



focus on essentials

## Infor ERP XA Enterprise Integrator



Improve customer satisfaction with quick responses

Improve partner communication by deploying web functions quickly and easily

Increase user productivity with a common interface across multiple systems

Deploy robust, industrial-strength applications quickly, for internal or external use

Reduce support costs with fewer custom programs and fewer user questions

Reduce support costs with easy security set-up and little or no troubleshooting

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# Development Environment for the Power Architecture

Enterprise Integrator gives you all of the benefits of standard Integrator, plus more. It extends the benefits of the Integrator to more users, on more systems, in more places.

### The Challenge

Today's manufacturers must be able to serve their customers, vendors and partners over the Internet. This requires the technology to make data available in a usable form. It requires that customizations made to the internal system be reflected externally. And it certainly brings a whole new focus to security.

Moreover, no enterprise today has only one internal system. In addition to the ERP backbone there are other systems in other databases that also participate in running day-to-day operations. These niche systems provide good value to the departments that use them but are remote islands to the rest of the organization. They can also be a burden to your support staff.

Finally, organizations need a way to enhance the standard software with robust application function. They need to create complete new applications seamlessly integrated to their ERP backbone.

### The Infor Solution

Let vendors use the Internet to inquire into their orders on your system, with customized views that you define. Add additional data to the database, such as certification requirements, and include it in the customized views.

Define an object over SQL Server tables in a departmental system. Let XA users navigate to it from XA without any idea that they are not only leaving XA but leaving the iSeries. After all, it all looks the same to them.

Develop your own in-house solution for a particular application including complex objects, reports and transactions...in days, rather than weeks or months. All this and more is possible with Enterprise Integrator.

### Features

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#### Publish & Subscribe

An ERP system is a storehouse of useful information. The information is extremely dynamic, however, which makes the value of the information time-dependent. Some things need to be known as soon as possible; every hour of delay is costly.

Publish and Subscribe refers to notifying users of selected events. Events can be described for any object, and any attribute in the object, and any transaction against the object. Some events are ongoing, such as the entry of any PO over \$10,000. Other events are one-time, such as the arrival of a particular order. There is no limit to the number of events that can be published.

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Standard Integrator allows a company to extend the objects and functions of **Infor ERP XA** by adding data, actions, code files, comments, and even brand new objects.

**Enterprise Integrator** takes this **beyond the iSeries to the Internet, XML, cell phones and e-mail**. It takes it beyond DB2 to other data bases such as Oracle and SQL Server.

With **Enterprise Integrator** a programmer can create an entire application in the Power Architecture with header/detail objects, transactions, host jobs and host reports...**with all the power and flexibility of standard EA objects**.

**You'll be amazed at how quickly projects can be completed with Enterprise Integrator.**

Users can be notified via e-mail or cell phone. An event could even 'notify' another program via an XML request or an RPG program.

The same transaction that updates the database automatically informs the event system, resulting in immediate notification to users. This means the users can forget about constantly checking the system and instead focus on their work. They can do what they do best and let the system do what it does best.

## Custom Objects in Net-Link

With Enterprise Integrator, the click of one radio button will allow your objects to be visible in Net-Link. You can deploy your objects over the web in no time. Create web applications using Enterprise Integrator. In addition, any changes you make to standard objects, such as adding new fields, will be visible in Net-Link.

## Custom Objects in System-Link

As with Net-Link, one click of a radio button is all it takes to give your objects an XML interface. You will be able to display your object and get the XML request for it, just like an XA object. Integrate outside programs via the web or use the RPG Local Program Interface. It's all available to your objects with Enterprise Integrator.

## Deployment Profiles

Create a profile of data your vendors are authorized to view, then assign vendors to it. You can even choose what to let them maintain, such as contact information or acceptance of a PO. The same can be done for customers, partners and employees.

## Automatic Content Security

Specify that a particular user is, say, vendor 150. The only records that will now appear to that user are those for vendor 150. Objects without a vendor number are not affected. This is a very quick, simple and straightforward way to be sure that each external user sees only their data. It works for internal users, too, for such values as Site, Warehouse and Company.

Note: Deployment Profiles and Automatic Content Security are additional security layers. CAS security is still observed. Any one of these can restrict access to data; all must allow it for a user to have access.

## Other databases

Create an object over quality data in a SQL Server database, and link it via the item number to the ERP data. Now your users can be looking at an item in XA and - click! -- view the quality data for the item as though it's part of XA. Enterprise Integrator lets you extend your object definitions to Microsoft Access and SQL Server data, Oracle, PostgreSQL as well as DB2 files on other iSeries systems. By integrating these systems into the ERP backbone, your users will be happier, support costs will be lower, and operations will run smoother.

## Web Services

Use Deployment Profiles to create a web service front-end to System-Link requests. (Note: System-Link is required.) Enterprise Integrator will provide a URL to access the services. You can choose what objects to deploy. For each object you also select display attributes,

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All projects completed with Enterprise Integrator are **release/transparent**. This means they will migrate to the next XA release **automatically** when the next release is installed. This **eliminates the need for extensive analysis** not to mention reprogramming and retesting for every project at every release.

maintainable attributes, actions and user definitions (views, subsets, cards, etc.). We deployed a web service for updating price books in CSM, and then created the program in Microsoft Excel to update prices. The program is a free download that your programmers can examine to see how easy web services are to use.

## Transaction Broker

The Transaction Broker is a maintenance method with a number of important advantages over trigger programs. For example:

- One or more secondary extensions can be added to user objects.
- Mass maintenance is done in the background, instead of locking up the client.
- Default values can be supplied to fields on the create prompt and/or the card file during data entry.
- Edits can be created as errors (hard halts), warnings (soft halts) or informational messages.
- The necessary programs can be generated, with lines of code stubbed in to add your custom logic.

The transaction broker operates below the presentation layer. This means that the features listed above apply equally to Power-Link, Net-Link and System-Link. For example, a default value supplied in Power-Link will also be supplied in Net-Link. An edit performed in one will be performed in all three. Maintenance history will be captured regardless of the entry method.

Using the transaction broker, your new objects can function much more like standard XA objects. Defaults and secondary extensions could not be done at all with trigger programs. Edits and history are much easier since the programs are generated. Mass maintenance no longer locks the user's PC. Taken together, this means that your user objects are more 'industrial strength' than ever before, while creating them is easier than ever before.

## Header/Detail

The concept of header/detail is fairly common. All orders have a header/detail structure, as do IFM transactions and EPDM data. Typically, a header does not exist without a detail line, and vice versa.

A new relationship type now allows you to identify header/detail relationships between two primary objects. This has the following benefits:

- Create** The detail lines can be created at the same time as the header. The header fields will be made available to the user exit programs so line item defaults and edits can be performed as though the header already exists.
- Change** Maintaining the header or any detail object automatically locks the entire complex object.
- Delete** When the header is deleted the detail objects will be deleted.
- Copy** When copying the header the user can choose to copy the detail objects also.
- Compare** When comparing two header objects the detail objects will also be compared

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**Infor** takes pride in the 20 years of experience we have in the manufacturing industry. Using our deep base of industry knowledge and proven communications and planning applications, we help suppliers and manufacturers achieve their business goals.

We are passionately focused on providing comprehensive solutions that meet the unique challenges of the manufacturing industry on a global scale. Our solutions are comprehensive, open and modular, giving you the optimal choices to meet today's challenges and leverage tomorrow's opportunities.

This now gives you the ability to create more complex objects, such as orders. You can even make a detail object a header to another detail object - a header/detail/sub-detail relationship such as Order/Line/Release. Delete, copy, compare and locking will perform against all levels.

The beauty of this is that these complex objects are actually simpler for the users. The application is more intuitive because it lets users handle multiple objects as a unit, the way they think of them.

## **Object Transactions**

Object transactions are application-specific transactions that do not correspond directly to a standard maintenance action such as create, copy, update or delete. It is the difference between a MO Receipt to Stock (RM) transaction and Item Warehouse maintenance. Object transactions appear as a menu option on a business object. They allow you to define both attributes and logic independent of the business object with which they are associated. In our example, an RM transaction has a transaction quantity, which is a field that exists for the transaction but is not found in the Item Warehouse object. An object transaction may update multiple objects, just as an RM transaction updates Item Warehouse as well as Manufacturing Order and Inventory Transaction History.

## **Host Jobs/Reports**

Standard Integrator allows you to create host jobs and reports for a business object. Enterprise Integrator enhances this by providing a way to provide edits and defaults for the selection criteria. This means that the user can be told up front that their selections are invalid, rather than checking a printout for error messages.

## **Logical Transactions**

You can now define transaction that update specific fields. For example, you can create a transaction to update a customer address. The transaction appears on the Maintain menu for the object, and can be independently secured. In our example, a customer may not be authorized to change the customer object but could be authorized to the Change Address transaction. The customer might make the change using Net-Link or a custom web site supported by System-Link.

## **Additional Edits and Defaults**

Some companies have business processes that cause warning messages in XA. There is now an edit that allows warnings to be overridden (i.e., turned off). This is warnings only, not hard errors. Another edit provides referential integrity by checking a second object for the existence of a value. New default values include current date, time, timestamp, user and a simple constant.

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## Integrator Product Comparison

<b>Primary Objects</b>	<b>R6</b>	<b>R7</b>	<b>Enterprise</b>
Create primary objects	•	•	•
Maintenance via direct SQL	•	•	•
Maintenance via SQL with trigger program (iSeries objects)	•	•	•
Mass delete		•	•
Automatic key generation		•	•
Maintenance via transaction broker (iSeries objects)			•
Maintainable secondary objects for user primary objects			•
View primary objects in Net-Link			•
Access primary objects in System-Link			•
Create primary objects in other databases			•
Complex (header/detail) objects			•

<b>Secondary Objects</b>	<b>R6</b>	<b>R7</b>	<b>Enterprise</b>
Create secondary objects	•	•	•
View extended object (primary with secondary) in Net-Link			•
Access extended object (primary with secondary) via System-Link			•

<b>Transaction Broker</b>	<b>R6</b>	<b>R7</b>	<b>Enterprise</b>
User exit to load buffer from client data	•	•	•
User exit to load buffer from server data	•	•	•
User exit to load buffer from default data	•	•	•
User exit to edit buffer	•	•	•
User exit to update database	•	•	•
User exit to log maintenance history	•	•	•
User exit when action is cancelled		•	•
Consistent user exit model across all objects		•	•
Automatic generation of user exit program source		•	•
Automatic archiving of user exit program source		•	•
Automatic insertion of custom source code after regeneration		•	•
Automatic compilation of user exit programs		•	•

<b>Defaults</b>	<b>R6</b>	<b>R7</b>	<b>Enterprise</b>
Custom logic		•	•
Current date			•
Current time			•
Current timestamp			•
Current user			•
Constant			•

<b>Test Objects</b>	<b>R6</b>	<b>R7</b>	<b>Enterprise</b>
Create text extensions	•	•	•
Integrated update (no Update button)		•	•

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<b>Edits</b>	<b>R6</b>	<b>R7</b>	<b>Enterprise</b>
Boolean	•	•	•
Discrete domain	•	•	•
Required value (non-blank, non-zero)	•	•	•
Non-negative	•	•	•
Custom (error)	•	•	•
Range		•	•
Specific value		•	•
Custom (warning)			•
Custom (status)			•
Override XA warning (remove or make it an error)			•
Referential integrity			•

<b>Code Files</b>	<b>R6</b>	<b>R7</b>	<b>Enterprise</b>
Create single-key code files	•	•	•
Maintain using direct SQL	•	•	•
Maintain using SQL with trigger		•	•
Create multi-key code files		•	•
Delete code file entry		•	•
Maintain using transaction broker			•
View object with code file in Net-Link			•
Access object with code file via System-Link			•

<b>Client Actions</b>	<b>R6</b>	<b>R7</b>	<b>Enterprise</b>
Create action to run client program	•	•	•
Create action to run host program	•	•	•
Add program to relationship action	•	•	•
Create action to navigate to a web site		•	•
Mass program actions		•	•
Attribute actions		•	•
Logical transactions			•
Object transactions			•

<b>Host Actions</b>	<b>R6</b>	<b>R7</b>	<b>Enterprise</b>
Host jobs		•	•
Host reports		•	•
User exit for host jobs/reports parameter defaults			•
User exit for host jobs/reports parameter edits			•

<b>Security</b>	<b>R6</b>	<b>R7</b>	<b>Enterprise</b>
Content security	•	•	•
Field security	•	•	•
3-state field security (hidden, display, maintain)		•	•
Automatic content security			•
Deployment profiles			•

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Attributes	R6	R7	Enterprise
Alphanumeric and numeric attribute types	•	•	•
Attribute classes for date, time, user stamps	•	•	•
Attribute sub-types for Date, Time, Boolean	•	•	•
Logical attributes	•	•	•
Nines dates, zero dates	•	•	•
Century byte, 4-digit year	•	•	•
Automatic synchronization		•	•
Date attribute type		•	•
Time attribute type		•	•
Timestamp attribute type		•	•
Boolean attribute type		•	•
Integer attribute type		•	•
Hex attribute type		•	•
URL attribute class		•	•
e-Mail attribute class		•	•
User attribute class		•	•
Attachment counter attribute class		•	•
Null attribute support		•	•
Attribute classes for auto content security			•

Management	R6	R7	Enterprise
Create and maintain user definitions	•	•	•
Create and maintain user preferences		•	•
Access Attachment and Media File objects		•	•
Automatic logoff by user		•	•
Flexible export		•	•
Unlimited objects		•	•
Object locking during maintenance		•	•
Object maintenance history		•	•
No shutdown for programmer		•	•
Automatic extension assignment (EXTnnnn)		•	•
Remove Integrator Changes by object		•	•

Integration	R6	R7	Enterprise
Client API	•	•	•
Client-Link		•	•
Generate web service catalog			•
Publish & subscribe			•



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