



Premier Modernization Solution for Mainframe Systems

Attachmate® Verastream® Host Integrator enables the full range of mainframe-based legacy applications to participate in today's service-oriented architectures. Its advanced services approach helps IT organizations extend legacy functionality for use in web, portal, CRM, mobile, contact-center, or web self-service solutions. And it delivers rapid results because you can use existing development skills, familiar IT tools, and proven mainframe investments.

With Verastream Host Integrator, developers can capture data and logic via the screen interface to create services and components (e.g., COM, .NET, Java, or web services) that can be mixed, matched, and reused. That gives you a flexible application-development platform for ongoing projects. Whether your environment is IBM Mainframe, IBM System i (AS/400), Unix, HP OpenVMS, or HP e3000, Verastream can give your users a new look and feel, without disturbing valuable code or associated business processes.

Key Features

- Design tool with intelligent screen navigation and table representation.
- Web builder enabling a range of simple rejuvenation to complex integration.
- Debugging tools including navigator, session monitor, validator, and more.
- Event handlers that eliminate the need for cumbersome client-side programming.
- Session pooling that reduces host workload and unnecessary user navigation.
- Load balancing and failover to ensure seamless scalability, rapid response, and 24/7 reliability.
- Comprehensive security.
- Remote management with management console or any SNMP tool.
- Noninvasive approach that minimizes risk and maximizes daily business operations.

Product Highlights

Design Environment

With Verastream Host Integrator, you use a simple point-and-click process to abstract legacy functionality in component form. The solution's design environment includes a set of practical integration tools:

Design Tool

Developers can use this graphical tool to encapsulate legacy functions—including data elements and screen navigations—as components. The Design Tool automates the process, regardless of legacy application type, and provides some powerful capabilities:

- **Intelligent screen navigation.** The Design Tool learns how to navigate from one screen to the next and independently determines the best path to a given

screen. You can even define escape routes and alternate paths, triggered by legacy-application error conditions.

- **Table representation.** Verastream Host Integrator can organize and present legacy data and logic as database tables. This allows web programmers to retrieve information from the legacy application using a familiar database interface.
- **Model Import.** Multiple developers can work on a single project or within a single model. This feature is useful for larger projects and allows the project to be broken into pieces or subsets and worked on in part by various individuals. Model import also allows for reuse of code, with the ability to import needed portions of one project into other projects. This functionality is useful for retaining intricate work and allows a group to build a virtual library of application interactions for use in any project.

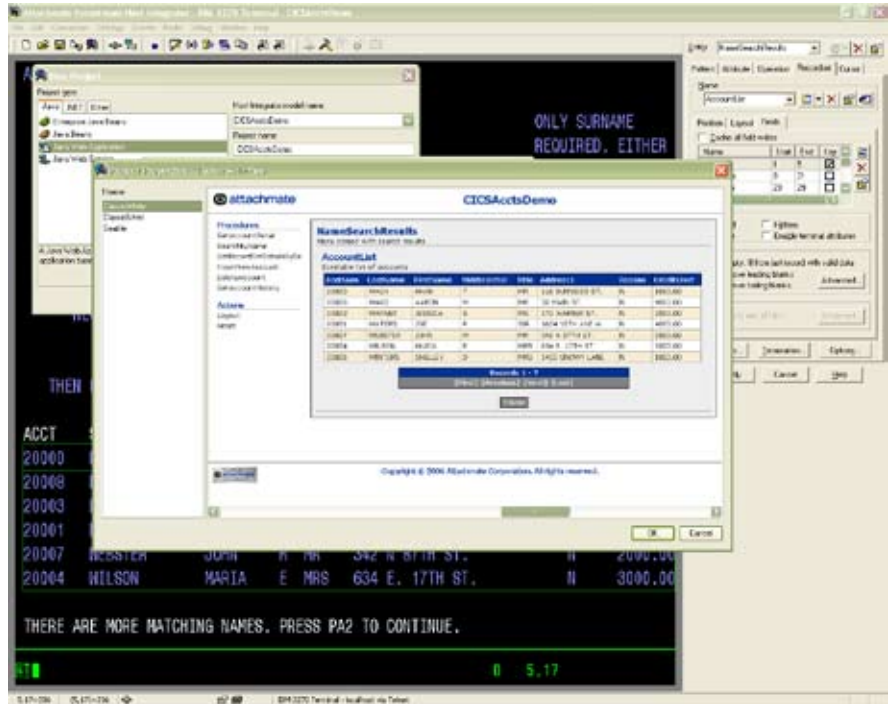
Web Builder

With Verastream Web Builder, you can generate and deploy web applications, component interfaces, and web services from legacy functions abstracted using the Design Tool. Your project potential ranges from simple rejuvenation to complex integration services:

- Rejuvenation.** Through the Web Builder user interface you can map an unlimited number of modeled screens, as-is, into ASP.NET or JSP/Servlet web pages. For unmodeled screens, you can choose to leave rarely used screens unchanged, while making often-used screens available as web pages. For third-party IDE support, Verastream Host Integrator includes themes with extensible theme support. This feature provides a simple method for controlling the look and feel of dynamic content.

- Integration.** You can go beyond simple rejuvenation to generating integration projects that encapsulate legacy functionality—spanning multiple screens, applications, and hosts—into a single service. Verastream Web Builder automatically creates component interfaces like JavaBeans, .NET Class Libraries, or web services. Using industry-leading IDEs (such as Eclipse or Microsoft® Visual Studio®), you can edit the low-level components and combine them to form high-level components or composite services. Next, Web Builder can generate ASP.NET or JSP/Servlet web applications based on host functionality, rather than host screens. This level of abstraction enables you to create new applications that are independent of the existing host-application workflow, for real improvement of your business processes.

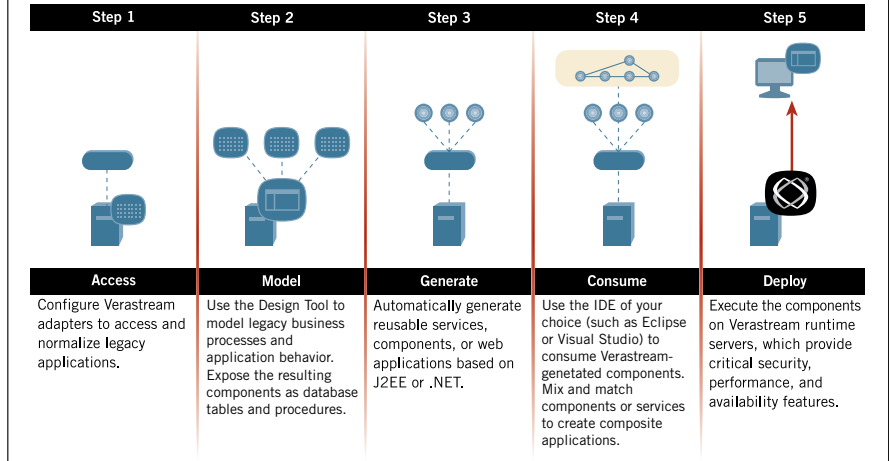
Verastream-generated rejuvenation and integration projects can be customized using any web/HTML design tool. Verastream Web Builder can also produce WS-I-compliant web



Host experts can use the graphical Design Tool to easily create a working model of a host application.

How Does Verastream Host Integrator Work?

Reusing legacy functionality doesn't have to be a long and labor-intensive process. With Verastream Host Integrator, it takes only five quick steps:



services, to accommodate the ever-newer standards of the web services specification. This functionality ensures interoperability for SOA and flexibility for more formal layered-tier architecture approaches.

Debugging tools

To help troubleshoot the components you create, Verastream Host Integrator provides a range of debugging tools, which include:

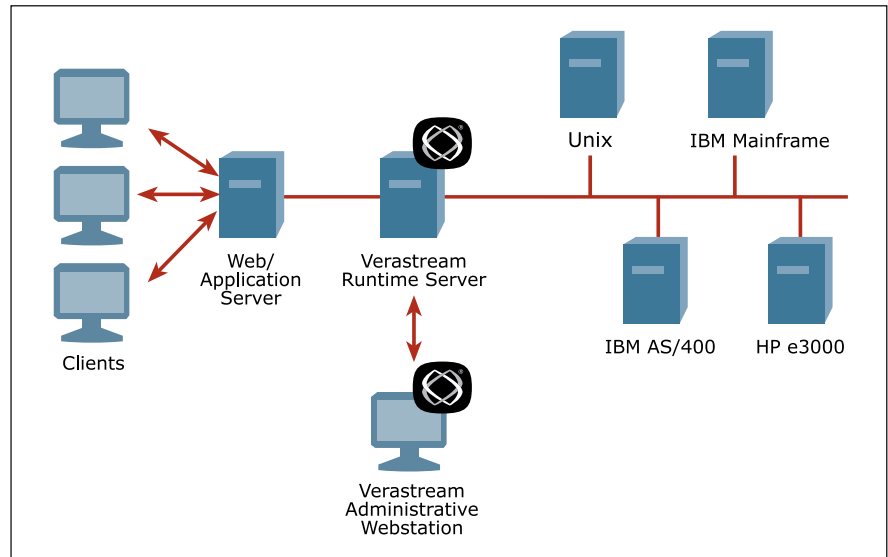
- **Navigator.** Shows a point-and-click graphical depiction of relationships and navigation paths for all specified screens.
- **Session monitor.** Shows active host sessions while client applications are running, so you see the results of user actions.
- **Validator.** Automatically checks key component elements to verify functionality.

Event handlers

Event handlers let you extend the flexibility and power of Verastream Host Integrator. For example, you can create event handlers to change legacy application codes to user-friendly descriptions, convert formatting for currencies or dates, improve error handling, or enable multiple legacy components to work together. Event handlers run on the Verastream server and relieve the need for cumbersome client-side programming. Once an event handler is created, it can be reused in multiple legacy components.

Runtime Environment

Verastream Host Integrator offers unprecedented scalability because it runs as a native task on 32-bit as well as 64-bit Unix and Windows® platforms. By running natively, Verastream incurs less operational overhead than server technologies running in an interpreted virtual-machine environment. Windows 2008 support ensures use of Windows 2008 features and functions in integration projects. Native .NET client (full managed code) makes Verastream transparent with respect to 32- or



Verastream load balancing, security, and failover provide a scalable architecture that lets you expand your legacy environment to new applications or business processes.

64-bit OS, provides more flexibility for client applications, and simplifies maintenance. Other significant runtime features include:

Session pooling

As each transaction with the host is completed, the user session is immediately released back to a session pool for the next user request. This greatly reduces the ratio of sessions to users. And because Verastream sessions are pre-set to specific host screens, you eliminate unnecessary user navigation and reduce host workload.

Load balancing and failover

Verastream scales seamlessly across multiple runtime servers to deliver rapid response and 24/7 reliability. When multiple runtime servers are deployed, the workload is dynamically balanced for optimal performance under high-transaction volumes. If a service outage occurs on any runtime server, the remaining servers automatically provide uninterrupted failover protection.

Security

Verastream offers comprehensive security and can leverage user security settings on local runtime servers or use Lightweight Directory Access Protocol (LDAP). Verastream accommodates end-to-end security through the use of SSL; host-to-server as well as server-to-client communications can be secured. SSL public key cryptography ensures the protection of all data passed between client web applications and the Verastream runtime server. Any host-based security implementations (such as RACF, TopSecret, or ACF-2) remain fully in force. FIPS-validated crypto libraries enhance compliance with data-protection guidelines defined by the U.S. National Institute of Standards and Technology. While a requirement for many government IT systems, these security standards benefit private-sector organizations as well.

Remote management

The Verastream management console provides a single browser-based interface to manage any number of runtime servers. It lets administrators remotely configure, deploy, or monitor services, as well as session pools and security, using the management console or any SNMP management tool.

The Verastream Product Line

Verastream Host Integrator is part of the Attachmate Verastream legacy integration suite, a complete range of mainframe, web, and desktop modernization tools. Our solutions deliver the full spectrum of basic and advanced rejuvenation to customized presentation and sophisticated high-performance integration. Verastream-generated services can be mixed, matched, and reused selectively to extend legacy functionality to new applications or new users. No code changes to legacy applications are required.

By providing a wide range of standard interfaces to host-based data sources, programs, and applications, Verastream solutions enable any client to access any host asset. With Verastream, you can optimize the following resources and more:

| | |
|---------------------|---|
| Applications | |
| CICS | VT420 |
| IMS/TM | HP700/92 & HP2392A |
| CICS 3270 Bridge | Web / HTML |
| 3270 & 5250 | Desktop (Windows, Java, DOS, web-based) |
| Data Sources | |
| Adabas | IMS/DB |
| DB2® | SQL Server |
| DB400 | VSAM |
| Programs | Natural |
| COBOL | RPG |

TECHNICAL SPECIFICATIONS

PLATFORMS AND REQUIREMENTS

Screen Interfaces

IBM 3270, typically used with IBM MVS, S/390, and System z hosts

IBM 5250, typically used with IBM AS/400 and System i hosts

VT52, VT102, VT220, VT320, and VT420 terminals, typically used with Unix, Linux, and HP OpenVMS hosts

HP 2392A and HP 700/92, typically used with HP e3000 hosts

Application Program Interfaces

CCI for J2EE v1.5 JCA Resource Adapters

J2EE stateful and stateless EJBs

JDBC

COM

.NET v2.0 support for CLR-compliant languages like C# or VB.NET

SQL

Microsoft BizTalk® Server 2004

Microsoft BizTalk Server 2006

Component Interfaces

Web services (J2EE, .NET, XML, SOAP)

JavaBeans

EJB

JCA

.NET Class Libraries (C#, VB) COM Objects

Verastream Development Kit

Windows XP Professional

Windows Vista

Windows Server Platform

Verastream Runtime Server

Both 32-bit and 64-bit hardware and OS

Solaris for SPARC platform

AIX on PowerPC

SuSE Enterprise Linux on IBM zSeries and x86

Red Hat Enterprise Linux for Intel x86 platform

Windows 2003

Windows 2000 SP4

Windows Server Environments 2003 and 2008

Support for Virtual Machine Managers



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