



BEA Financial Message Designer Release Notes

Version: 3.4

Document Date: November 2007

What's In This Release?

Volante Product Suite					
Component	Version	Design Time	Code-Generator/Runtime		
			Java/EJB	C++	C#
Composer	3.4.0	√	√	√	√
ASCII Delimited Format Plug-in	3.4.0	√	√		
ASCII Fixed Width Format Plug-in	3.4.0	√	√		
XML Format Plug-in	3.4.0	√	√		
FIX Format Plug-in	3.4.0	√	√	√	√
SWIFT Format Plug-in	3.4.0	√	√		
FCS/CMS Format Plug-in	1.1.0	√	√	√	
Universal Format Plug-in	3.4.0	√	√	√	√
Cartridge Publisher	3.4.0	√			
Persistence Designer	3.4.0	√	√		
Web Forms Designer	3.4.0	√	√ (only EJB)		
Java/EJB Simulator	3.4.0	√			
C++ Simulator	3.4.0	√			
C# Simulator	1.0.0	√			

Metadata Repository	
Component	Version
Repository Server	1.0.1
Repository Client	1.0.1

Compatibility

Designer

Cartridges created using older versions of Designer are compatible with this version. But the same is not guaranteed for the reverse case. Do not try to open cartridges created with this version of Designer with an older version. It will result in error.

Runtime

Code generated using a version of Designer is not compatible (and should not be used) with the runtime libraries of another version. For instance, if you had used the previous version of Designer to generate code for your cartridge, you need to regenerate code and use it with new runtime libraries. This applies to all the supported platforms (Java, C++ and C#). You need to take this precaution even for minor version upgrades since API between generated code and standard library is not publicly documented and is subject to change across versions. Make sure that you compile your custom classes and client as well.

Both the runtime and the Designer have been tested with JRE1.4.2_13.

What's New in Version 3.4.0

New Product Components

No new product components were added, but existing components were enhanced.

New Product Features

General

1. Support for multiple validation nodes (Internal/External Message). Choose which validation needs to be executed as part of "Validate Activity's configuration in message flow.
2. Support for multiple Processing rules nodes (Internal Message)
3. Support for debugging cartridge.

4. Support for Tree view (XML Spy like tree) in message format panels (all messages)
5. "Go to Definition" menu added in trace window in simulator. You can now jump to definition (say a flow) from a trace line.
6. Cross platform serialization support. Serialize any message object in "Volante" binary format. The serialized form can be deserialized later using the same message definition in the same platform (Java/CPP etc) or a different platform.
7. Support for refreshing referenced cartridges.

Message Flow

1. In message flow, variables can be defined with new scope: CACHED. The values of these variables are cached across calls.
2. New Message flow activity 'Dynamic Query' added.
3. Support for catching and handling Runtime Exceptions in Flow.
4. Handling exception during batch parse. While handling records of a batch you can also handle the exceptions associated with the each record separately (supported only in XML plug-in)

Persistence

1. Multiple data source support - You can now specify multiple data source for persistence designer. This means that you can decided at runtime which data source to use.
2. A formula can now be specified for an 'Auto Generated' field in the table. This gives you the ability to use arbitrary sequence/unique key generators.
3. Support for batched persistence. Using the Persist activity you can now persist more than one record (object). This takes advantages of batched updated in JDBC hence resulting in increased performance. Option to specify batch size using "Other Options" tab ("batch.size='parameter').
4. SQL statements from Persistence Manager and key generator are now logged (at runtime).

5. Support for CLOB SQL type.

SWIFT

1. Support for SWIFT input/output (both in same message) header.
2. Support for SWIFT System Messages has been added.
3. New SWIFT formula functions added for BIC. Documented BIC provider extension.
4. Swift max message length can now be specified.

WebForm

1. Support for customizing column width
2. Support for date format patterns for date type fields
3. Improved control over look and feel
4. Support for field groups
5. Support for displaying multiple pages in a view

Formula Enhancements

The following formula functions have been added.

General Functions

- CreateIndex (sectionOpt, fieldName)
- SecFindFieldWithValue (section, fieldName, fieldValue)
- GetMessageFlows ()
- GetMessageMappings ()
- GetMessages ()
- GetExternalMessages ()
- GetInternalMessages ()
- GetBatchMessages ()
- Exists (field)
- UUID ()
- GetCanonicalFieldId(fieldId)

- ToBinary(value, length, signed, encoding)
- GetCanonicalFieldId

DB Functions

- DbUpdate (poolName, sqlStatement)

SWIFT Functions

- GetBICName (bic)
- GetBICAddress (bic)
- GetBICInfos (category)
- ParseFormat (value, format)

Composer UI enhancements

Refer to [Designer.doc](#)

Bugs Fixed

- a) Premature termination of loop when an exception handler is used within Loop Activity.
- b) [BUG-001011](#) - Within the message flow, user should be able to define exception handling runtime exceptions that could result in TransformRuntimeException
- c) [BUG-001013](#) - database (sql) exceptions should give us the actual sql that failed. This helps a lot for debugging.
- d) Cartridge publisher did not handle referenced cartridges correctly when the same cartridge was referenced in multiple locations.
- e) SWIFT Plugin allows X charset with values { and }. These are not allowed values in text for user-to-user messages

- f) Inclusion of underscore "_" in the Z character set in SRG2007.
- g) XML Choice validation. If a choice type compositor is empty (without any elements) or more than one choice was serialized if it didn't result in any errors.
- h) Inconsistent FieldId used while reporting SWIFT validation errors. In some cases a spurious index value is used when there is no need for it. See also new formula function GetCanonicalFieldId.

Known Issues

- a. Batch mode is not supported in case of ASCII FIXED external messages.
- b. Batch activities are supported only for XML and ASCII Delimited plugins.
- c. Batch activities are not supported in C++ and C#.
- d. Batching requires that the invocation is through local interfaces. It may not work well when the client is remote, for e.g. in case of EJB.
- e. RawMessage is not properly supported in C++ and C#.
- f. In Resources, internationalization and locales are supported only in Java. These features are not supported in CPP and C#.
- g. Number of formula functions are not supported in C++ & C#.
- h. BigDecimal and BigInteger data types are supported only in XML & ASCII Delimited plug-in.

Upgrade Issues

Compatibility Changes

- In XML plug-in choice elements/groups are now validated correctly. There is special case where one of the items in the choice is optional. In this case it is correct even if none of the choices is present. To support this, a new

compositor “optional_choice” has been added. The “choice” compositor is strict, in the sense that at least one of the choices must appear while the “optional_choice” allows missing child.

For messages that have been imported using previous version (3.3), the compositor would have been always set as choice. You need to reimport the schema using this version (3.4) if your schema contains choice where one of its children is optional.

- The base interface for exception is “ExceptionObject”. It was wrongly documented as “ExceptionDataObject” which is an implementation class. If you have cast the exception to ExceptionDataObject in Java code, it may no longer work.

Alpha Features

Some of the new features in the Designer are not yet finalized and are subject to change. Do *not* use these features in production applications. User feedback on these features would be appreciated.

- Message flow templates
- Diff formula function

These features are likely to be fully supported in a future release.

Other features that are not fully completed/tested in this release are,

- Cartridge Diff
- Open Cartridge in Read only mode

JMX Based Administration

Support has been added for management agent, which can be used to remotely monitor and manage the Command Processor.

Command Processor Configuration Editor

Support to open, edit and save Command Processor XML files using Command Processor configuration file editor

Other Release Notes

The following sections describe component-specific release notes.

Volante Product Suite 3.4.0
Volante Designer 3.4.0
Release notes

What's New?

General

1. Support for multiple validation nodes (Internal/External Message). Choose which validation needs to be executed as part of "Validate Activity's configuration in message flow.
2. Support for multiple Processing rules nodes (Internal Message)
3. Support for debugging cartridge.
4. Support for Tree view (XML Spy like tree) in message format panels (all messages)
5. "Go to Definition" menu added in trace window in simulator. You can now jump to definition (say a flow) from a trace line.
6. Cross platform serialization support. Serialize any message object in "Volante" binary format. The serialized form can be deserialized later using the same message definition in the same platform (Java/CPP etc) or a different platform.
7. Support for refreshing referenced cartridges.
8. New Formula functions were added.

Persistence Designer

1. Multiple data source support - You can now specify multiple data source for persistence designer. This means that you can decided at runtime which data source to use.
2. A formula can now be specified for an 'Auto Generated' field in the table. This gives you the ability to use arbitrary sequence/unique key generators.
3. Support for batched persistence. Using the Persist activity you can now persist more than one record (object). This takes advantages of batched updated in JDBC hence resulting in increased performance. Option to specify batch size using "Other Options" tab ("batch.size='parameter').

4. SQL statements from Persistence Manager and key generator are now logged (at runtime).
5. Support for CLOB SQL type.

Known Issues

1. When formula is formatted the comments in it are lost.
2. In the Edit Formula dialog box, when a validation rule defined for an External Message, in one message part (for e.g. 'Data') refers to fields/sections in another part (Header), it is shown as syntax error.
3. **Formula Issues:** If not all paths of a formula return a value, it is not reported as an error. For instance the following formula fragment should fail validation, since there is no return value if the condition is true.

```
if(false) {  
    return 10;  
}
```

The current behavior is to return the default value for the return type (in this case 0 – for type integer). Do not rely on this behavior; the above formula will fail validation, once this bug is fixed.

Work Around: Make sure that all paths in your formula do have a return value.

4. **Formula Issues:** In a formula where 'if' condition has been used, if a 'return' statement has been specified after the 'if' and 'else' parts it results in error while compiling the generated code.
5. In the source field dialog, the source field that is returned by the designer based on the mapping specified always remains as the first field. It cannot be moved up/down. The fields that are manually added by the user are present after it. The fields added by user can be moved up/down among themselves.
6. Using the DBQuery() function in a user defined function results in compilation error during cartridge generation.
7. In case of external message formats, CSV export is now supported only for the following plug-ins: ASCII Delimited, ASCII Fixed, Universal and XML.

Compatibility Issues

1. Cartridges created/saved with this version (3.4) cannot be opened in previous versions (3.3 and previous versions), while the reverse is possible.

Bug Fixes

1. BUG-001013 - database (sql) exceptions should give us the actual sql that failed. This helps a lot for debugging.
2. Cartridge publisher did not handle referenced cartridges correctly when the same cartridge was referenced in multiple locations.

ASCII Delimited Plug-in – 3.4.0 Release Notes

Specification

The specification for ASCII Delimited format is as given below:

1. Fields are separated by the given field delimiter character.
2. A field may be enclosed in double-quote characters "...".
3. A quoted-field may contain the delimiter character as part of it, but it cannot contain new lines.
4. A quoted-field may contain a double-quote character (") as part of it, represented by two successive double-quote characters (").
5. Field containing only white space characters or no character is treated as a null field.
6. A zero length quoted string (""") is treated as a value and not as a null field.
7. Leading and trailing white space within a quoted-field is preserved.
8. In an unquoted field, leading and trailing white space is not preserved.
9. In case of a quoted-field, the opening quote must immediately follow the field delimiter. Similarly the closing quote must immediately followed by the field delimiter.

Clarification:

There should not be any white space character between the field delimiter and the opening quote of a quoted-field. Likewise, there should not be any white space character between the closing quote of the quoted-field and the next field delimiter.

**Volante Product Suite 3.4.0
FCS Plug-in – 1.1.0
Release Notes**

Known Issues:

- CMS to Firm Header/Trailer is not yet supported.

Volante Product Suite 3.4.0

Volante Java Runtime Library – Release Notes

What's New in 3.4.0

Known Issues

1. Batched messages are supported only for XML and ASCII Delimited plug-ins.
2. Batching requires that the invocation be through local references. It may not work well when the client is remote, for e.g. in case of EJB.
3. Since types supported by the Designer are based on platform specific types, the limitation of these types applies. Specifically, the precision and correctness of Double and Float types are dependent on the corresponding types supported by the Java platform.
4. Issue in persisting Unicode string values in Oracle. The value persisted is not as Unicode. This may be an issue with Oracle or the table creation scripts.
5. ISODate types are implemented using Gregorian calendar. There are some differences between the ISO and Gregorian calendars. This would affect you if your date is before the Gregorian change (16 Century).
6. **NO XML Issues:**
 - While parsing NOXML if mandatory field is missing and validate activity is added it results in error. If only parsing is done no error occurs. This is a deviation from the behavior of external formats, which this would result in error while parsing itself.
 - While parsing NOXML if non-repeating section is repeating error occurs if validate activity is also added. Parsing does not fail. This is a deviation from the behavior of external formats, which this would result in error while parsing itself.
 - While parsing NOXML invalid repeat count for a section results in error only if validate activity is added. Parsing does not fail. This is a deviation from the behavior of external formats, which this would result in error while parsing itself.

- While parsing NOXML if order of fields/section is changed (not as per Designer order) no error occurs.
 - The root tag of the NOXML is not validated during parsing. The root tag can be anything as long as the NOXML is well formed. While serializing the NOXML, output is generated with the name of the internal message as root tag.
7. When a cartridge does not have any entity (external message, message flow, etc) defined in it and EAR for the cartridge is generated using Designer, the generated deployment descriptor files are invalid. If the generated EAR is deployed in EJB server it will result in error.
 8. BigDecimal and BigInteger data types are supported only in ASCII Delimited and XML plug-ins.

Volante Product Suite 3.4.0

Message Flow – 3.4.0

Release Notes

What's New in 3.4.0

1. Variables can be defined with new scope: CACHED. The values of these variables are cached across calls.
2. New Message flow activity 'Dynamic Query' added.
3. Support for catching and handling Runtime Exceptions in Flow.
4. Handling exception during batch parse. While handling records of a batch you can also handle the exceptions associated with the each record separately (supported only in XML plug-in)

Bug Fixes

1. When a fields under a repeating message flow variable was accessed directly (without array indices) no validation error as reported. This has been fixed.

Known Issues

1. Batch activities are supported only for XML and ASCII Delimited plug ins.
2. Batch activities are not supported in C++ and C#.
3. Batching requires that the invocation is through local references. It may not work well when the client is remote, for e.g. in case of EJB.
4. RawMessage is not properly supported in C++ and C#.
5. In the RawMessage formula functions like Mid(), At(position), the position and the length parameters are of type int. Due to this, files greater than 2 GB cannot be accessed.
6. Cascade exceptions is not implemented for Batch Parse and Batch Serialize activities.
7. When Batch Query activity is used with HSQL, it results in OutOfMemoryError if large number of records are selected. Though records are read one at a time and immediately processed, HSQLDB's driver seems to fetch the whole

thing leading to `OutOfMemoryError`. This problem does not occur with Oracle.

Volante Product Suite 3.4.0

SWIFT Plug-in – 3.4.0

Release Notes

What's New in 3.4.0

1. Support for SWIFT input/output (both in same message) header.
2. Support for SWIFT System Messages has been added.
3. New SWIFT formula functions added for BIC. Documented BIC provider extension.
4. Swift max message length can now be specified.
5. New SWIFT functions

The following functions have been added

- GetBICName (bic)
- GetBICAddress (bic)
- GetBICInfos (category)
- ParseFormat (value, format)

Bug Fixes

1. SWIFT Plugin allows X charset with values { and }. These are not allowed values in text for user-to-user messages
2. Inclusion of underscore "_" in the Z character set in SRG2007.

Known Issues

1. Field 77E Known Issues:

- As per the SWIFT specification, line 2 or succeeding lines starting with hyphen is invalid. But this validation is not yet enforced.

2. Z Charset Known Issues:

- In fields 77S and 77T if the second or subsequent lines start with colon it results in error. According to SWIFT specification it is valid.

- As per the SWIFT specification, line 2 or succeeding lines starting with hyphen is invalid. Currently Z charset fields with lines that start with '-' do not result in error.
3. The datagen utility does not conform to the SWIFT specification, "When a SWIFT field is defined with multiline format using the 'Z' character set(ex.4*35Z), the second or subsequent lines should not start with colon (:) except for fields 77S and 77T." It generates the colon character at the start of second and subsequent lines for all fields with multiline format using the 'Z' character set.
 4. In a SWIFT message format, if a sequence is mandatory and all of its child fields are optional, the datagen utility does not generate values for any of the child fields.
 5. Datagen utility does not generate data based on N/W validation rules.
 6. Support for data generation for 'Party Identification' validation and 'Copy of Fields' is not yet provided in datagen utility.
 7. If the tag specified for a trailer field is incorrect the trailer fields following the error field are ignored.
 8. SWIFT Validation Issue: In case of Party Identification Validation (T78) if the same code (type) is present twice in data no error is thrown.
 9. Date range not implemented properly for field 32A of message MT910
According to the "SWIFTStandards - General Information" document :
The valid date range of 1980 to 2060 applies to fields 30 and/or 32A of the MT 910 and the categories 1 and 2 message types excluding the MTs 192, 292, 195, 295, 196 and 296.
 10. U03 validation for User Header has not been implemented.
 11. The maximum length of a SWIFT message should be 10000 or 2000 depending on the message. This should be enforced when serializing AND parsing SWIFT messages. If this validation fails we should report error code M50 - "Message length exceeded". The SWIFT UHB "Standards General Information" chap 4.2 specifies what is the max message length based on MT.

Volante Product Suite 3.4.0

WebForm– 3.4.0

Release Notes

What's New in 3.4.0

1. Support for customizing column width
2. Support for date format patterns for date type fields
3. Improved control over look and feel
4. Support for field groups
5. Support for displaying multiple pages in a view

Known Issues:

1. In case of dynamic mapping incorrect error fields may be highlighted. For more information about best practices to be followed in webform repair applications please refer [WebFormRepairBestPractices.doc](#).
2. In the reference implementation sample we have consciously avoided using any particular web framework and have stuck to JSPs even for action handling. We do not recommend this approach in real applications. Feel free to use the framework of your choice.
3. The 'Return' button does not work correctly in all cases for Dashboard. It some times returns back to the summary index page where the DashBoard entries are editable.
4. When a section is repeating and occurs multiple times, while displaying the section in WebForm the section header is displayed only once for the first instance. The other instances are displayed below without any section header.

Volante Product Suite 3.4.0

XML Format Plug-in – 3.4.0

Release Notes

Bug Fixes:

XML Choice validation. If a choice type compositor is empty (without any elements) or more than one choice was serialized if it didn't result in any errors.

Known Issues:

Unsupported Features

The following is the list of unsupported features in DTD and XML Schema. These features are ignored by Volante Designer.

DTD

1. The following are not supported:
 - Attributes of type ID
 - Attributes of type IDREF
 - Attributes of type IDREFS
 - Attributes of type NMTOKEN
 - Attributes of type NOTATION
 - Attributes of type ENTITIES
 - SYSTEM keyword in element/attribute declaration
 - ANY element

XML Schema

1. For XML type 'token', white space conformance given in the spec. is not supported.
2. The sequential order of occurrence of attributes is not supported.
3. Identity constraints are not supported.
4. For wildcards, Designer does not validate contents, be it skip, lax or strict.
5. Notation declarations are not supported.
6. The Union and List type fields are represented as simple strings.

Partially Supported Features

1. In XML Schema, for a mandatory element, setting the nillable attribute to true means that the element can appear with NIL content provided the attribute 'xsi:nil = true' is set in the XML instance. At the same time it also means that the element must be present as it is a mandatory element. In the DESIGNER, such an element is represented as an optional element. So an invalid instance where the element itself is missing passes without throwing exception.
2. While representing List and Union types in Designer, the XML built-in type specified in the schema is ignored and they are treated as strings. Hence, facet constraints, if any, set and the data type constraint are not honored.
3. Only the user information specified in annotations is supported and application information specified in annotations is not supported. In attribute groups and flattened model groups, even user information is not supported.

Export/Import Issues

XSD Import Issues

1. If you reconfigure schema (with different xsd), the previous entries in the "Namespace", "Entity References" tabs of Format Options window are not overwritten, but new entries get appended to the previous ones.

DTD Import Issues

1. DTD import issue if keyword case is not correct.

If the element declaration keyword ELEMENT is specified as Element (using lower case letters), it is ignored during import.

2. When attributes of type ID, IDREF etc are imported their XML Type is set as string.

XSD Export Issue

Exporting an XML format as XML Schema (XSD file) is not supported.

DTD Export Issues

1. While exporting an XML format as DTD, which was created without ignoring FIXED attributes, the FIXED attributes are exported as normal attributes. The fixed value is also not exported.

2. While exporting an XML format as DTD, choice values of an attribute and the default value are not getting exported.
3. DTD export is not fully tested.

UI Implementation Issues

1. If FIXED type attributes are not displayed when importing a DTD, the Default value text box of the corresponding field is set to the FIXED value specified and this text box is incorrectly left disabled.
2. In XML Type column of the XML format UI, the attribute types ID, IDREF etc. are displayed even for fields.
3. Unable to change the field name of a recursive element. The original name is set again if the cartridge is saved or focus is shifted to some other row.

Facets Support Issues

1. The "totalDigits" facet not supported for any applicable data type.
2. The following facets are not supported for "duration" data type:
maxInclusive, maxExclusive, minInclusive & maxInclusive.

Other Issues

1. If the default value specified in the XML format UI for an attribute is not one among the allowed choice values defined in the DTD no validation error occurs.
2. During code generation, the generated classes file name may exceed that allowed by the platform. You can workaroud this by specifying smaller Designer names, while retaining the XML names, for fields and sections.