Technical Highlights

January - March 2018

A new technical publication, extending the value of our rich Focal Point community, and highlighting techniques, topics, and use cases to support your success with Information Builders software.
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Focal Point users can download a PDF version of *Information Builders Technical Highlights*, at no cost:  

To purchase a print copy, or all four 2018 print copies, contact us at Customer_Success@ibi.com.
Information Builders’ customers have one characteristic in common—the ability to drive their organization’s success through the development of applications or solutions powered by FOCUS, WebFOCUS, and iWay software. We’re proud to support so many successful customers and to establish new channels to foster that success.

With the growing number of customers and Focal Point community users, we see increasing value in the questions and answers that are exchanged. What better time to introduce *Information Builders Technical Highlights*, a new technical publication, highlighting “need-to-know” techniques, How-Tos, trending topics, and use cases associated with Information Builders software.

Each publication will feature topics highlighting FOCUS, WebFOCUS, and iWay. We’ll include one of our many customer success stories as well, to show how your peers are generating success at their organization. We hope that what you read will seed your creative thinking, inspire you to try something new with Information Builders software, and most of all facilitate your organization’s continued success through the development of applications or solutions powered by FOCUS, WebFOCUS, and iWay.

The first issue highlights:

**Column Magic With ACROSS, by Walter Blood**

Walter offers a glimpse into his FOCUS Hidden Gems treasure chest with this description of how you can use ACROSS to expertly manage column data.

**WebFOCUS and PowerPoint Working Together, by Kathy Kendall**

Kathy describes how you can integrate WebFOCUS data with your corporate PowerPoint templates to easily create compelling, professional presentations.
The New Integrated, Integrity Focused, and Intelligent Kid on the Block, by Stefan Kostial and Scott Schneider

Stefan and Scott introduce you to iWay's powerful handling of blockchain integration.

Customer Success Spotlight: First Rate

Understand how First Rate enabled customer and corporate success using Information Builders business intelligence technologies.

Upcoming Customer Events

- Information Builders User Groups offer a unique way for you to join your peers in a local venue, learn about the latest software features and innovations from Information Builders technical experts, and share your own expertise through networking at or after the event. See our schedule of Local and Virtual User Groups at https://ww2.informationbuilders.com/support/userforum/local.

It’s easy to join the Information Builders Focal Point community. Just visit the Focal Point home page and click Login/Join at http://forums.informationbuilders.com/eve/forums.

- Summit 2018: Data and Analytics in the New Connected World is Information Builders’ annual user conference, taking place this year in Orlando, Florida, from May 22 - 25, 2018. The conference is all that you have heard about and more—customer presentations, hands-on technical labs, dozens of technical sessions from Information Builders experts, networking with hundreds of peers, and many opportunities to connect with our expert Information Builders product and customer support staff. Visit our Summit webpage at http://ww2.informationbuilders.com/events/summit to learn more and register today.

Finally, if you have a “need-to-know” technique to share, would like to see a specific topic showcased in Information Builders Technical Highlights, or would like to share your customer success story, please contact me directly at Frances_Gambino@ibi.com. I’ll be standing by to hear about your latest success.

Enjoy!

Frances Gambino
Vice President, Technical Content Management
One of the most powerful phrases in the FOCUS language—ACROSS—allows you to generate a matrix of data in the simplest and most direct way, comparing any two or more dimensions. For instance:

And when you use this construction, there are a number of aspects of the ACROSS column processing and display that you might wish you could change. Well, most likely, you can!
Getting the ACROSS Columns in the Order That You Want

For instance, you are aggregating data ACROSS a date field

```
TABLE FILE WF_RETAIL_LITE
SUM
REVENUE_US
BY LOWEST STATE_PROV_NAME
ACROSS LOWEST TIME_DAYNAME AS ‘Sales Activity – Day of Week’
ON STATE_PROV_NAME PAGE-BREAK
WHERE TOTAL QUANTITY_SOLD GT 100
WHERE TIME_YEAR NE 2017
...
END
```

and the sequence is not what you want. How could this happen?

If you are aggregating ACROSS the days of the week, the sort will be alphabetical. Is this what you want?

There is an easy way to adjust this sort sequence, using the ACROSS syntax itself.

```
ACROSS field COLUMNS value1 AS 'header1' AND value2 AS 'header2' … AND
valuen AS 'headern'
```
A simple change to the request using this syntax, indicating each value to include and the order in which to display them, quickly resolves the sequencing problem.

This procedure allows you to control four important aspects of the ACROSS:

1. **Select the values from the field that you want to use in the output, and only the values that you want to use.**

   A column appears for each value specified, whether there is data or not. Using this technique, you can make sure the column value is represented, even if data is not present. Normally, if there is no instance of a specific sort value, it is not shown. If you are looking at days of the week, or weeks or months of the year, your report would not indicate where the missing instances are. And often the lack of data is more significant than its presence—and this control will make sure you can see that case.

2. **Exclude all other values associated with that field without a WHERE or IF statement.**

   The selection of the specified values is implicit, no filter is required.

3. **Rename the column header for those values with AS.**

   For cryptic data values, you have an easy way to translate the value to an understandable column header.
4. Specify the order in which you want to display those values.

This gives you the ability to change the sort sequence to whatever is most meaningful for the output you are generating. (Example: Sales by product across day of the week.)

And that’s just for starters—let’s add some additional possibilities.

1. ACROSS works with database fields and also with DEFINE fields—both in the synonym and in the request itself. When we are working with a data field, we are working with a single value. Do you want to work with a range of values, or a specific grouping of values that is unique to your company? Create the grouping in a DEFINE, and then use that DEFINE in the ACROSS with the above controls.

2. This same functionality works with BY. The syntax is BY field ROWS value OVER value, which you may recognize from FML, EMR, SML, or FRL, all Financial Reporting Languages. And you can use one BY ROWS and one ACROSS COLUMNS in a given request.

Making Sure Columns Don’t Display
You have a report that will be sent to each of the 50 state store managers, detailing total sales by product across their specific state and stores. Not every store sells in every state, so if you break the report by store, there will undoubtedly be lots of empty columns on the page, forcing the user to scroll back and forth to review the data—not the best solution. You could run the report 50 times with a filter on the state to limit the output. But that is not efficient.

Or you can use the SET command to handle this situation:

```
SET HIDENULLACRS = ON/OFF
```

The default behavior is OFF, so our basic report will look like the previous report. Notice that we used a PAGE-BREAK on each STATE_PROV_NAME. This is significant, as you will see. Notice also that the third line has columns with no data displayed.
Simply by changing the value of HIDENULLACRS to ON, you will generate the following output:

There are a few key points to remember with this switch.

1. The scope of this setting is the PAGE. Therefore you want to make sure that you use PAGE-BREAK on the sort key where your break will occur. If the column has no data to display on that PAGE, the column will not appear in the output.

2. Now that you are aware of this switch and what it does, you can make use of it. This is true of all of the switches (SET commands) that are available to you. So get to know them.

Creating Detailed ACROSS Lists

There are times when you simply want a listing of the data values in ACROSS columns in the same report. But when you use PRINT or LIST to access the detail, a row is created for every record. With ACROSS, it is unlikely that each record will have data in more than one column.
Look at the details for the report when you use PRINT.

```
TABLE FILE WF_RETAIL_LITE
PRINT
REVENUE_US
BY LOWEST STATE_PROV_NAME
ACROSS LOWEST TIME_DAYNAME AS 'Sales Activity – Day of Week'
ON STATE_PROV_NAME PAGE-BREAK
WHERE STATE_PROV_NAME EQ 'Alabama'
WHERE TIME_YEAR NE 2017
...
END
```

The following report is produced. This is only the first of many pages. This is limited to show only one state and the effect is apparent. With a lot of data, this is hardly an optimal display.
There is another SET switch you can use to alleviate this problem.

\[
\text{SET ACROSSPRT = NORMAL/COMPRESS}
\]

If you use the COMPRESS value here, all of the data values in the column will be compressed up to the top of the column, greatly reducing the number of rows that are required to display the data.

This certainly makes it easier to use this list of values.

Be aware that this removes any record-level connection between the data values.

We have just scratched the surface of the development possibilities with ACROSS. If you haven’t taken a look at the documentation for the reporting language, see the resources on the next page.
Additional Resources


WebFOCUS and PowerPoint Working Together

By Kathy Kendall, Director, Information Builders

Use WebFOCUS to present your data within your corporate PowerPoint templates.

Did you know that you can generate complete, informative, and professionally styled presentations that are dynamically populated with the latest data available in your enterprise? You can combine the power of WebFOCUS and PowerPoint® to use your corporate presentation templates to showcase your corporate data and add timely commentary.
Who in your organization is using PowerPoint presentations to make their point?

- Sales teams use PowerPoint presentations to present their product and direct the conversation through the sales cycle with prospects. These presentations are usually manually customized for each situation. The pairing of WebFOCUS and PowerPoint together provides reusable data-driven slides that can be grouped as needed and integrated with key data about the product and the prospect.

- Corporate Boardroom Reports are often accompanied by a presentation explaining and highlighting key points. Charts and tables presenting the status of the corporation can be built directly off the corporate data sources.

The key is to leverage the strengths of WebFOCUS and PowerPoint together and take advantage of what each does best. In PowerPoint, you can build stylized content in templates that can be used by WebFOCUS as the foundation for presentations populated with dynamic data and variable elements in just the right places.

Using PowerPoint’s enhanced design features, you can create sophisticated, styled templates with common design themes, color schemes, and non-variable (static) content. In WebFOCUS App Studio’s Document canvas, you can create multi-page presentations with page layouts of content that correspond with each of the PowerPoint slides. Integrating key data elements into static content, you can create dynamic, aesthetically powerful, and attention-grabbing PowerPoint presentations.

To create these presentations, build pairings of PowerPoint Slide Layouts and Document canvas Page Layouts.

**PowerPoint Slide Masters & Slide Layouts.** A slide master is the top slide in a hierarchy of slides that stores information about the theme and slide layouts of a presentation, including the background, color, fonts, effects, text placeholders, and positioning.

Using WebFOCUS, you can generate complete, informative, and professionally styled presentations that can be dynamically populated with your latest data.
Every presentation contains at least one slide master. Each slide master contains one or more slide layouts. All slide layouts utilize the same theme defined in the slide master. The slide layouts can differ in how content is arranged and presented.

**WebFOCUS Page Layouts.** Each page within a Document canvas document is defined as a page layout. Data components, including charts, tables, and text boxes, as well as styling elements, are defined within the page layout. The presentation design process involves getting to know your PowerPoint template and building corresponding WebFOCUS page layouts for each slide layout in the slide master. Once these page layouts have been built, creating your next presentation is as easy as building a document of page layouts corresponding to the slide layouts that match your presentation requirements.
Getting to Know Your Corporate PowerPoint Template

The first step is to examine the PowerPoint template to identify the styling elements and prepare it for use with WebFOCUS Page Layouts.

Locate a copy of your corporate template and place it in a location where you can prepare it to work with WebFOCUS. Microsoft stores PowerPoint templates in a common Office directory on your local machine.

C:\Users\<user>\AppData\Roaming\Microsoft\Templates

Save a copy of the template in an application folder on the WebFOCUS Reporting Server application path. This is the version of the template you will customize and access through WebFOCUS.

Open the template in PowerPoint. Note the following:

- **Themes.** PowerPoint provides themes to create a standard style throughout a presentation. Identify the theme colors and fonts used throughout the presentation. Note the RGB values of the key theme colors so they can be applied to the content added by WebFOCUS. The RGB value of any selected color can be identified by using the More Colors menu option.

- **Slide masters and layouts.** To review the slide masters and slide layouts within the template, click View, and then click Slide Master. The most basic template usually contains a cover page, and title, content, and divider layouts. More sophisticated templates contain layouts for many different slide designs.

  1. Within the slide tree on the left, rest the mouse on the master slide and slide layouts to determine the name of each slide. Template developers often leave these names as generic defaults when they create the slide. The link between the slide layout and the page layout will be made based on this slide name. Change the name to one that will be meaningful to the WebFOCUS users of this template.
2. Remove the placeholder objects on the slide layouts that will be filled with data by WebFOCUS. Typically, these objects are text boxes and chart creation placeholders.

- Static Content. Add slide layouts for content that does not have variable or data-driven elements. The full range of the content building, styling, and interactivity tools available on standard slides is available for the development of slide layouts.

   A good practice is to copy an existing layout with the base template styling to use as a starting point for a new static page. Be sure to rename each new layout with a meaningful name for the users of the template. To place static text into the heading locations on the layout, replace the text placeholders with text boxes.

   Interactivity defined within the template will be available within the presentations. Transitions can be specified for movement between slides. Animations can be defined to make objects on the slide move around. However, content added by WebFOCUS cannot be animated. A color block may fly off of the slide, but the WebFOCUS generated content placed on top of it will not move.

Tips on Working With Templates

- Take note that when you open the template in PowerPoint, you should always use the Open command, not the New command, to ensure that you are making changes to the actual template and not a presentation copy.

- As you build the page layouts, it is important to remember to always save the PowerPoint template in Normal View, not Slide Master View, ready for filling.

- While testing the presentation generation, the template may remain open in a different window. However, it must be in Normal View. The Slide Master View is modal, which leaves the PowerPoint template unable to receive the new presentation.
Building Page Layouts for Each Slide Layout

The next step is to build individual Document canvas Page Layouts to correspond with each of the Slide Layouts in the PowerPoint template, using App Studio Document canvas. Use the following steps:


2. Within the properties panel for the compound document, attach the PowerPoint template that you want to use. Select the desired template from the list of available templates found in the Reporting Server’s application path. Select the default slide master and slide layout. This will be used as the slide layout for any page where the page layout has not been explicitly set.

3. Build page layouts for each of the slide layouts in your template. Add placeholders to put the text, report, and chart objects in the right place to match the selected slide layout. Prepare each to merge the data elements into the layout.

Starting with the cover slide, place text boxes on the page layout corresponding to the text boxes on the slide layout. As a standard practice, this includes a major title, minor title, authors, and the date.

For the text boxes that are customized for each presentation, place a text box in the appropriate position. Fill the text box with directive text that clearly describes what content should be supplied. Be sure to apply font styling, including size and color, to the entire text object rather than the text within the box. Do this using the font properties in the properties panel.

The date field on the cover page is an example of a variable that WebFOCUS can provide when the presentation is generated. Place a text object in the appropriate place and insert the Date/Time system variable in your preferred format. The date will be updated automatically.
You can place other variable information anywhere on a slide. Temporary variables with default values can be created in the preprocessing step of a WebFOCUS procedure. Place these variables into text objects on the page layout.

Once a page layout is complete, use the Save Page As option to save the layout as a self-contained procedure. These procedures can be maintained in a common location within the Reporting Server’s application path.

4. Continue building page layouts to pair with each of the slide layouts in your PowerPoint template. Build a standard Title and Content page layout. Some templates offer two versions of the Title slide, with one-line or two-line headings. Multiple versions of the Title and Content layout can be created to contain different layouts, including empty chart or report components. These can be used to standardize slide real estate and layout. Additionally, create a layout with a blank content area that can be filled as needed. Using a Document canvas document, WebFOCUS PowerPoint presentations can now be built by inserting the existing procedures for each desired page layout / slide layout in order, from the title slide to the end slide.

Taking the Template for a Test Run
Once the template is built, generating presentations with new data is a quick and easy process, as shown in the following example.

The sales force for Insightful Business Innovations (IBI), an electronics distributor, visits customers each quarter to review current business and plan for future opportunities. Each sales representative uses a PowerPoint presentation to direct the conversation. Using WebFOCUS and PowerPoint together, presentation procedures can be built to generate the standard sales presentation with customer-specific data in all the right places.

In this scenario, Melanie Jones is a sales manager preparing for a visit with senior executives of Sunshine Sounds, a chain of high-end audio stores operating in Florida. Sunshine Sounds has been sourcing some of its home audio products through IBI for the last three years. The relationship has been profitable for both parties.

Using the WebFOCUS PowerPoint option, a presentation can be built to include valuable data on historical successes within the sales presentation focused on the latest products and sales opportunities.
The steps below outline the process of building the presentations slide-by-slide.

1. **Slide #1.** Open a copy of the Title Slide Page Layout as a starting point in Document canvas. All of the template links and presentation-level styling is in place. Fill in the text boxes with the presentation titles and presenter information.

   ![Slide #1 Image]

2. **Slide #2.** Add the Agenda slide. Insert the existing page layout for the Title and Content Slide. Fill in the text boxes for the slide headings (a). In the content area, add a text box with bullet points representing the agenda for this presentation (b).

   ![Slide #2 Image]
3. **Slide #3.** Insert the existing page layout for the Title and Content Slide. Fill in the text boxes for the slide headings (a). In the content area, insert a line chart presenting the trends in profit over time (b). Add a text box containing commentary highlighting the upward trend (c).

![Line Chart of Sunshine Sounds Home Audio Profits]

4. **Slide #4.** In this step, we will create a dashboard layout, showing multiple charts and a table, to visualize the data elements and trends. Then, using this dashboard layout, we will create a group of slides, that represent the summary for all stores and the detail by store.

Insert another existing page layout for the Title and Content Slide. Fill in the text boxes for the slide headings, including the summary title, All Stores (a). In the content area, insert an area chart (b), a pie chart (c), a bar chart (d), and a variance report (e), representing different views of profit by product category.

![Dashboard Layout of Gross Profit Analysis for All Stores]
Save this page layout as a separate external procedure, so you can reuse it in the next step.

5. **Slides #5 - 7.** Insert the existing page layout saved in the previous step. Use this as the foundation to generate unique instances of this slide for each of the stores in our data. Edit each component in the content area and add the store identifier as the primary key. In the charts, add this primary key to the multi-graph bucket. In the report, use the primary key to insert a page break for each new key value. Replace the All Stores slide title with a report displaying the store name as the key value. Once you have completed all of these updates, a separate slide will be generated at run time for each value of the store key (a).

6. **Slide #8.** Wrap up the history review with a section end slide. Insert the existing page layout for the End Presentation Conclusion Slide and add concluding comments in the text box (a).
7. **Slide #9 +.** Add static content about the product. Insert a new page layout and link it to a slide layout that does not require data from WebFOCUS.

In conclusion, combining the power of WebFOCUS and PowerPoint allows you to generate complete, informative, and professionally styled presentations that are dynamically populated with the latest data available in your enterprise. Use your corporate presentation templates to showcase your corporate data and add timely commentary.
Additional Resources

Blockchain Buzz
A blockchain is a distributed record of transactions validated and stored at multiple peer locations in a network. The records form a consensus of replicated, shared, and synchronized information. For example, the debits and credits applied to a bank’s accounts might be stored in the blockchain. The ledger (blockchain) is not the record of the accounts themselves, but rather the changes in account position.

The records stored in the blockchain are immutable, providing a high level of security and integrity. Each record is chained to the prior record, hashed, and encrypted, forming a chain of transactions from the initial transaction to the most current. The records are duplicated among the peers in the network, and available to any authorized party for viewing. The result is a horizontal (peer storage) and vertical (historic chain) mesh that is virtually tamper proof. This results in a high level of trust, transparency, and reliability.

The New, Integrated, Integrity-Focused, and Intelligent Kid on the Block
By Stefan Kostial, Director, Information Builders
and Scott Schneider, iWay Product Manager, Information Builders

Learn how iWay handles blockchain integration.
The diagram above illustrates the “chaining of the blocks,” where iWay Service Manager (iSM) posts a unique Transaction ID (TID) along with application data for a specific transaction within a block.

Once an item is recorded, it is irrefutable proof that this event occurred at a specific time and date, and (perhaps) between specific counterparties. The use of blockchains solves the problem of transferring value between parties (or entities) without the need to rely on a third intermediating party.

In the enterprise business world, a private (permissioned) blockchain provides a basis for non-repudiation and automates many of the existing labor-intensive processes required to settle transactions. Blockchains can reduce transaction and back office costs, the complexity of cross-enterprise business processes, fraud, and inefficiencies in the business to free up capital.

Blockchains can also take advantage of smart contracts. Smart contracts are self-executing contracts or agreements that are represented as software that can automatically trigger actions under certain conditions, such as when payments are made (or missed).

Smart contracts are implemented in chaincode, which implements the application in the peers. The peers run this code, and at a future point, validate the transaction to determine, for example, whether an asset should or should not be transferred.

Business Value Drivers:
- Ability to share information with parties that cannot be fully trusted
- Reduce the risk of data being compromised internally or externally
- Multi-party collaboration
- Need for increased security
- Utilization of smart contracts/chaincode
- Transparency and ease of auditability
- Increase business transaction speed
- Minimize data duplication
- Reduce operational costs
- Reduce the cost of fraud
Blockchain Provides:
- Decentralization
- Reliability
- Simplification
- Transparency
- Traceability
- Cost Savings
- Reduced Errors
- Faster Transactions

**Blockchain Integration Support With iWay Service Manager**

iWay Service Manager (iSM) Version 8.0 and higher offers integrated support for permissioned/private blockchain applications. Our proven integration capabilities work with and alongside blockchain platforms and applications.

Using our blockchain application integration capabilities, iSM can acquire messages from the outside world, existing applications, or other sources, then process them and share the results with other applications. iSM lays the foundation for a quickly deployable, easily maintainable service and event-oriented blockchain architecture, as well as a mechanism to make configuration easier for a user to understand. iSM integration benefits include:

- Reduction in development cost and time, and faster implementation into the blockchain workflow.
- Integration with peers (nodes) on the network, and ability to transfer detailed posts and queries between peers and iSM.
- Capability for synchronous and asynchronous transaction posting to the blockchain, which directly tackles scalability, transaction speed, and throughput concerns.
- Linking multiple types of blockchains together.

Blockchains can reduce transaction and back office costs, the complexity of cross-enterprise business process, fraud, and inefficiencies in the business to free up capital.
• Graphical building of process flows with full integration and configuration via adapters.
• Ability to keep transactions in order, prior to posting a sequence of transactions.
• Better visibility of the workflow process with real-time exchange of events and documents.
• Component customization through our wizard simplifies component use.
• Metadata and streaming analytics.
• Unique queries and custom event handling.

Blockchain Data Integrity Support with Omni-Gen
Once your blockchain application is integrated with iSM, our Omni-Gen platform can easily be incorporated. Omni-Gen Master Data Management (MDM) and Data Quality (DQ) Editions enable profiling, analyzing, enrichment, merging, managing, and cleansing data from any source, structured or unstructured. With Omni-Gen, organizations can:
• Obtain a browser-based, 360-degree view of master data across multiple blockchains.
• Assess and visualize data through dashboards, open presentation interfaces, and user-driven execution.
• Implement real-time data quality rules that support standardization, validation, cleansing, custom business requirements, and integration with multiple blockchains.
• Facilitate data governance using an integrated Remediation portal with customizable workflows for insight and remediation.
• Shorten development cycles and improve ROI.
Blockchain Data Integrity Support with WebFOCUS

Once your blockchain application is integrated with iSM, our WebFOCUS platform provides the ability to turn blockchain data into actionable insights for real business strategic decisions. The WebFOCUS enterprise business intelligence (BI) and analytics platform delivers rich, consumable, interactive information to the widest range of employees, managers, analysts, partners, and customers. With WebFOCUS, organizations can achieve:

- Broad and deep analytical capabilities via portals and dashboards.
- Self-service analytics and data discovery.
- Enterprise reporting and analysis.
- Predictive and location analytics.
The blockchain workflow provides participants end-to-end visibility based on their level of permission. Detailed visibility of the workflow process is enhanced with real-time exchange of events and documents.

**Sample Business Blockchain Applications**

<table>
<thead>
<tr>
<th>Industry</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banking and Finance</td>
<td>Domestic and cross-border payments, KYC, AML, clearing and settlement, loan origination, trading transactions</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>Design IP protection, product history tracking, production process assurance, recalls management</td>
</tr>
<tr>
<td>Education</td>
<td>Transcript validation and transfer, educator credentialing, payment of federal/state funds/grants, degrees, certifications</td>
</tr>
<tr>
<td>General Business</td>
<td>Payments, collections, claims, purchase agreements, identity fraud, shareholder voting</td>
</tr>
<tr>
<td>Media and Entertainment</td>
<td>Direct payment to content creators, digital asset security, know your customer</td>
</tr>
<tr>
<td>Government</td>
<td>Taxation, infrastructure protection, ownership records, building permits, criminal records, voting, identity management</td>
</tr>
<tr>
<td>Retail and e-Commerce</td>
<td>Product histories, reduction of counterfeit goods, supply chain management, product registration/warranties</td>
</tr>
<tr>
<td>Real Estate</td>
<td>Mortgages, title ownership, lease agreements, legal documentation, contracts, escrow</td>
</tr>
<tr>
<td>Healthcare/Pharmaceutical</td>
<td>Lot tracking of drugs, regulatory submission, clinical trial management, patient privacy (EMR), genome data</td>
</tr>
<tr>
<td>Supply Chain</td>
<td>Supply chain finance, shipment tracking, ownership transfer, compliance monitoring</td>
</tr>
<tr>
<td>Insurance</td>
<td>Transactional processing, claims automation/processing, fraudulent claims reduction</td>
</tr>
</tbody>
</table>
Utilities/Energy | Asset management, certification of renewable energy and emission allowances, metering and billing

Personal | Vehicle registration, passports, birth certificates, death certificates, marriage licenses

Legal | Wills, trusts, transfer of ownership, contracts

Food | Enhanced traceability of product origin, processing, tracking

Travel and Hospitality | Loyalty programs, travel documents

**How Can iWay Service Manager Integrate With My Blockchain Application?**

The blockchain workflow provides participants end-to-end visibility based on their level of permission. Detailed visibility of the workflow process is enhanced with real-time exchange of events and documents.

This level of detail and transparency helps reduce fraud and errors, reduces the time required to complete the workflow, and improves the management of the workflow. The result of the selected query is returned to iSM from the blockchain for transaction analysis.
Why Partner With Information Builders?

- Over four decades of enterprise software experience.
- Global organization.
- Capable of linking multiple blockchains together for greater analysis and intelligence.
- Guaranteed delivery network.
- Provides 360-degree customer view.
- Flexible solution architecture design.
- Blockchain agnostic.
- Shorter time to market and lower operating costs.
- Ability to reuse existing applications and infrastructure investments.
- Can adapt to existing legacy systems.
- Universal off-the-shelf adapter suite, providing easy access to enterprise systems.
- Award-winning IT customer service department.
- Leader in transforming data into business value.
- Member of the Hyperledger Consortium and Linux Foundation.

Additional Resources

Customer Success Spotlight: First Rate

First Rate Generates Billions of Nightly Returns With Information Builders’ Technology

The Challenge. Generate performance-return records for millions of accounts, which involves building and storing more than one billion account-return records each night.

The Strategy. Create flexible and highly scalable information-delivery and analysis capabilities; use WebFOCUS to process performance returns and simplify account oversight.

The Results. Increased efficiency and flexibility in reporting rates of return, enabling First Rate to capture the portfolio analysis and performance measurement business of more than 350 institutions and more than 4,000 investment advisors worldwide.

Savvy investors want to know more than just how their portfolios are performing each quarter. They require in-depth analysis based on dynamic, up-to-date information. Investment advisors who can keep their customers abreast of market changes in a clear, concise fashion stand out in this crowded, highly commoditized market. That’s why First Rate Investments depends on integration and business intelligence (BI) software from Information Builders as essential components of its First Rate Performance suite of applications.

“What makes our company unique is its BI and information delivery capabilities,” says Terry Gaines, managing director and manager of Business Development at First Rate. “We add significant value with our web-based reporting and drill-down capabilities, plus our ability to integrate our application suite with almost any database or computing platform. Information Builders’ technology makes these aspects of our solution possible.”

“Thanks to Information Builders’ broad technology base, it takes very little work on our part to modify our software solution to suit the requests of individual institutions.”

David Stone, Chief Executive Officer, First Rate
First Rate provides software and services to calculate rates of return on investment portfolios for investment advisors and financial institutions. The Arlington, Texas-based company has carved out a lucrative niche by creating a web-based performance measurement solution that reveals minute details within millions of portfolios. Wealth managers, financial advisors, and registered investment advisors use First Rate’s software products to deliver portfolio information to their customers.

It’s a data-processing-intensive business model. Every night after the market closes, First Rate receives holdings and transaction records for more than two million accounts. The company uses WebFOCUS to generate performance-return records for each investment holding, asset, and style class in every account. On average, this involves creating and storing more than one billion account-return records in about six hours, which works out to more than 40,000 return computations per second.

“The scalability inherent in Information Builders’ products is critical to our growth and escalating volumes of data,” says Bo McWilliams, managing director and general manager of Managed Hosting Services at First Rate. “We ingest millions of records and create billions. Information Builders helps us meet our service-level agreements without significant new investments in hardware. Keeping costs down means we can offer better services to clients.”

**Horizontal and Vertical Scalability**
Using Information Builders’ technology to process a high volume of portfolios in a short period of time enabled First Rate to expand in Europe, and recently to Asia. Thanks to its advanced software products and the underlying WebFOCUS infrastructure, First Rate has captured the portfolio analysis and performance measurement business of more than 350 institutions worldwide, including five of the ten largest domestic trust firms and many of the largest financial institutions in the U.S.

First Rate takes in about one terabyte of data every evening and processes more than 2.5 million portfolios per hour throughout the night. Business continuity and resilience are of the utmost importance to its clients, such as Bank of America, PNC Bank, and Suntrust. They need assurance that First Rate can fulfill service-level agreements (SLAs) for high volumes of data.
To meet escalating client demands, McWilliams and his team built a robust farm of WebFOCUS servers. Currently, 16 multi-core servers are dedicated exclusively to portfolio processing. The hardware runs in a horizontal configuration and has been optimized with high-speed solid-state drives that WebFOCUS uses for scratch space. First Rate easily replicates the hardware/software footprint and adds servers to scale the environment as needed.

“Using WebFOCUS on this hardware configuration enhances reliability,” McWilliams explains. “Spreading the load across multiple machines reduces the risk in case any one machine goes down. We can also dedicate a number of machines to a certain client for a period of time.”

Scalability within the farm is founded on capacity per machine, which is 40,000 returns per second. First Rate uses that metric to scale the farm, multiplying it across their 16 servers to determine whether their systems have capacity for each day’s total return volume. As First Rate adds clients, they easily add servers to the farm and scale horizontally.

With more than 4,000 investment advisors already using the system, a reporting volume of more than two million statements generated per month, and ambitious plans for ongoing growth, McWilliams is confident that First Rate has established an architecture that meets the escalating load.

First Rate plans to give clients even greater flexibility by using WebFOCUS In-Document Analytics to create interactive statements that utilize Information Builders’ patented Active Technologies capabilities. This allows First Rate to embed analytics right in its investment statements. Recipients won’t have to access a portal to filter the data or export it to Excel. Each statement includes a dynamic payload of data so they can sort, summarize, and filter it locally. Similarly, they won’t need to print the document to highlight transactions or write comments. That is all accomplished locally within the document—providing advanced end-user analytics for delivery via e-mail.

“Information Builders helps us meet our service level agreements without significant investments in hardware and keeping costs down means we can offer better services to clients.”
Bo McWilliams, Managing Director, First Rate
High-Yield InfoApp™ Delivers Executive View

First Rate has decades of experience measuring portfolio performance and calculating rates of return. The company’s corporate officers recently realized they could take these analyses a step further. “We are sitting on a treasure trove of information in our databases so we asked ourselves: How can we help our clients glean insight from all of this data?” recalls Marshall Smith, managing director and general manager of the Products group at First Rate.

The answer came with an InfoApp™ called ExecView that transforms First Data’s massive data set into informational data points to help clients figure out how their businesses are trending. ExecView helps prevent issues with regulatory agencies regarding trading regulations, cash management, and diversification, as well as to help verify the oversight process during an audit.

For example, an investment firm can use ExecView to determine what may be driving increased revenue through fees, or look for areas where accounts and assets under management (AUM) may be decreasing. The InfoApp™ allows them to run checks and balances on individual investment accounts and to fix accounts that are out of line.

According to Smith, it is difficult to create risk-return reports with standard deviations across tens of thousands of accounts, but ExecView creates these reports within seconds. That’s a game changer for oversight officers responsible for a group of investment managers or a group of accounts.
“From a monetization standpoint, ExecView has resulted in a 10 percent uptake in our revenue per year as a value-added service,” Smith says. “This tool gives them management oversight, even if we’re not the vendor who is providing their reporting solution. That’s an exciting avenue into new client relationships.”

Supporting an Economical SaaS Model
Many clients let First Rate host applications for them, such as the Advisor reporting tool, which reveals details about where their investments are going. With as few as three mouse clicks, Advisor lets them create client-ready presentations and deliver them to investors. “Some of our clients are huge banks with thousands of users, so a thin-client architecture is very economical,” Gaines says. “They don’t have to load anything on their desktops. All of the application logic resides on our servers.”

David Stone, Chief Executive Officer and founder of First Rate Investments, reports that his company’s use of WebFOCUS has been an unquestionable success. “Information Builders was able to leverage code that we’ve had in place for a long time and deliver it through a flexible browser environment,” he concludes. “Thanks to Information Builders’ broad technology base, it takes very little work on our part to modify our software solution to suit the requests of individual institutions.”

“New prospects are very interested in ExecView as they face a continued increase in scrutiny in wealth management space. Our competitors don’t have a tool like this. We can identify risk and return outliers in a very fast way.”

Marshall Smith, Managing Director, First Rate
User Groups

Information Builders User Groups offer a unique way for you to join your peers in a local venue, learn about the latest software features and innovations from Information Builders technical experts, and share your own expertise through networking at or after the event. See our schedule of Local and Virtual User Groups at https://ww2.informationbuilders.com/support/userforum/local

Focal Point Community

It’s more than a message board

Focal Point provides customers with an opportunity to collaborate on solutions and share tips and techniques with over 10,000 members. Browse more than 26,000 topics and over 150,000 posts for answers to your questions on WebFOCUS, FOCUS, and iWay. Focal Point membership is complimentary, and it’s easy to join the Information Builders Focal Point community. Just visit the Focal Point home page and click Login/Join to create a profile at http://forums.informationbuilders.com/eve/forums.

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