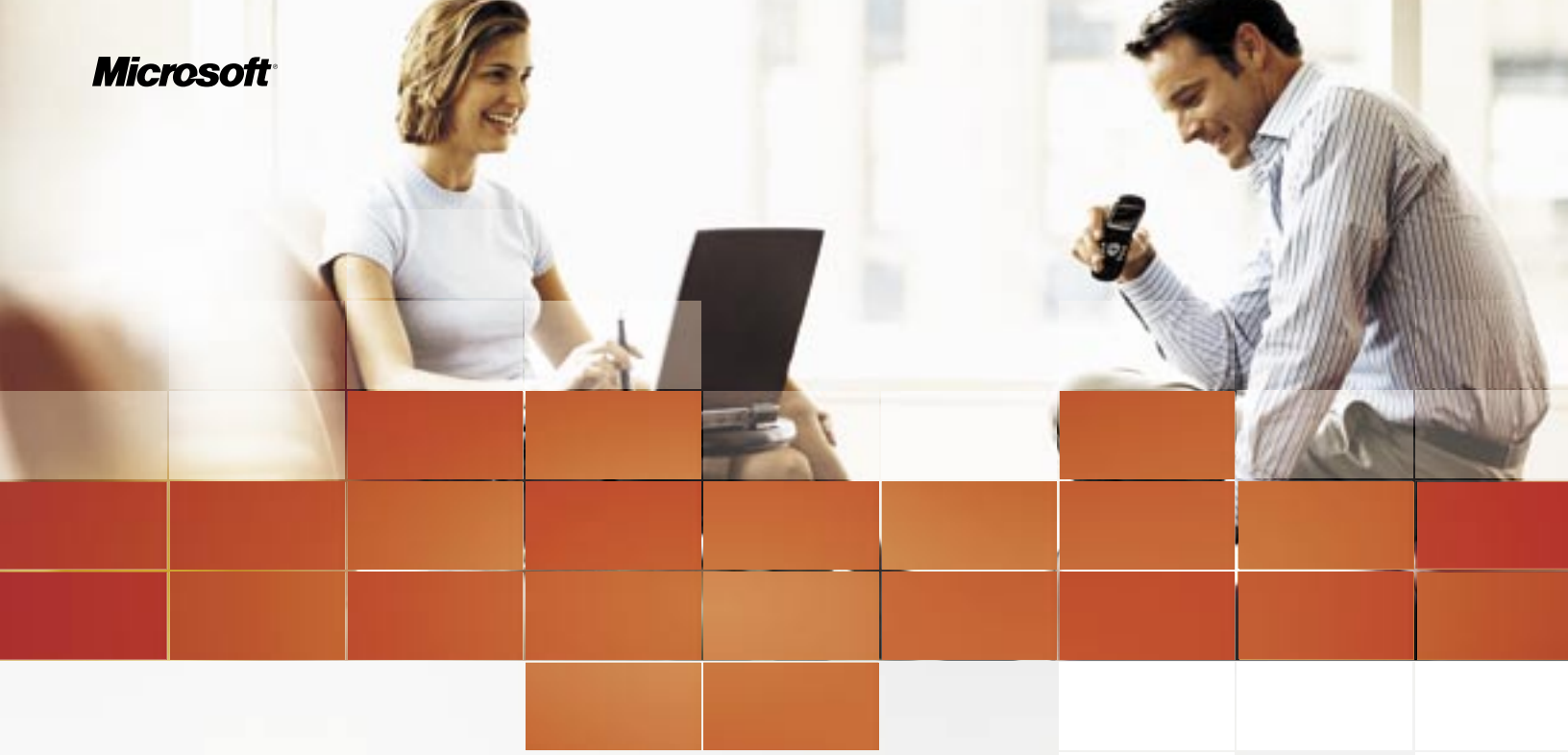
Microsoft



Microsoft® Host Integration Server 2004

SOLUTION HIGHLIGHTS

Extending Host System Resources Across Distributed Networks

Part of Microsoft® Windows Server System™, Microsoft Host Integration Server 2004 makes it easy for customers to connect, access, integrate, and manage IBM mainframe and iSeries midrange resources across distributed networks within a Microsoft .NET Services-Oriented Architecture.

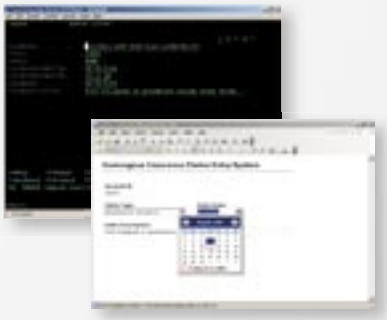
With Microsoft Host Integration Server 2004:

- Windows®-based LANs and WANs can interoperate readily with IBM System/390 or z/OS mainframe and iSeries midrange systems over a TCP/IP network.
- Windows desktop users can share resources found on IBM mainframe and iSeries midrange systems.
- Enterprise developers can access host-based business processes and data using XML Web services—through support for a Microsoft .NET development environment.

Boosting the Productivity of Information Workers and Cutting Costs

Whether the goal is to develop a Web-based or smart-client-based application that performs transactions with host data or to incorporate host data into management reports for analytical purposes, Microsoft Host Integration Server 2004 can enhance productivity while lowering costs. With the technology it provides, enterprises can:

- Preserve investment in currently deployed host technology while taking advantage of a Services-Oriented Architecture and a suite of products offered for the Windows Server System platform.
- Rapidly deploy a smart-client (intuitive, forms-based) interface for host applications using Web services and Microsoft Office InfoPath™ 2003.
- Leverage Microsoft Visual Studio® .NET and a large pool of qualified .NET developers who do not need to know or learn host programming.
- Lower the total cost of ownership (TCO) for host access and host application integration by reducing administrative, development, and host processing costs.



With Microsoft Host Integration Server 2004, users can create Web or smart client interfaces for host applications.

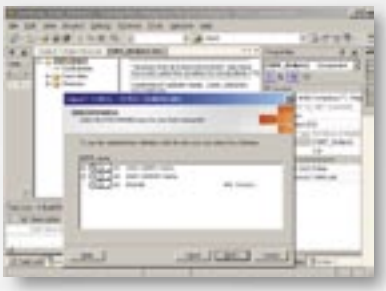
Microsoft Windows Server System

For more information, please visit www.microsoft.com/hiserver

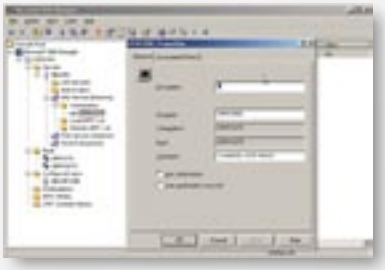
MAKING SEAMLESS HOST INTEGRATION EASIER THAN EVER

With Microsoft Host Integration Server 2004, enterprises can more easily incorporate IBM mainframe and iSeries midrange applications into new, distributed applications that run on the more cost-effective and accessible Windows Server™ platform.

A new central Data Access Tool that helps define host connection



Transaction Integrator (TI) Project Designer tool importing CICS COBOL Commarea data declarations within a Visual Studio .NET 2003 solution



Administering server configurations with improved administration and diagnostic tools

Synchronizing user account and password information on the IBM host with the Windows domain server enabling single sign on

Easier to Connect

Microsoft Host Integration Server 2004:

- Facilitates bidirectional connections between Windows-based LANs and WANs and IBM System/390 or z/OS mainframe and iSeries midrange systems using Systems Network Architecture (SNA) or TCP/IP.
- Makes it possible for developers to easily create and manage DB2 and host file system connections through a new Data Access Tool.
- Offers host application integration and Host-Initiated Processing (HIP) capabilities that allow a computer running Windows Server to function as a peer to IBM mainframe and iSeries midrange computers.
- Supports IP routing to simplify connections to IBM mainframes that still use the older SNA networking protocol, significantly lowering costs for SNA-enabled enterprises.

Easier to Integrate

Microsoft Host Integration Server 2004:

- Eases the way for enterprise developers to integrate mission-critical host applications and data within a Windows-based Services-Oriented Architecture.
- Utilizes the networking and .NET capabilities within Microsoft Windows Server System to enable scalable and high-performance legacy integration.
- Offers direct access to IBM DB2 databases through .NET-enabled data provider.
- Provides peer-to-peer, bidirectional integration services that allow Windows application developers and host application developers to share resources found on both platforms.

Easier to Manage

Microsoft Host Integration Server 2004:

- Simplifies client configuration and resource location using Windows Server 2003 Active Directory®.
- Includes enhanced administration and diagnostics tools that improve the usability of configuration wizards and most dialog boxes.
- Simplifies management of Windows and IBM user credentials using the new Enterprise Single Sign-On (SSO) feature, which includes:
  - User account and password mapping, caching, and synchronization
  - Single sign on between Windows Active Directory and IBM mainframe systems using IBM RACF, CA-ACF2, and CA-Top Secret
  - Mainframe and iSeries password change notification and password change management

Easier to Improve Security

Microsoft Host Integration Server 2004:

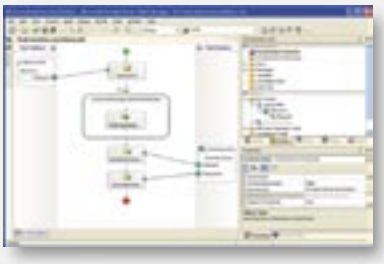
- Supports a new Windows Server product configuration called “Secure by Design” to deliver a higher level of security for enterprise data.
- Incorporates enhanced security and integrated single sign on for single-point authentication for both Windows-initiated and host-initiated transactions. Bidirectional password synchronization is available through third-party software.
- Supports Secure Sockets Layer (SSL) and Transport-Layer Security (TLS) for TN3270 to increase the overall security of the enterprise network when accessing mainframe resources over a TCP/IP network.

HOST INTEGRATION FOR THE DISTRIBUTED ENTERPRISE

Bottom-Line Benefits

Microsoft Host Integration Server 2004 helps the distributed enterprise:

- **Simplify access to host data with new solutions developed using the Microsoft Windows platform.** Host Integration Server offers data providers that make it possible for enterprise developers to improve end user task flow for transactional or reporting applications by integrating information stored in DB2 and host file systems with new solutions based on Windows Forms, Web Forms, Web services, or Microsoft Office System productivity applications such as Microsoft Office Excel 2003 and Office InfoPath 2003.
- **Simplify network infrastructure and reduce operating costs by removing SNA telecommunications equipment.** With Host Integration Server, network administrators can consolidate their network infrastructure and migrate toward pure TCP/IP WANs and data centers while supporting the same level of SNA-compatible applications and services.
- **Quickly integrate host application business logic within a .NET Services-Oriented Architecture.** Host Integration Server incorporates a common design environment for faster development with Microsoft Visual Studio .NET, making it easier for developers to rapidly publish business processes found in mainframe CICS and IMS applications as well as those found on IBM iSeries midrange systems as XML Web services.
- **Reduce TCO and improve ROI of new application development.** Easily integrate systems, people, and trading partners with existing host resources using other Microsoft products such as Microsoft BizTalk® Server 2004, Microsoft Commerce Server 2002, and Microsoft Office 2003 Editions, and reduce time to market for e-business solutions.



BizTalk Server 2004 orchestration of an insurance claims solution using an IBM DB2 database

Support for Industry-Standard Technologies

Host Integration Server 2004 employs industry-standard technologies that:

- Publish business processes found in IBM iSeries midrange systems and mainframe CICS and IMS applications as **XML Web services**.
- Support a well-known standard called **Synchronization Level 2** (Sync Level 2), also known as the **Two-Phase Commit** (2PC) protocol, for distributed transactions over SNA and TCP/IP.
- Provide industry-standard **SSL/TLS** support for TN3270E host access.
- Support industry-standard SNA over IP routing (also known as **HPR/IP** or IBM Enterprise Extender) to enable direct connections to IBM mainframes via high-speed IP networks.
- Support **IBM Message Queue** protocol for cross-platform messaging between Windows and heterogeneous systems.
- Support **Distributed Relational Database Architecture** for accessing IBM DB2 database servers on popular computing platforms.

Integrating Host Assets with the Windows Server System

When enterprises integrate existing host-based data and applications with the Windows Server System, they can:

- **Preserve** existing investments in host systems.
- **Extend** host-based resources to highly scalable, distributed component-based and Web services–based applications.
- **Reduce** development costs by drawing from a large pool of Windows developers rather than a small group with specialized host programming skills.
- **Lower** operational costs by migrating selected host applications and data to the more cost-effective Windows platform.
- **Lower** migration costs by keeping host-based resources on IBM mainframe and iSeries midrange computers, or amortize these costs by migrating slowly to the Windows Server System platform.

Microsoft Host Integration Server 2004 Standard Edition

Enterprise Ready	Supports an extended implementation of Windows authentication, enabling enterprises to more efficiently deploy and manage access between IBM host systems and distributed Windows-based networks
Data Integration Components	Provides desktop or server-based applications with direct access to relational and nonrelational mainframe and iSeries data through Open Database Connectivity (ODBC), object linking and embedding database (OLEDB), and .NET Framework–enabled ADO.NET
Management Components	Includes tools for performing interactive and scripted local and remote Web-based and traditional client/server management of Host Integration Server 2004 components
Managed Provider for DB2	Eases the way for developers to directly publish vital data stored in DB2 databases as Windows Forms, Web Forms, or XML Web services using Visual Studio .NET tools
Network Protocol Support	Supports a broad range of network protocols for communicating between clients, servers, and host computers
Data Access Tool	Enables developers to create and manage connection definitions to DB2 and host file systems. Also includes new DB2 Connect Import Wizard to define data source definitions for use with Microsoft DB2 data providers

Microsoft Host Integration Server 2004 Enterprise Edition

Includes all the features of the Standard Edition, plus:

Application Integration Components	Makes it possible for IBM mainframe, iSeries, and Windows-based applications to communicate with one another, including solutions that integrate synchronous, bidirectional Windows and host-initiated transactions
Transaction Integrator (TI)	Includes new TI design tools that make it easy for Windows developers to publish and extend business rules in CICS, IMS, and AS/400 applications as XML Web services, offering improved developer productivity and increased runtime cost efficiencies
TI Project Designer Tool	Eases mainframe and iSeries application integration with an import wizard and an object builder that runs within the Microsoft Visual Studio .NET development environment
TI Management Tools	Includes Microsoft Management Console snap-ins for administering network and application integration technologies, providing improved manageability and enterprise supportability
MSMQ-to-MQSeries Bridge	Provides asynchronous, messaging-based communication integration between Message Queuing (also known as MSMQ) applications and MQSeries-enabled applications

Microsoft Host Integration Server 2004 Standard Edition

Microsoft Host Integration Server 2004 Enterprise Edition

Microsoft Windows Server System

Microsoft

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