the best solution. This is supported by the Program Attachment decorator.

Before attaching a Program Attachment decorator, perform these steps:

- 1 Identify the data required to fill out the missing Business Context fields.
- 2 Identify where that information resides in the application or how to calculate it.
- 3 Identify the data that your program will need to retrieve or calculate the missing data.
- 4 Write an API program that takes the data present on the panel and retrieves the data needed. See following example code. Compile this program and place it in the appropriate program library on the relevant library list(s).

The following sample code retrieves and returns a single value from an Infor Infinium Adapter (IA) configuration record for use in Business Context or Contextual Application or Script decorators.

```

*
*   IAGGETAE
*       Get Accounting Entity
*           This program will be called from the W3GDOH,
*           and be used to retrieve the accounting entity
*
*

```

```

*           From the IA system
*
* format of in_keys
* <programcall action="GET">
*   <keys>
*     <key name="COPOST" value="02601"/>
*     <key name="COHCC" value="USD"/>
*   </keys>
* </programcall>
*
* Format of in_flds
* <fields>
*   <field name="RETFLD1"/>
*   <field name="RETFLD2"/>
* </fields>
*
* Format of the out_xml
* <fields>
*   <field name="masterAE" value="infor-infinium"/>
* </fields>
*
*****
*   O B J E C T       H I S T O R Y
*
*   Created . . . . : 08 Jul 2013  RAM
*
*****
*   Modification control
*   -----
*
*****
* This program was generated by running the CRTXMLPGM command
H OPTION( *NODEBUGIO : *SRCSTMT : *SHOWCPY ) CVTOPT(*VARCHAR) #hspecs(1)  **
H DEBUG(*YES) DFTACTGRP( *NO ) BNDDIR(' *LIBL/AMBNDIR': 'IABNDIR') #hspecs(2)
H ACTGRP(*CALLER) #hspecs(3)
#hspecs(4)

FIALCFG      UF A E          K DISK

      //-----//
      //  Entry PLIST  //
      //-----//
D main          PR          extpgm(' IAGGETAE')
D in_keys       like(keyparm)
D in_flds       like(fldparm)
D out_xml       like(xmlout)

D main          PI
D in_keys       like(keyparm)
D in_flds       like(fldparm)

```

D out_xml				like(xmlout)
D keyparm	s	1024		
d fldparm	s	1024		
d xmlout	s	2048		
D retxml	s	2048		varying
d keysidx	s	2	0	
D key	ds			qualified dim(20)
D name		21		
D value		50		
d fieldsidx	s	2	0	
D field	ds			qualified dim(20)
D name		21		
D xmlerror	s		n	
d soa_setup	ds			qualified
d esb				likes(esb_t)
d archive				likes(archive_t)
d inbox				likes(inbox_t)
d exception				likes(exception_t)
D esb_t	ds			qualified
D fromlid		42		
D tolid		42		
D tenant		30		
D masterae		30		
D archive_t	ds			qualified
D inbox_days		3s	0	
D event_days		3s	0	
D event_done_flag...				
D		1		
D inbox_t	ds			qualified
D purge_days		3s	0	
D purge_sts		1s	0	
D archive		1		
D exception_t	ds			qualified
D waittime		3s	0	
D maxretry		3s	0	
d	ds			

```

D cfxml          1 16386                                     Data Structure
D cfxmll        5U 0 overlay(cfxml:*next)
D cfxmld        16380 overlay(cfxml:*next)
/FREE
exsr proc;
return;

//-----//
// Proc Subroutine //
//-----//
begsr proc;

// extract out keys
xmlerror = *off;
key = *blanks;
keysidx = *zeros;
monitor;
XML-Into key
  %XML(in_keys:
    'path=programcall/keys/key'
    + ' case=any allowextra=yes allowmissing=yes');
on-error;
xmlerror = *on;
endmon;

// extract out fields
// The array field can be used to determine what fields are to
// be included in the returned XML
xmlerror = *off;
field = *blanks;
fieldsidx = *zeros;
monitor;
XML-Into field
  %XML(in_flds:
    'path=programcall/fields/field'
    + ' case=any allowextra=yes allowmissing=yes');
on-error;
xmlerror = *on;
endmon;

// Soa Configuration record
cfkey = 'INFOR_SOA';
chain(n) cfkey iarcfg;
if %found;
xmlerror = *off;
monitor;
XML-Into soa_setup

```

```
%XML(cfxmld: 'path=soa_setup +
           case=any allowextra=yes allowmissing=yes');
on-error;
xmlerror = *on;
endmon;
endif;

// build return message
retxml = '<fields><field name="masterAE" value="'
        + %trim(soa_setup.esb.masterae) + '"/></fields>';
out_xml = retxml;
endsr;
```

To set up a Program Attachment decorator:

- 1 Log onto WebTop with a profile that has Designer Mode access and Web Designer administrator authority. This enables the Designer Mode icons to appear on application screens and allows decorators to be applied to all users, not just your user profile.

Refer to the “Accessing change font and designer mode” section of the *Infor WebTop for IBM i™ System Administrator’s Guide* for instructions on authorizing access for designer mode.

Refer to “Establishing Web Designer status” section of the *Infor WebTop for IBM i™ System Administrator’s Guide* for instructions on authorizing a profile as a Web Designer administrator.

- 2 From a WebTop application screen (not the Home tab or a System Command screen), select the Designer Mode icon (the magic wand) on the toolbar to enter Designer Mode.
- 3 Select the scope of the decorator (your profile or all users). In most cases, select **All Users**. If you are not prompted for the decorator’s scope, stop and obtain Web Designer administrator authority; otherwise, your decorators apply only to your user profile.
- 4 The system displays all panel fields surrounded by border boxes. Select a field on the panel, other than a radio button, check box, or date field, by clicking inside its box.
- 5 Right-click in the selected field to add a decorator.
- 6 From the **Decorators** dropdown list, select **Program Attachment**.
- 7 If Program Attachment decorators already exist on this panel, the system displays a subfile list of them; otherwise it displays a creation panel for a Program Attachment decorator. If the subfile list is displayed, press **F6** (Create) to create a new Program Attachment decorator; otherwise, proceed to the next step.
- 8 Use the information below to complete the fields on this page.

Program to call

Specify the name of the API program to call. This program must be on your profile’s library list; otherwise, an error is issued.

Key Fields

Specify the panel fields to pass to this API program. If no fields are passed, a warning is issued, but if your API program needs no fields, this warning can be overridden. These fields are passed to the API program and can be used to retrieve the necessary information.

- 9 Press **Next**.
- 10 Use the information below to complete the fields on this page.

Return fields

Specify the field names for the data returned by this API program. This list of field names is passed to the API program, which may choose to return data in fields with these names – or not. The field names that the API program returns appear as new panel fields with the values that the API program returns in them. These new field values can be accessed in Business Context, Contextual Application, and Script decorators' Substitution Entry screens with the expression **PGM/<field>**, and in Script decorators' JavaScript with the expression **getfldval('PGM_ <field>')**.

- 11 Press **Enter** to attach this decorator to the panel.
- 12 Verify that you see the “Decorator added” message; otherwise, the decorator has not been added and must be corrected or it will be lost.
- 13 If the Program Attachment decorator subfile list is displayed, press **F3** to exit.
- 14 From a WebTop application screen, select the Designer Mode icon (the magic wand) on the toolbar to exit Designer Mode.

Hint: Fields returned from Program Attachment decorators, and additional program fields, can be viewed by right-clicking the Attachment Rules icon (the paperclip) on the toolbar.

Configuring Contextual Application messages

The Infor Business Context message is very important, but there are other Infor Ming.le Enterprise messages that can be sent to context applications. One example is the “address” message that is listened for by the Map context application. WebTop supports contextual application messages through the Contextual Application decorator.

WebTop is preconfigured to allow the Infor Ming.le Enterprise context messages shown in Table 2-2 to be sent. This configuration is provided by records in table W3PPROPNV; other messages can be added to that table as custom configurations. Setup and use of context messages requires an ICS engagement.

Infor Context Message type	WebTop Context Message configuration	Context Message field	Substitution ID
address	ADDRESS	street	*(ID1)*
		city	*(ID2)*
		state	*(ID3)*
		zipCode	*(ID4)*
		country	*(ID5)*
address	COMPLETEADDRESS	completeAddress	*(ID1)*
contactContext	CONTACT	contactName	*(ID1)*
		companyName	*(ID2)*
		emailAddresses	*(ID3)*
		twitterIds	*(ID4)*
		facebookIds	*(ID5)*
		linkedInIds	*(ID6)*
		skypeIds	*(ID7)*
		yahooIds	*(ID8)*
		msnIds	*(ID9)*
		aimIds	*(ID10)*
currencyExchange	CURRENCY	baseCurrency	*(ID1)*
		baseValue	*(ID2)*
		targetCurrency	*(ID3)*
packageInformation	PACKAGE	carrier	*(ID1)*
		trackingNumber	*(ID2)*
businessSearch	SEARCH	businessName	*(ID1)*
		businessCategory	*(ID2)*
		businessLocation	*(ID3)*
languageTranslator	TRANSLATOR	fromLanguage	*(ID1)*
		toLanguage	*(ID2)*
		fromText	*(ID3)*

Table 2-2: Pre-configured Contextual Application Messages

For a complete list of standard context messages, see the Infor internal web page <http://wiki.infor.com:8080/confluence/display/companyon/Infor10+Workspace+-+Standard+Context+Message+Definitions>.

Before attaching a Context Application decorator, collect the following information:

- Identify the display and field IDs of the data needed to fill out this message's fields (see Table 2-2).

- If necessary, identify any application program variables required to fill out the message fields.
- If necessary, create a Program Attachment decorator to supply the required information.

To set up a Contextual Application decorator:

- 1 Log onto WebTop with a profile that has Designer Mode access and Web Designer administrator authority. This enables the Designer Mode icons to appear on application screens and allows decorators to be applied to all users, not just your user profile.

Refer to the “Accessing change font and designer mode” section of the *Infor WebTop for IBM i™ System Administrator’s Guide* for instructions on authorizing access for designer mode.

Refer to the “Establishing Web Designer status” section of the *Infor WebTop for IBM i™ System Administrator’s Guide* for instructions on authorizing a profile as a Web Designer administrator.

- 2 From a WebTop application screen (not the Home tab or a System Command screen), select the Designer Mode icon (the magic wand) on the toolbar to enter Designer Mode.
- 3 Select the scope of the decorator (your profile or all users). In most cases, select **All Users**. If you are not prompted for the decorator’s scope, stop and obtain Web Designer administrator authority; otherwise, your decorators will apply only to your user profile.
- 4 The system displays all panel fields surrounded by border boxes. Select a field on the panel, other than a radio button, check box, or date field, by clicking inside its box.
- 5 Right-click in the selected field to add a decorator.
- 6 From the **Decorators** dropdown list, select **Contextual Application**.
- 7 If any Contextual Application decorators already exist on this panel, the system displays a subfile list of them. If this subfile list is displayed, press **F6** (Create) to create a new Contextual Application decorator; otherwise, proceed to the next step.
- 8 Use the information below to complete the fields on this page.

Context message

Specify the name of the context message to send. For example, **COMPLETEADDRESS** for the single-field address message)

- 9 Press **Next**. The system displays the context message configuration. This is a skeleton of the JavaScript function to be created to send this message. The following special expressions are used on this panel for JavaScript characters that are not invariant and for values that are to be replaced during decorator attachment.

Special expression	Description
* (OPEN) *	Stands in for the open curly brace character (“{”) in JavaScript, which is not an invariant character and so is not stored in database tables.
* (CLOSE) *	Stands in for the close curly brace character (“}”) in JavaScript.

Special expression	Description
* (ID1) *	A Substitution ID to be replaced by a JavaScript expression during decorator attachment.

Table 2-3:Contextual Application Configuration Special Expressions

- 10 Press **Next**. The system displays the Substitution Entry panel to allow panel data field IDs to replace the *(ID#)* substitution IDs in the context message configuration.
- 11 Use the information below to complete the fields on this page. Be sure to scroll through all Substitution Entry fields.

Field

Displays the substitution ID in the context message configuration to be replaced.

Value

Specify a JavaScript expression to replace the given substitution ID with screen panel field data. Constant strings must be enclosed in quotation marks. Concatenation of values is expressed with the plus sign ('+'). One enhancement to JavaScript is allowed: values of the form `<panel>/<field>` extract the value of that panel's field.

- 12 If information necessary to complete some Substitution Entry field is not available in the panel's fields but is available in the application program displaying the panel, use the following steps to obtain additional fields of data from the application program.

WARNING: Configuring additional program fields for a decorator requires a license for Infor WebTop for IBM i™ Studio 4.6 must be installed. The decorated application panel program requires re-weblication and compilation as type SQLRPGLE.

- a Press **F16** (Program Fields) to enter additional fields. The system displays a list of fields with which to enter program field names and their data types. Use the information below to complete the fields on this page.

Program Fields

Enter the individual application program variable names to be retrieved in separate fields.

If necessary, and this should be very rare, use the code ***ALL** to obtain *all* application program fields; this option makes this panel run slower, so use sparingly.

Field Type

Specify the data type of the program variable, either **C** for character data or **N** for numeric data. Do not fill this field in when using the ***ALL** option.

- b Press **Enter** to return to the Substitution Entry panel.
- c On the Substitution Entry panel, refer to additional fields with **PGM/**`<program-field>` expressions.

Note: After configuring additional fields, the application program must be re-weblicated for these fields to become available. Solution Record S1426611 must be installed. Also, the application program must be given the type SQLRPGLE, since additional field processing is implemented

with SQL. See the *Infor WebTop for IBM i™ Studio Guide to Web Conversion Tools* for directions.

Hint: Additional program fields, and fields from Program Attachment decorators, can be viewed by right-clicking the Attachment Rules icon (the paperclip) on the toolbar.

- 13 Select **Next** to attach this decorator to the panel.
- 14 Verify that you see the “Decorator added” message; otherwise, the decorator has not been added and must be corrected or it will be lost.
- 15 If the Contextual Application decorator subfile list is displayed, press **F3** to exit.
- 16 From a WebTop application screen, select the Designer Mode icon (the magic wand) on the toolbar to exit Designer Mode.

Configuring Script decorators

Script decorators allow arbitrary JavaScript code to be run on a WebTop panel each time it is displayed. Script decorators are executed before Contextual Application and Business Context decorators. This makes Script decorators ideal for gathering information for those context decorators based on conditional program logic. In other words, if a context message should send different data depending on the information in the panel, then a Script decorator can perform that operation.

Script decorators are also executed by WebTop when run stand-alone outside of the Infor Ming.le Enterprise environment. This makes them useful for other purposes.

With a Script decorator you have the power to program the browser to alter the panel as you see fit. That makes it harder to provide guidance in using this decorator, and knowledge of the JavaScript programming language is required. Some risk is also entailed; although, failure of a Script decorator does not stop WebTop, it is possible for a script to change a panel in ways that cause WebTop to fail – for example by interfering with WebTop-internal data. Because of this, any use of a Script decorator is considered a client customization to the application.

Before attaching a Script decorator, collect the following information:

- Identify the display form/field IDs that the script will get values from or alter.
- If necessary, identify any application program variables required by the script.
- If necessary, create a Program Attachment decorator to supply information to the script.

To set up a Script decorator:

- 1 Log onto WebTop with a profile that has Designer Mode access and Web Designer administrator authority. This enables the Designer Mode icons to appear on application screens and allows decorators to be applied to all users, not just your user profile.

Refer to the “Accessing change font and designer mode” section of the *Infor WebTop for IBM i™ System Administrator’s Guide* for instructions on authorizing access for designer mode.

Refer to the “Establishing Web Designer status” section of the *Infor WebTop for IBM i™ System Administrator’s Guide* for instructions on authorizing a profile as a Web Designer administrator.

- 2 From a WebTop application screen (not the Home tab or a System Command screen), select the Designer Mode icon (the magic wand) on the toolbar to enter Designer Mode.
- 3 Select the scope of the decorator (your profile or all users). In most cases, select **All Users**. If you are not prompted for the decorator's scope, stop and obtain Web Designer administrator authority; otherwise, your decorators apply only to your user profile.
- 4 The system displays all panel fields surrounded by border boxes. Select a field on the panel, other than a radio button, check box, or date field, by clicking inside its box.
- 5 Right-click in the selected field to add a decorator.
- 6 From the **Decorators** dropdown list, select **Script Decorator**.
- 7 If Script decorators already exist on this panel, the system displays a subfile list of them; otherwise it displays a creation panel for a Script decorator. If the subfile list is displayed, press **F6** (Create) to create a new Script decorator; otherwise, proceed to the next step.
- 8 Use the information below to complete the fields on this page.

Script

Specify the body of the JavaScript function to be run each time this panel is displayed. The following special expressions are allowed in these fields for JavaScript characters that are not invariant, for values that are to be replaced during decorator attachment, and for retrieving panel field values.

Special Expression	Description
* (OPEN) *	Stands in for the open curly brace character (“{”) in JavaScript, which is not an invariant character and so is not stored in database tables.
* (CLOSE) *	Stands in for the close curly brace character (“}”) in JavaScript.
* (ID1) *	A Substitution ID to be replaced by a JavaScript expression during decorator attachment. Note: If additional program fields are required, you must define at least one substitution ID; otherwise, the Substitution Entry panel, through which Program Fields are added, is not displayed.
<code>getfldval (' <panel> _ <field>')</code>	Retrieves the value of a panel field. Note the use of underscore (“_”) instead of slash (“/”) between panel display name and field ID.

Table 2-4: Script Decorator Special Expressions

- 9 Click **Next**. If any Substitution IDs are defined in the script, the system displays the Substitution Entry panel to allow panel data field IDs to be replace the *(ID#)* substitution IDs in the script; otherwise, skip to step 13.

- 10 Use the information below to complete the fields on this page. Be sure to scroll through all Substitution Entry fields.

Field

Displays the substitution ID in the context message configuration to be replaced.

Value

Specify a JavaScript expression to replace the given substitution ID with screen panel field data. Constant strings must be enclosed in quotation marks. Concatenation of values is expressed with the plus sign ('+'). One enhancement to JavaScript is allowed: values of the form `<panel>/<field>` extract the value of that panel's field.

- 11 If information necessary to complete some Substitution Entry fields is not available in the panel's fields, but is available in the application program displaying the panel, use the following steps to obtain additional fields of data from the application program.

WARNING: Configuring additional program fields for a decorator requires a license for Infor WebTop for IBM i™ Studio 4.6 must be installed. The decorated application panel program requires re-weblication and compilation as type SQLRPGLE.

- a Press **F16** (Program Fields) to enter additional fields. The system displays a list of fields with which to enter program field names and their data types. Use the information below to complete the fields on this page.

Program Fields

Enter the individual application program variable names to be retrieved in separate fields.

If necessary (and this should be very rare), use the code ***ALL** to obtain *all* application program fields; this option makes this panel run slower, so use sparingly.

Field Type

Specify the data type of the program variable, either **C** for character data or **N** for numeric data. Do not fill this field in when using the ***ALL** option.

- b Press **Enter** to return to the Substitution Entry panel.
- c On the Substitution Entry panel, refer to additional fields with **PGM/<program-field>** expressions.

Note: After configuring additional fields, the application program must be re-weblicated for these fields to become available. Solution Record S1426611 must be installed. Also, the application program must be given the type SQLRPGLE, since additional field processing is implemented with SQL. See the *Infor WebTop for IBM i™ Studio Guide to Web Conversion Tools* for directions.

Hint: Additional program fields, and fields from Program Attachment decorators, can be viewed by right-clicking the Attachment Rules icon (the paperclip) on the toolbar.

- 12 Click **Next** to attach this decorator to the panel.
- 13 Verify that you see the "Decorator added" message; otherwise, the decorator has not been added and must be corrected or it will be lost.

- 14 If the Script decorator subfile list is displayed, press **F3** to exit.
- 15 From a WebTop application screen, select the Designer Mode icon (the magic wand) on the toolbar to exit Designer Mode.

Script decorator example

Consider the Infinium AR Display Cash Receipts panel. This panel can display cash receipts for a Customer, a National Account, or a Treasury Control. The ID for whichever of these is displayed in the field **@CUNA#**, but we do not know which it is except by a label. We need the Infor Business Context message for this panel to provide appropriate business entities and to drill back to different WebTop panels in each of these cases. To do this, we need additional program field information, and we need conditional program logic. That makes this a job for a Script decorator.

We need our script to determine which kind of business object is being displayed on the Display Cash Receipts panel. It must then set global JavaScript variables to communicate the correct business entity ID and description data to use in subsequent Business Context decorators for each of these three alternatives. The ID variable for the business entity type shown on the panel will be filled out, but the IDs for the two unused business entity types will be left blank, inhibiting those business entities from being sent to Infor Ming.le Enterprise.

We will describe how the Script decorator is created and then show how its global variables are used in one of the Business Context decorators.

First, we identify any panel or program fields that the script needs values from. There are program variables for the three separate keys that are combined into **@CUNA#**:

- PHCUNO holds the customer number, if there is one. We decide to put this data into ***(ID1)*** during Substitution Entry.
- PHNANO holds the national account number, if there is one; this will be put into ***(ID2)***.
- PHTRSY holds the treasury control number, if there is one; this will be put into ***(ID3)***.

This is all the information that the script will need to determine what kind of panel is in use, so we do not need to create a Program Attachment decorator.

To set up this particular script decorator, we would use the following steps:

- 1 Log onto WebTop with a profile that has Designer Mode access and Web Designer administrator authority. This enables the Designer Mode icons to appear on application screens and allows decorators to be applied to all users, not just your user profile.

Refer to the “Accessing change font and designer mode” section of the *Infor WebTop for IBM i™ System Administrator’s Guide* for instructions on authorizing access for designer mode.

Refer to the “Establishing Web Designer status” section of the *Infor WebTop for IBM i™ System Administrator’s Guide* for instructions on authorizing a profile as a Web Designer administrator.

- 2 From the AR Display Cash Receipts screen, select the Designer Mode icon (the magic wand) on the toolbar to enter Designer Mode.

- 3 Select the scope of the decorator (your profile or all users). In most cases, select **All Users**. If you are not prompted for the decorator's scope, stop and obtain Web Designer administrator authority; otherwise, your decorators apply only to your user profile.
- 4 The system displays all panel fields surrounded by border boxes. Select a field on the panel, other than a radio button, check box, or date field, by clicking inside its box.
- 5 Right-click in the selected field to add a decorator.
- 6 From the **Decorators** dropdown list, select **Script Decorator**.
- 7 If Script decorators already exist on this panel, the system displays a subfile list of them; otherwise it displays a creation panel for a Script decorator. If the subfile list is displayed, press **F6** (Create) to create a new Script decorator; otherwise, proceed to the next step.
- 8 Use the information below to complete the fields on this page.

Script

Specify the following lines of JavaScript code:

```

1     customerID = *(ID1)*;
2     nationalAccountID = *(ID2)*;
3     treasuryControlID = *(ID3)*;
4     customerDescription = "";
5     nationalAccountDescription = "";
6     treasuryControlDescription = "";
7     if (treasuryControlID != "")
8     *(OPEN)*
9     treasuryControlDescription = 'Treasury Control: ' + treasuryControlID;
10    nationalAccountID = "";
11    customerID = "";
12    *(CLOSE)*
13    else if (nationalAccountID!= "")
14    *(OPEN)*
15    treasuryControlID = "";
16    nationalAccountDescription = 'National Account: ' + nationalAccountID;
17    customerID = "";
18    *(CLOSE)*
19    else
20    *(OPEN)*
21    treasuryControlID = "";
22    nationalAccountID = "";
23    customerDescription = 'Customer: ' + getFldval('PGM_PHCUNO');
24    *(CLOSE)*

```

Notes:

See Table 2-4 for the meaning of the special expressions, such as ***(OPEN)***.

Lines 1-3 create global JavaScript variables for the keys to each of the three business entity types that share this panel. These variables are assigned values using the Substitution IDs ***(ID1)***, ***(ID2)***, and ***(ID3)***.

Lines 4-6 create global variables for the descriptions of each of the business entity types.

Line 7 tests if a treasury control ID is present. If so, lines 8-12 are executed, assigning a value to the treasury control description variable and assuring that the other ID values are blank. After that, no other code in this script will be executed, since those lines all represent alternative conditions. But if no treasury control ID is present, lines 8-12 will be skipped and line 13 will be executed.

Line 13 tests if a national account ID is present. If so, lines 14-18 are executed, assigning a value to the national account description variable and assuring that the other ID values are blank. After that, no other code in this script will be executed, since those lines all represent alternative conditions. But if no national account ID is present, lines 14-18 will be skipped and line 19 will be executed.

Line 19 says to execute lines 20-24. No condition is tested, because if the code gets here, the panel must be displaying a customer. Lines 21-23 assign a value to the customer description variable and assuring that the other ID values are blank.

Line 23 demonstrates an alternative way of retrieving the additional program field PHCUNO by using the `getfldval()` function instead of using the JavaScript variable `customerID`.

- 9 Click **Next**. The system displays the Substitution Entry panel to allow field IDs to replace the substitution IDs in the script.
- 10 Use the table below to complete the fields on this page.

Field	Value
(ID1)	PGM/PHCUNO
(ID2)	PGM/PHNANO
(ID3)	PGM/PHTRSY

- 11 Use the following steps to obtain additional fields of data from the application program.

WARNING: Configuring additional program fields for a decorator requires a license for Infor WebTop for IBM i™ Studio 4.6 must be installed. The decorated application panel program requires re-weblication and compilation as type SQLRPGLE.

- a Press **F16** (Program Fields) to enter additional fields. The system displays a list of fields with which to enter program field names and their data types. Use the table below to complete the fields on this page.

Program fields	Field type
PHCUNO	C

PHNANO	C
PHTRSY	C

b Press **Enter** to return to the Substitution Entry panel.

Note: After configuring additional fields, the application program must be re-weblicated for these fields to become available. Solution Record S1426611 must be installed. Also, the application program must be given the type SQLRPGLE, since additional field processing is implemented with SQL. See the *Infor WebTop for IBM i™ Studio Guide to Web Conversion Tools* for directions.

Hint: Additional program fields, and fields from Program Attachment decorators, can be viewed by right-clicking the Attachment Rules icon (the paperclip) on the toolbar.

- 12 Click **Next** to attach this decorator to the panel.
- 13 Verify that you see the “Decorator added” message; otherwise, the decorator has not been added and must be corrected or it will be lost.
- 14 If the Script decorator subfile list is displayed, press **F3** to exit.
- 15 From a WebTop application screen, select the Designer Mode icon (the magic wand) on the toolbar to exit Designer Mode.

Now that the Script decorator has been put into place, each time this panel is displayed, the six global JavaScript variables are assigned values. We can now use these variables in a Business Context decorator's Substitution Entry fields.

For example, to attach a Business Context decorator for the InforNationalAccount business entity type, we would use the following entries on the BC decorator Substitution Entry screen:

- System Key: AR / xx / xx
- Library: AR2000
- Display: ARDPHI
- Format: DSP01
- Decorator Type: BC Business Context
- IBC Base Fields
 - Name: **'InforNationalAccount'**
 - Description: **nationalAccountDescription**
 - Acct entity:
 - Location:
- IBC ID Fields
 - ID-1: **nationalAccountID**
- IBC Drillback Fields:
 - (*ID1*): **PGM/PHNANO**

This demonstrates how Script decorators can be used to collect, process, and share information to other decorators that are executed after they are. Both the global variables defined in the script, and the additional program fields added by the Script decorator are available for use by other decorators.

Script decorators can also be used for many other purposes, but this example serves to demonstrate their power and application to supporting Infor Ming.le Enterprise messaging.

Setting Infor Ming.le Enterprise Messaging to be on or off

All Infor Ming.le-related decorators, including the Script decorator, are controlled by the command **SETMINGLE**, which prompts for whether Infor Ming.le-related processes should be run (**1**) or not (**0**).

```
                Set Mingle Flag (SETMINGLE)

TYPE CHOICES, PRESS ENTER.

Run Mingle Processes . . . . . 1           (0=No 1=Yes)

                                                                 BOTTOM
F3=EXIT   F4=PROMPT   F5=REFRESH   F12=CANCEL   F13=HOW TO USE THIS DISPLAY
F24=MORE KEYS
```

When this flag is changed, WebTop's cached pages must be regenerated for the new flag value to take effect. To do this, clear the "UI Flag" (field FVC00102 in AM table W3PDFV) for all pages to blank with the following SQL statement:

```
UPDATE <AM library>/W3PDFV SET FVC00102 = ' '
```