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Data Sheet

Verastream Bridge Integrator

OpenText Verastream® Bridge Integrator is an on-host connector that exposes CICS applications and transactions for service enablement via DPL transaction access and IBM Link3270 bridge services. While most on-host solutions require modifications to the target CICS applications, Verastream Bridge Integrator takes a different approach. It provides easy-to-use tools that allow for direct interaction with CICS applications as they exist. This approach is especially useful for quick turnaround projects and for situations when changes to the CICS application are unacceptably risky or costly.

Product Highlights

How Verastream Bridge Integrator Works

Verastream Bridge Integrator uses an advanced pair of methods for accessing and using CICS applications. It seamlessly enables interactions with CICS via direct program links (DPL) and via the IBM Link3270 bridge. While Verastream works behind the scenes, you benefit from these access methods in two ways:

1. You can take control of any exposed transaction in a CICS application.
2. You can invoke transactions that are not clearly exposed via the IBM Link3270 bridge.

This simple combination of access methods means that you get direct ability to manipulate the underlying COBOL in the CICS application regardless of whether some, all, or none of the COBOL is cleanly accessible as a transaction call.

Design Tools

With Verastream Bridge Integrator, it's surprisingly easy to obtain essential control over your CICS applications. Intuitive design tools, which give you complete insight into the target applications, provide three task-specific capabilities:

- Decipher even the most complex copybook structures and (using a drag-and-drop visual layout) let you turn them into web service operations for use across the enterprise.
- View the entire extent of a CICS application by leveraging BMS maps (pre-defined or automatically generated on the fly) and then create services accessing the application COBOL through this view.
- Orchestrate custom processes out of these services (via a visual process tool), letting you apply controls or create compound services before publishing them for use across the enterprise.

Direct CICS Participation in SOA

Because you can expose Verastream-generated services and make them available to other applications, you get a standard way to communicate across systems, inside and outside of CICS. It's done via an HTTP service call that points to a web service in the CICS application. The web service runs a given operation and returns needed information.

That means any application visible to Verastream can participate in SOA. Composable services pave the way, and anyone familiar with web services can use them. For IT organizations moving to the architecture model of the future, this truly distributed approach—requiring no embedded code—is a step in the right direction.

Quick View

- Broad client-platform support for web service implementations or Java and .NET environments.
- Simple state management through Assignable Terminal ID support; ability to control state management of MRO.
- Ability to access CICS logic and embedded UI process logic via 3270 bridge exits or DPL-based calls.
- Direct access to 3270 applications spanning multiple CICS regions when using IBM Transation Server v3.x or higher.
- Ability to expose DPL-based interactions as web service operations.
- Ability to handle international code pages.
- Support for Top Secret, IBM RACF, and ACF2.
- Interception of CICS 3270 Terminal I/O, bypassing VTAM for faster processing.
- No need to modify the CICS application or generate BMS maps.
- End-to-end security using SSL.

Solving Real IT Needs

The job of modernizing native business processes on multiple, disparate systems can present some unique challenges for application development. Here are some typical host-integration requirements, paired with Verastream-specific solutions:

- **Remove usage complexities.** The Verastream transaction designer captures COBOL copybooks with drag-and-drop ease so there is no hand coding. Because developers can isolate the tasks that are needed (including "redefine" and "occur" statements), they maintain granular control.
- Deliver mainframe-resident code that works in the IBM architecture, for web-enabling CICS applications. Verastream Bridge Integrator strictly adheres to the IBM CICS Web Support and CICS Link3270 bridge architecture for seamless integration of existing systems in a CICS application environment.
- Access CICS applications whether they were written to leverage COMMAREA communications or not. In addition to DPL access, Verastream Bridge Integrator allows low-level access to applications based on BMS maps and 3270 Terminal Control Programs that do not provide BMS maps, while still delivering enhanced performance over traditional Telnet access.
- Use existing business logic, data systems, and security without modifying CICS 3270 applications. Verastream Bridge Integrator enables the reuse of host data and business processes from existing CICS applications without changing host code.
- Create front-end applications that mirror current business processes. Verastream Bridge Integrator helps you meet your business needs by creating new applications that access the data and logic from CICS applications. As an added bonus, you leverage the speed, security, and reliability of the mainframe.
- Generate rapid ROI for new applications. Verastream Bridge Integrator provides an easy-to-use API for making calls directly into the CICS application with mainframe performance. This approach is on par with COMMAREA access, which typically yields a tenfold performance increase over traditional screen-scraping approaches.
- Manage change-control and performance issues associated with HLLAPI and Telnet. Verastream Bridge Integrator enables interaction with CICS applications via symbolic names or row/column positions. You get access to the entire CICS application through the native CICS HTTP interface.
- You do not have to go through VTAM or create sessions, so you can reduce overhead on the mainframe and enhance throughput.
- Manage terminal IDs directly in CICS. Now you can control state management and track application use directly from the CICS environment within Verastream Bridge Integrator. This feature ensures top performance and fault tolerance of MRO interactions.

Because developers need to meet the above requirements without disrupting existing processes or rewriting host application code, the Verastream method becomes especially compelling.

The Benefits of Access via Link3270 Bridge

The Link3270 bridge provides a direct and low-overhead method for interaction that has the performance and reliability of COMMAREA access, yet the freedom of generic 3270 access. Unfortunately for many, however, the Link3270 bridge process is too complicated and too limited.

With Verastream Bridge Integrator, the drawbacks associated with CICS application architecture and BMS map dependencies are no longer inhibitors to this valuable access method. To take advantage of the power and richness of the Link3270 bridge access approach, Verastream provides the following tools and abilities:

- **Verastream bridge designer.** With this graphical tool, developers can abstract bridge interactions. Using an interface that mirrors a 3270 session for ease of use, the bridge designer automates the code generation that drives Verastream Bridge Integrator. The bridge designer simplifies the building of application navigation and provides these features:
  - Intelligent screen navigation, as through a GUI.
  - Drag-and-drop facilities to create variables for inputs and returned outputs.
  - Ability to create partial interactions and tie them together.
  - Code generation for popular IDEs like Microsoft Visual Studio or Eclipse.
  - Extensible framework with examples on providing designer support to any language or IDE.
  - Navigation tester within the design facility.

  The bridge designer provides the ability to stack commands into a single unit of work and send them to the host for processing. With Verastream Bridge Integrator, state for activities is passively maintained within CICS. That means you can let multiple interactions with destination CICS ap=plications occur with only a single inbound call to CICS and a single return. The result is the removal of network overhead and latency.

  With the bridge designer, the use of this functionality is easy. Upon command, the designer looks through your host interactions, suggests how to combine them into larger units of work, generates the streamlined code, and—most important—

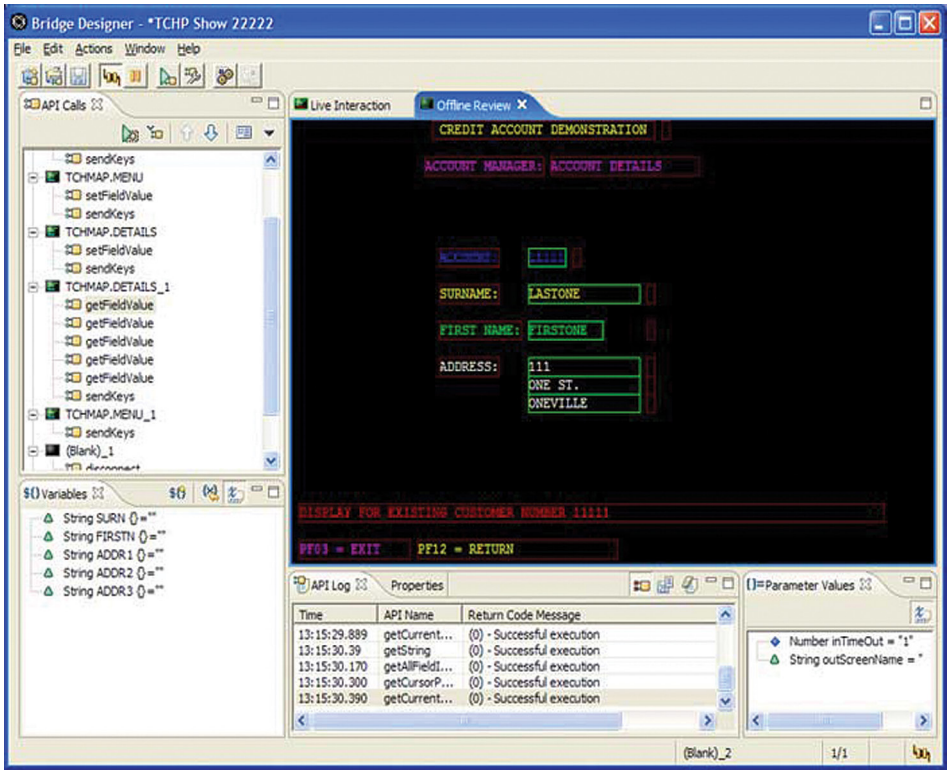

Figure 1. The Verastream bridge designer lets developers abstract bridge interactions using an interface that mirrors a 3270 session for ease of use.

teaches you how to interact with the host in the fastest and most efficient manner possible.

- **BMS map, no BMS map, or both.** BMS maps let you use map-screen names and field names. Use of host information is as simple as calling the symbolic names of screens and fields. Interaction with the CICS application is based on the use of name/value pairs in the maps instead of row/column positions on the rendered terminal screens. Therefore, movements of fields on host screens do not force changes downstream, and client applications developed against the BMS maps are not affected.
- **Access to unmapped host fields.** Client applications can interact with every field on a screen, not just the mapped fields. Verastream Bridge Integrator allows a client application to access the underlying terminal controls available through the Bridge Exit. This is done natively through the Bridge in CICS, not by invoking an external session as other solutions do.
- **Name/value pairing.** Importation of BMS maps is done dynamically and generation of name/value pairs is based on the underlying terminal controls for all unmapped fields on the screen. You can then use these unmapped fields by calling the generated name. This not only enables a client application to use name/value pairing, but also allows the client application to work against any screen and any field, whether a full map has been generated or not.
- **Interaction with screens that never had a map.** Even if a CICS application does not use BMS maps, a client application can still take advantage of the performance of the CICS Bridge and use CICS without invoking a middle tier-based screen-scraping infrastructure. When Verastream Bridge Integrator encounters unmapped screens and fields, it dynamically creates a map with generated names for all fields. (Note that Verastream Bridge Integrator can also suppress the use of non-mapped information.) Every field is included in this map and you can then either request data from or post data to specific fields.
- **Support for interactions using row/column/length commands.** Verastream Bridge Integrator is not limited to BMS-only interactions. Instead, it allows CICS interaction through the Verastream Bridge Exit in any way (e.g., row/column/length commands) required by the corresponding CICS application.
- **Simplified bridge vectors.** The application developer does not have to understand and manage bridge vectors. Verastream Bridge Integrator allows the calling application to request just the information it wants via a simple library verb available using a Java class, COM, or .NET object, or as a web service. If only one field is required, the calling application can request one field, either by mapped name, generated name, or row/column/length. When the client application needs all the fields on the screen, Verastream Bridge Integrator supplies a verb to return them. If extended field information, such as attributes, is required, this can also be returned with the data.

1,668% Faster!

Verastream Bridge Integrator enables interactions with CICS via direct programmatic manipulation of CICS application business logic. This method is highly efficient. For example, using screen-access methods, navigating through ten screens in a CICS application takes 4.57 seconds. With Verastream Bridge Integrator, it takes 0.1 seconds—a 1,668% gain.

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- **CESN Logon and CESF Logoff procedures.** Verastream's patent-pending technology allows the use of CESN Logon and CESF Logoff procedures. This is a common authentication method for interactions with CICS applications and a requirement for many security-enabled applications.

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