Secure and highly available user access to multiple z/OS applications

IBM Session Manager for z/OS, Version 3.1

Highlights

▪ High availability and near-continuous operations with application-session recovery following planned or unplanned outages in a Parallel Sysplex® environment

▪ Further Parallel Sysplex enhancements, such as workload balancing, sysplex networking, automatic user reconnection and sysplex-wide messaging and auditing

▪ Online administration capabilities that enable authorized users to add, delete, or update applications, profiles, and users

▪ Batch administration capabilities that enable mass updates on large sites to be run as batch jobs

▪ Dynamic application menus and users that are administered through definitions in an external security manager, including RACF®

▪ System-management menu for authorized users with a range of new commands

▪ Help-desk facility that provides user display with rapid access to query, message, spy, or cancel commands

▪ Usability enhancements throughout the product, such as national language support

Recent enhancements

▪ Pass-phrase support

▪ Extended Login Facility (ELF) support

▪ Operational plug-in for IBM® CICS® Explorer™

Simple, secure session-management

Many business tasks require users to switch among a variety of applications on different systems. For example, when taking orders, users need to validate client information, check client credit history, and determine whether items are in stock and when delivery is possible. Users might also need to arrange client financing and payment schedules. And because users must keep track of all the applications and systems they work on, becoming proficient at completing complex transactions like these can be difficult and time-consuming.
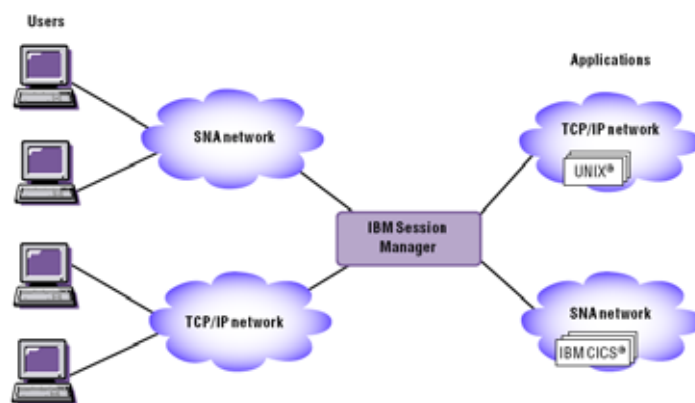

Figure 1 IBM Session Manager configuratiom

IBM® Session Manager for z/OS®, Version 3.1 provides IBM VTAM® software users, as well as TCP/IP users, with security-rich, highly-available, and user-friendly access to multiple IBM z/OS systems from a single 3270 terminal (see Figure 1). A password or passphrase-protected menu means that users are within a few keystrokes of any business application from multiple, concurrent virtual sessions. System details are transparent to users—they can access the information they need without having to know where the applications are or what system they run on.

IBM Session Manager provides a consolidated view of a user's business application network from a single workstation, helping to reduce system administration time and provide quick access to a variety of applications. Because users work with applications from one easy-to-use menu, training requirements can be minimized.

Increase ease-of-use and productivity

IBM Session Manager can help users work more efficiently. Users can connect to a critical application or switch between applications with a single keystroke or simple command. With the windows facility, you can view several sessions simultaneously—and position, move, or resize windows anywhere on the screen. IBM Session Manager also helps improve communications efficiencies.

Messaging capabilities allow users to send messages to other users and groups, or to another terminal. Users can also copy and paste data from one session into the same or another session, save screen images for later reference with the push-pull facility, and create a permanent copy of the current screen image by entering the specified hardcopy command to help save time and effort.

Integrate 3270 applications

With IBM Session Manager, different applications—even on different operating systems—can share and exchange data. The application-builder facility enables you to build a new application by combining the output from one or more applications. Output from one or more sessions can be collected selectively and displayed on user-defined panels—in effect, creating a new application.

Users can start a session, terminate a session, run a specific script on a particular session, and halt a script in progress. They can also copy virtually any part of an application screen to a variable, send variable data to a script running on another session, and receive variable data from a script running on another session.

A security-rich session manager

IBM Session Manager provides a password- or passphrase-protected single menu from which users can access virtually all applications running on any z/OS machine in your network. Mixed case passwords and passphrases, and a change facility for passwords and passphrases can strengthen the user's ability to manage security. The Extended Login Facility (ELF) allows automated sign on from any workstation, without the user having to enter a user ID/password combination.

Support for passphrases of up to 100 mixed case, alphabetic, numeric, and special characters, is new in IBM Session Manager V3.1. Passphrases, also known as *password phrases*, allow for an exponentially greater number of possible combinations of characters than do passwords, making them much harder to guess or to attack.

A user ID can have both a password and a passphrase. The same user ID can be used both for existing applications that accept an 8 character password and those that take advantage of the new passphrase infrastructure provided by RACF or equivalent vendor products.. This support is intended to help to improve system security and usability, and to facilitate the implementation of demanding compliance requirements.

With IBM Session Manager, you can help reduce the cost and effort associated with secure system access for your users, assist help-desk and operations personnel to view and resolve problems more effectively, and increase user productivity and efficiency in the process.

Easier operations with CICS Explorer

The IBM Session Manager plug-in for the CICS Explorer—the new face of CICS–is new in this release and makes it even easier for you to manage your Session Manager environment. The CICS Explorer enables users with broader and less-specialized skills to access the power of Session Manager, and deliver additional value when it is used in conjunction with CICS Transaction Server and IBM CICS and Problem Determination tools.
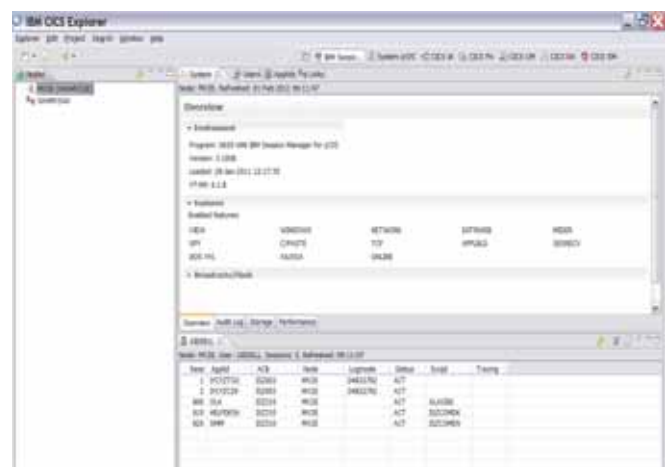

Figure 2 Session Manager plug-in for CICS Explorer

The plug-in (see Figure 21) provides some of the operational capabilities previously available only in the ISPF/ TSO interface, including:

- User, Session, and Sysplex views

- Broadcast facility

- Operational level agreement (OLA) member update (member editing is not yet implemented)

- Configuration update

- User Exit update

- Security Refresh

- Administration commands: Dump and Shutdown

- User menu commands: Display Current Sessions, Send Message, Cancel, and Trace

The Session Manager plug-in also includes an integrated User Guide and context-sensitive help.

Customers with a Session Manager V3 license are entitled to download and use IBM CICS Explorer without needing to have a license for CICS Transaction Server.

The CICS Explorer provides a common, intuitive, Eclipse-based environment for administrators, system programmers, and operators, with task-oriented views that provide integrated access to a broad range of control capabilities. It is also an integration point for CICS TS, CICS Tools, CICS TG, PD Tools, and Rational® Tools, and it is extensible by ISVs, SIs, and customers using the Software Development Kit (SDK).

Highly available access

Even with the superior reliability of IBM System z®, chance failures can occur, however infrequently. Previously, if a failure occurred to the system hosting IBM Session Manager, or if the system needed to be quiesced for maintenance, your users would need to re-establish their application sessions.

Now, the high availability and near-continuous operations support in Session Manager V3.1, together with the Coupling Facility in an IBM Parallel Sysplex environment, means your users simply reconnect to Session Manager and all application sessions are recovered automatically, minimizing lost time and reducing the risk of data loss (see Figure 32). As users connect (or reconnect) to Session Manager, the Workload Manager (WLM) balances the distribution of users and sessions across available Session Manager instances.

Multiple Session Manager instances operating in a sysplex can use Session Manager Sysplex Networking to enable a number of facilities such as automatic user reconnection, sysplex group-wide BROADCAST and MSG commands, and sysplex menu provide a single-system view across the sysplex group. Sysplex panels are provided to enable the user to display users and nodes within a sysplex group, to enter sysplex group commands, and to view and navigate the sysplex group audit log.

Other facilities that support operations in a Parallel Sysplex environment include workload balancing, configuration sharing, and sysplex group audit log.
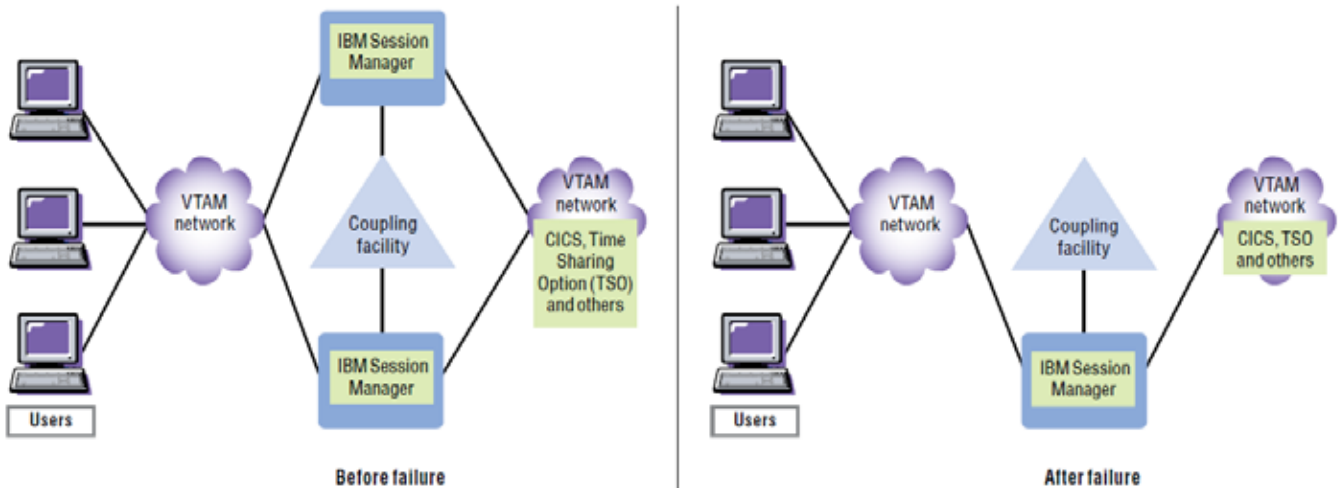

Figure 3 High-availability configuration

Help Desk

This Help Desk facility provides help desk and service desk personnel with quick access to information about session manager users. The Help Desk facility provides a list of users that can be selected individually with rapid access to Session Manager commands such as Query, Message, Spy, or Cancel. The Spy facility, which enables help desk and operations personnel to easily view user problems, can help to reduce cost and effort associated with Incident Management. Additionally, it offers centralized user ID administration and the ability to broadcast messages to users.

Comprehensive features

IBM Session Manager includes a broad range of other features to meet your business needs.

- Self-administration capabilities that enable authorized users to customize the appearance of their IBM Session Manager menus.

- Dynamic menus based on definitions in an external security manager. You can use these menus to migrate users from other session-management solutions more easily, using existing security manager profiles. The ability to leave undefined resources hidden enables IBM Session Manager resources to be defined in advance, but not exposed to potential users until required. The ability to use the VTAM application identifier (APPLID) in resource authorization provides a consistent naming convention within VTAM and IBM Session Manager.

- The ability to hide menu entries so that they are invisible to unauthorized users.

- Batch administration that enables you to administer IBM Session Manager through a batch job, using the same application programming interfaces (APIs) provided for online administration.

- Multiple log on capabilities that allow users to log on to multiple IBM Session Manager terminals, and that uniquely identify the user as accessing each terminal by a 4-character qualifier.

- Command and application exits that process all inbound commands and data streams before they are acted upon or displayed at your users' terminals. These exits enable users to seamlessly switch between applications within the IBM Session Manager environment.

- The Clear key that can be used as a menu escape through the IBM Session Manager network data minimizer (MISER) function.

- An escape sequence that can be passed to an application. When a menu escape key is pressed twice within a predefined time, the first escape returns to the menu as normal. The second escape returns the screen display to the session, and sends the escape command to the application.

- Disable start script capabilities that enable an individual, authorized user to disable the session start script function.

- An escape sequence or program function key that enables users to switch directly from a current active session to the last active session. This capability optimizes efficiency by reducing the number of keystrokes necessary to move between sessions.

- The ability to associate a user with multiple profiles. This can be useful, for example, for hierarchical roles: a manager might have access to all profiles, a supervisor to a select few, and a worker might have single access to the profile related to his or her specific job function.

- Duplicate session removal that enables sessions with the same session type to be eliminated from the user's menu, which complements the multiple profile capability.

- A list of user-authorized commands that is now optionally available on the system-management menu enabling them to be accessed in the same way as any other session.

IBM Session Manager is fully internationalized and all host and plug-in panels, scripts, text, and messages have been translated to Canadian French, German, and Japanese.

A choice of supported networks

Most session-management solutions provide access only for VTAM networks through Systems Network Architecture (SNA). IBM Session Manager also delivers consistent, security-rich entry to multiple, simultaneous mainframe applications for TCP/IP networks. Server support for TCP/IP uses a Telnet application server through the TN3270 protocol. Client support is available through the Telnet TN3270, VT100, and VT200, American National Standards Institute (ANSI) protocols or the network virtual terminal (NVT) service.

Telnet and TN3270 support provides access to remote applications running on any host connected over a TCP/IP network. It allows an IBM Session Manager user to have one or more TCP/IP Telnet client connections that show as conventional, configurable IBM Session Manager sessions to coexist with any other conventional sessions. A TN3270 session appears identical to a conventional IBM Session Manager session.

For users of IBM Session Manager running TCP/IP interfaces, TN3270 server support provides a more efficient, alternative method that also enables users to operate outside the VTAM environment. With this support, TCP/IP users running TN3270 can connect directly to an IBM Session Manager logon or menu panel. IBM Session Manager then acts as a TCP/IP Telnet server.

Access your entire network from a single station

The IBM Session Manager networking component permits communication among tasks running on two or more IBM Session Manager instances. To take advantage of the single-menu monitoring function, you must define each system in the network as a node and have IBM Session Manager running in each node. Then, you can access all applications running on any z/OS application in your network.

Network communication is possible using intermediate nodes, as well as adjacent nodes. If there is a choice in routing, the shortest route is always used. As soon as a link to another system is activated, the initiating system automatically determines whether other systems are accessible in the network.

Optimize data-stream transmission

With the IBM Session Manager MISER function, you can compress both inbound and outbound data streams. Because it transmits only changes made to the data, this function helps reduce the amount of data traffic to and from applications.

By eliminating the transmission of unchanged data, MISER can significantly increase network throughput, decrease network congestion and resolve bottlenecks—all helping to optimize network performance.

Gain more flexible functions through the script facility

The IBM Session Manager script facility performs a wide variety of functions. Scripts can fall into one of the following categories:

- *Session* scripts relate to a specific application session or session parameter, and can communicate data streams to an application automatically.

- *Exit* scripts can run in place of many of the exit points of the IBM Session Manager user exit.

- *Command* scripts can run in place of commands defined by IBM Session Manager commands or in place of IBM Session Manager logic to initiate a command.

- *Windows* scripts are not session-specific, and you can view several active sessions simultaneously.

- *Application-builder* scripts have special parameters that enable you to selectively combine output from multiple sessions and present the output on a single panel. Or you can use output from one or more sessions as input to any other sessions.

IBM Session Manager variables are used extensively in panels and scripts. Many variables are supplied, and a user can also install and define personal variables. The panel and scripting language includes commands that allow you to add logic to the scripts.

You can pause a script until certain output is received from an application. You can make continuation of the script conditional. You can also map input from the terminal into variables and pass it on to an application or to another script.

Improve user support and training

IBM Session Manager includes a unique monitoring function, the Spy facility, which allows an authorized user to simultaneously view the screen contents currently displayed at the terminal of another user. Designed for users with high-security clearance—such as system administrators, network controllers, or technical support staff—the Spy facility also enables service desk and help desk personnel to troubleshoot and diagnose application problems. This facility is particularly helpful when your technical support personnel and users are at different locations. Your technical support staff can use the Spy facility to view a screen display of the network to increase problem-determination efficiencies.

With the Demonstration facility, you get the education and conferencing capabilities to allow up to 999 users to participate in a single, centralized session while the record-replay facility allows users to capture session details for future viewing and use them as educational tools. With additional commands available to help monitor terminals on which users are viewing the demonstration, IBM Session Manager gives you a simple, cost-effective method to train employees in new skills.

Support staff can use captured sessions to solve problems, particularly when helping users in remote locations. The dump and data-stream analysis replay format can be particularly helpful in solving complex problems. Detailed examination of buffer control and attribute bytes allows you to pinpoint problems more accurately so you can fix them faster, the first time.

IBM System z tools — your pathway to success

IBM Session Manager is a part of an extensive portfolio of IBM System z tools, including CICS tools, problem determination (PD) tools, application development tools, and data management tools. The tools support the entire application life cycle, which helps you to build, test, deploy, and manage enterprise solutions. As a result, you can make the most of your System z platform investments and take advantage of the latest functions introduced in CICS Transaction Server, Version 4.

The comprehensive portfolio of CICS tools offers you the opportunity to realize the full potential of your CICS systems, whatever your business strategy. You have the potential to maintain and manage your core CICS applications more easily and at a lower cost. CICS tools enhance IBM service management initiatives to optimize IT processes, maximize CICS system availability, reduce total cost of ownership (TCO), and transform CICS applications to achieve greater business flexibility. Moreover, in today's world of increasing governance, CICS tools can help to meet growing demands for reporting and audit compliance, and improve control over CICS runtime environments.

All IBM CICS, PD, and application development tools support the latest releases of CICS Transaction Server.

For more information

To learn more about IBM Session Manager for z/OS, Version 3.1, contact your IBM representative or IBM Business Partner, or visit:

ibm.com/cics/smanag

To learn more about other IBM CICS Tools, visit:

ibm.com/cics/tools

IBM Session Manager for z/OS, Version 3.1 at a glance

Hardware requirements

IBM Session Manager V3.1 can run on any IBM System z machine on which a required operating system and other required software are installed and running.

Software requirements

Session Manager for z/OS requires z/OS V1.9, or later.

The product functions in the VTAM environment of the operating system.

IBM CICS Explorer and the IBM Session Manager plug-in are supported on the following platforms:

- Microsoft Windows XP 32-bit
- Microsoft Windows Vista 32-bit
- Microsoft Windows 7 32-bit
- Microsoft Windows Server 2003 32-bit
- Microsoft Windows Server 2008 32-bit
- Red Hat Linux V5 32-bit

Full details of the software requirements IBM Session Manager can be found at:

ibm.com/cics/smanag/requirements

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