

SecureAgent Software®

White Paper

SuperVision™

Enterprise Management Suite

Patented & Patent-Pending

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NOTES

OVERVIEW

Developed by SecureAgent Software, SuperVision is a Data Center Management Suite currently in use in some of the largest data processing centers, service management centers, and corporations in the world. Based on the Windows NT[®]/2000/XP operating system, SuperVision offers point-and-click, multi-tasking functionality in ONE software platform.

CONSOLE CONSOLIDATION—A SuperVision PC actually replaces the system or hardware console. It allows multiple and intermixed operating systems to be monitored, and controlled, from a single screen—z/TPF, z/OS, z/VM, z/VSE, AS/400, UNIX, Linux, and OS/2. Use SuperVision to streamline operations and cut costs by reducing the overall number of terminals. Better utilize personnel by allowing them to manage message traffic on multiple systems simultaneously. Reduce downtime with a management tool that offers both emulated screen and scrolling message history. SuperVision generates extensive, searchable history logs—EVEN DURING IPL.

AUTOMATION—The Data Center Management Suite also includes a stand-alone editor that works in conjunction with SuperVision and is specially designed for automating cross-platform and cross-system tasks quickly and easily. Create keywords that trigger Shutdown-Restart-IPL sequences, launching applications at a scheduled time (such as payroll), Power-On-Reset, message coloring, immediate paging of personnel, and automatic tape changes... just to name a few. SuperVision is even capable of initiating IPL automation, since it resides “outboard” of the host operating system.

SECURE REMOTE ACCESS—In addition to consolidating system control and automating both scheduled tasks and event responses, SuperVision allows you to DO IT ALL REMOTELY. Access a SuperVision PC, and the systems connected to it, from anywhere in the world using a TCP/IP network (such as the Internet, leased phone lines, or organizational intranets) and our patent-pending security. The SuperVision Data Management Suite contains a module that allows you to tightly control remote user access, while extensively encrypting data transfer. This means any task you can perform from the local terminal...you can perform securely from home, another office, an airport, or anywhere in the world!

With CONSOLE CONSOLIDATION, AUTOMATION and SECURE REMOTE ACCESS capability all wrapped up in one software package, it’s easy to see why SuperVision has been the leading choice for meeting information processing and remote access needs.

Reduce downtime, increase efficiency, and cut costs with SuperVision.

INTRODUCTION

With more than two decades of experience in automating mainframe operations, the creators of SuperVision have seen a great deal of change in the communications industry—even introducing many of those industry-shaping innovations themselves.

From its beginnings as the pioneer automator of commercial TPF systems, SuperVision has developed into a sophisticated, yet functional management system currently in its sixth generation of servicing high-speed communication industries and automating data processing. It has continually met the needs of a changing industry with innovation...

- **expanding platform support** to include intermixed z/TPF, z/OS, z/VM, z/VSE, UNIX OS/400, OS/2, and Linux environments; as well as VT100 protocol, all from a single PC screen
- **operating multiple systems from one common platform** and controlling all with one common user skill set
- **providing access to your system, from anywhere** in the world, using the **highest levels of security available**
- **reducing downtime and recovery time** by allowing off-site technical support to immediately access current history, view screens simultaneously with the operator and trouble-shoot a distressed system quickly—EVEN DURING IPL FAILURE
- **automating cross-platform and cross-system** tasks quickly and easily, including Shutdown—Restart - IPL sequences, and remotely administrating automation routines
- **alerts** via SNMP, SMTP e-mail, interactive Dialogics voice telephony, and paging
- **enabling thorough automation testing and operator training** without jeopardizing live operation or development environments
- **incorporating proven industry standards**, such as the Microsoft® Windows NT, 2000, or XP operating systems and Visual Basic® programming language
- **securing fall-back protection** through a product that works reliably and effectively

In the following sections, you will discover how SuperVision is equipped *and ready* to provide your company's operations team with system consolidation, task automation, secure remote access, and the profitability these enhancements yield.

For more information, please visit our Web site at www.supervision.com.

CONSOLIDATION: MULTI-SYSTEM / MULTI-PLATFORM MONITORING AND CONTROL, FROM ONE PC

The cornerstone of SuperVision's long-running success has been the ability to bring many systems, running many different operating systems, together onto one PC screen. From here, ONE OPERATOR can monitor all of them simultaneously, send commands, and respond to particular messages using one operating system and one software package.

While other methods of consolidation require multiple operating systems to control multiple systems, SuperVision uses ONE INDUSTRY STANDARD PLATFORM—Microsoft Windows NT, Windows 2000, Windows XP—to successfully consolidate systems. This allows not only skill set consolidation, but also more efficient operations and easier training.

Data from the consolidated mainframes can also be distributed to multiple operators using one operating system and one software package—enough flexibility to adapt without major system modifications or extensive retraining, and enough functionality to let you configure highly efficient workstations.

Multiple Simultaneous Connections

On a single PC screen, SuperVision allows you to simultaneously display, monitor, and manage TPF, z/OS, VM, VSE/ESA, OS/400, UNIX, Linux, and OS/2 operating systems. It functions with IBM®, Amdahl, and Hitachi mainframes, mini-computers, and CMOS architecture for operator consoles.

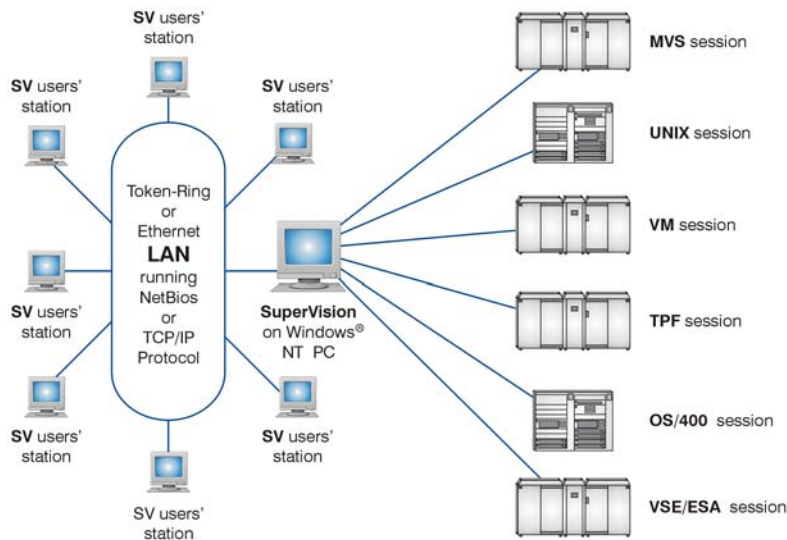


Figure 1: SuperVision Incorporated into a LAN Configuration

SuperVision can display and act upon messages displayed through that console connection. This "outboard" implementation is accomplished without any host-resident programs or modifications, and connection to any of these mainframe hosts can be remotely established (via dial-up or LAN) or locally attached to a SuperVision workstation.

(A streamlined version of SuperVision, called SV Lite, also is available for the Windows 98 operating system).

A local SuperVision PC workstation, which is a standard PC running Windows NT, Windows 2000, or Windows XP, uses existing hardware cables to connect to a host processor as a system console. Multiple workstations can then be connected via a Token Ring or Ethernet LAN, making all systems accessible to each workstation on the LAN.

Any one connection to a host, such as an z/OS console connected by COAX or TN3270E, can be made available to everyone on the LAN. Your operator, system programmer, and operations manager can see the appropriate console and browse back through the log with the click of a mouse. Your systems support staff can see the master console from their workstations. This capability is also true for any host sub-system such as CICS, IMS, NetView, TSO, etc.

Other systems that have ASCII-to-terminal ability can be connected to the SuperVision workstation through the use of COM ports. They may include DEC, AS/400, UNIX, HP, NCR and Linux. Once the ASCII messages are provided to SuperVision, they can be accessed through other terminals on the LAN also running SuperVision.

Multiple Consoles Displayed at a Single PC

Multiple host systems may be connected to each SuperVision workstation, with each host having its own "window." An operator can display multiple "windows" on the PC screen, and have access to data from:

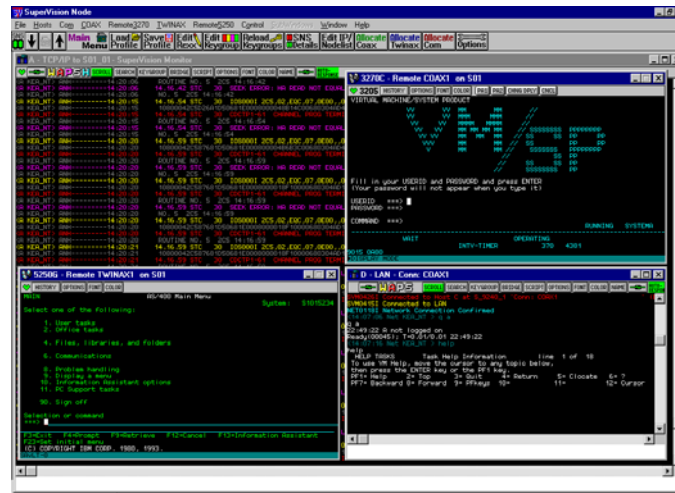


Figure 2: TCP/IP Remote, Local LAN, 3270 & 5250 Connections Displayed in the SuperVision Window

- 250 - Scrollable Sessions (through which local or remote connection is established)
- 250 - 3270 Sessions
- 250 - TN3270E Sessions
- 250 - 5250 Sessions
- 250 - VTXX Sessions

High-Volume Message Handling

In addition to the large number of separate connections, SuperVision can also handle excessively large message traffic. During the course of a rigorous and consecutive 24-hour destruction test, SuperVision successfully handled over 15 million average-length messages, a number that far exceeds the data processing requirements of most systems.

Supporting UNIX

In addition to local and remote 3270, TN3270E, or 5250 sessions, SuperVision provides connectivity to multiple UNIX systems, via Ethernet or serial port, through as many as 250 different windows. It utilizes standard telnet or RS/232 connections between these systems.

Figure 3: UNIX system connectivity WITHOUT SuperVision

Without SuperVision:

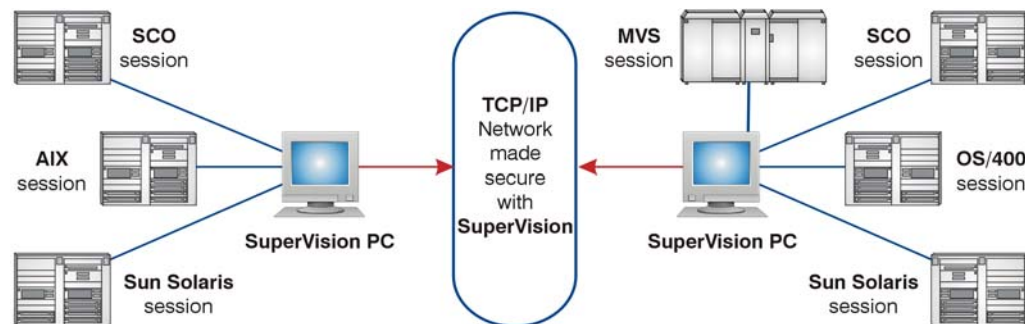
- (1) Connections may be established only 1 at a time.
- (2) Telnet and FTP functions across remotely connected systems are NOT SECURE.



Figure 4: UNIX system connectivity WITH SuperVision

With SuperVision residing “outboard” on a PC:

- (1) Connection can be established among different versions of UNIX.
- (2) As many as 16 different connections can be established simultaneously.
- (3) Remote connectivity to and from UNIX systems becomes secure, including telnet or ftp data transfer and connection between UNIX and other operating systems supported by SuperVision.
- (4) No additions to the UNIX box are required and implementation does not disturb the existing code.



ISA/PCI Adapter Support

SuperVision supports use of a high-speed **IBM PCI Adapter**.

With PCI exhibiting a 132 MB per second peak speed, it is certainly an attractive high-speed option, and one which SuperVision users will be able to easily implement for a significant increase in message handling efficiency.

Graphical User Interface

Utilizing a graphical user interface (GUI), SuperVision allows the operator to work in a mode that is best suited to his needs. Features include:

- Scalable, moveable windows
- Changeable fonts
- Adjustable background and text fonts
- Color-categorizing and displaying of messages
- Mouse-clickable, drop-and-drag control
- Setting and saving of workstation profiles

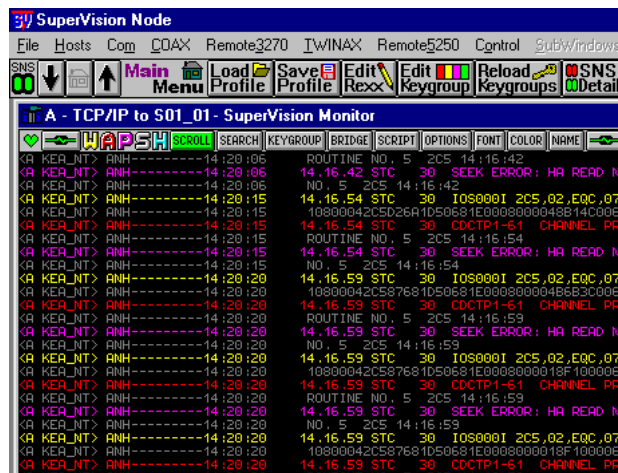


Figure 5: Sizeable Windows, Colorized Messages and Clickable Task Bars

Each workstation can be personalized for the number and type of connection windows, the fonts displayed in each window, the colorization of messages in each window, the size and position of each window on the screen, and the automation-triggering keywords that are enabled for each host session.

Reading and Writing the REXX Language

The procedural REXX language was developed by Michael F. Cowlishaw of IBM, UK and has been adopted as the Systems Application Architecture (SAA) standard. Initially available under IBM's VM operating system, it is now widely utilized across multiple platforms such as z/OS, UNIX, MS-DOS, VAX, OS/2, and OS/400. Distinguishing itself by its speed of development and ease of operation, REXX has become the standard procedural language that:

- is a non-proprietary, people-oriented language
- allows you to automate any response
- provides true multi-tasking

Designed to speed the automating of operating system command sequences, REXX's straightforward syntax allows even inexperienced users to write their own custom programs easily.

SuperVision has taken advantage of REXX's power and versatility for developing automation software by fully integrating REXX into the product. By doing so, a seamless console automation platform is created. With REXX programming skills readily available within an enterprise, there is no requirement to provide a specialized skill set.

In addition, a large number of extensions have been made to standard REXX within SuperVision specifically to facilitate automated operations, including an Automation Rules Editor and a REXX Editor.

SECURE WORLDWIDE REMOTE ACCESS: INCREASING MOBILITY AND REDUCING DOWNTIME

Local area networks extend your scope of operation into the next office and down the hall, but what about sales staff on the road? Satellite offices in other cities? Commuting employees? Technical support that requires hours of travel time to reach you, should a system go down?

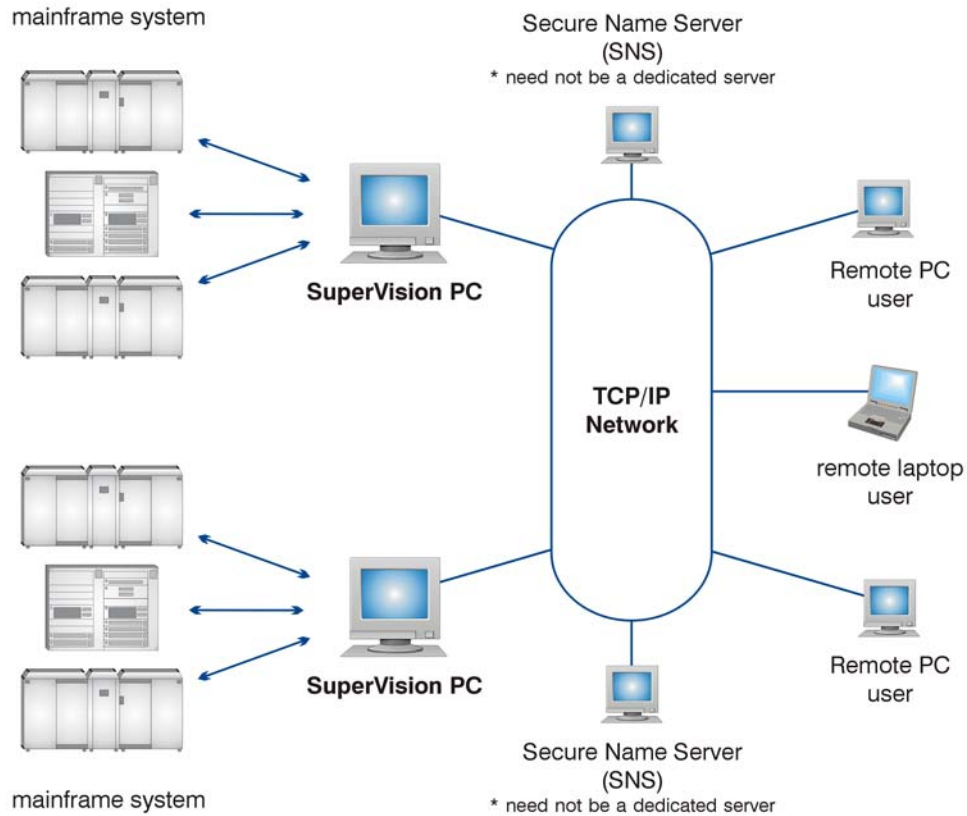


Figure 6: Secure Remote Connections to Multiple Mainframe Sites

SuperVision enables remote users access to tap into a mainframe...without ever compromising system security, and without spending a fortune to get it done! SecureAgent Software is the company making it all possible.

Mobility with Security

In addition to enabling multiple and varying connections over a LAN, SuperVision gives you the power to safely access your systems from anywhere in the world, using a PC or laptop, and access to any TCP/IP network (such as the Internet, an organizational intranet, or virtual private networks).

By equipping our data center management tools with a module called **SecureAgent®**, SecureAgent Software creates a protected environment in which your company can move and grow. It provides programs having remote connectivity with:



- (1) the ability to **communicate over any TCP/IP network protocol**
- (2) the most **extensive level of security** available

This enables technical support and other employees to telecommute and be covered during leave-time.

All of this helps to reduce significantly the time required to evaluate and resolve system problems. Using SuperVision's enabled programs, support staff can utilize history files and Instant Replay screens to get your system up and running, regardless of location and proximity.

SuperVision increases mobility without jeopardizing system security. It also provides a secure, cost-effective alternative to expensively leased phone lines and non-encrypted dial-up/dial-back procedures with costly long distance charges.

Remote Troubleshooting

If an operator attempts to initiate IPL of a mainframe in your company's system and problems occur, a second attempt is often made. When this fails, the chain of events that follows includes a request to technical support for a service call, and users that wait. Questions must be answered about why the system is down, and users must wait. A technical support engineer physically travels to the site, be it across town or across the country, and still, the users wait.

Meanwhile, productivity is lost, customer service deteriorates, travel expenses are incurred, and profits your company should be generating go out the door.

But what if...When IPL fails, SuperVision immediately pages technical support—even though the host system has not come online! What if an engineer, no matter what his location, were able to log on to the system through a secure connection? He accesses a history of what occurred prior to and during attempts to IPL, and even contacts additional engineers who also log on and view the same information at the same time—enabling a collective analysis of the problem. Modifications can then be made to get the system on its feet and put operators back to work.

The problem has been resolved much faster, downtime is minimal, technical support never had to make an on-site service call, and your company saves money.

Members of the technical support staff need to be contacted immediately when a problem occurs and be able to quickly access system information, including the history of a system having a problem. These engineers need secure connections from wherever they may be, and they should be able to access the system *while* other engineers and operators are also connected, allowing for conferencing and discussion among multiple resources. Finally, support staff members need a way to securely enter modifications into the system and resolve the problem.

What they need is SuperVision.

The following sections illustrate troubleshooting needs from the perspective of technical support. They also show how every innovative aspect of SuperVision can be used to meet the needs inherent in speeding system recovery time and decreasing system outages.

“I Need to Know About a Problem Quickly”

SuperVision can generate alerts based on any system condition. These alerts can be issued via SMTP e-mail, SNMP, pages, and interactive Dialogic voice telephony.

“I Need to Remotely Access the Distressed System”

SuperVision gives you the power to safely connect to your system from anywhere in the world. It increases mobility without jeopardizing system security—allowing off-site personnel to reach a distressed system more quickly, and without substantial cost.

- **UTILIZING TCP/IP NETWORKS**

By supporting communication over the TCP/IP protocol, SecureAgent allows the user to connect with a mainframe system over a variety of network configurations, whether your choice for remote access is:

- a leased phone line
- the Internet
- an organizational intranet
- a virtual private network (VPN)
- use of a dial-up/dial-back procedure

Your networking options may also include dial-up Internet access—that, when fortified with SecureAgent, creates a highly protected, cost-effective alternative to expensive leased phone lines. Internet connectivity incurs significantly less cost compared to leased lines and the cost of long distance charges associated with dial-up/dial-back procedures.

It will allow your company to create its own virtual private network (VPN), ensuring that authorized users worldwide can access the network using a phone and laptop PC, and that data cannot be intercepted.

This broad range of networking choice and connectivity means technical support staff can quickly access a distressed system from their office, home, an airport, another customer site—any remote location—using a laptop PC and cellular phone.

- **SECURITY IS THE KEY**

What if a laptop were to be lost or stolen? Would this compromise the security of the system?

No. Through its SecureAgent encryption and user-authentication module, SuperVision utilizes extraordinary levels of encryption, and a patented connection procedure, to establish remote connection.

Encryption	SecureAgent provides both the extensive encrypting and decrypting of data that travels across a TCP/IP network.
User Authentication	SecureAgent includes a patent-pending connection procedure that maintains system security even in the event of a lost or stolen remote machine.
Secure Name Servers	SecureAgent enables a Windows NT/2000/XP Server to act as a controlled-access data warehouse, which provides continually updated network address and operating status information to authorized users.
Secure Programs	SecureAgent also provides Visual Basic programming and OCX controls that allow secure file transfer, telnet, monitoring and remote control of any SecureAgent-enabled Windows NT/2000/XP server.

Encryption and User Authentication

With SecureAgent, you get the most secure remote access available. Two security features are built directly into SecureAgent and are always implemented when remote connections are requested.

1. Extensive levels of **Encryption** are applied to all data transfers.
2. **User Authentication** must occur before the connection will be established. This requires the user to enter a unique ID and password that must be approved by the target machine. As part of a patent-pending logon procedure, user combinations are **REVOCABLE** by a remote administrator.

One type of authentication is a fixed combination that must be validated. This requires both a user ID and a password, which have been registered with SecureAgent for the remote machine, to be confirmed on the target machine before the request for connection is honored.

NOTE: Both user ID and password may be changed either locally or remotely by an administrator at any time.

Secure Name Servers (SNS)

When establishing a remote connection, the user must provide a network address of the machine with which they would like to connect, in addition to a valid userID and password. This can pose difficulty over some TCP/IP networks, where such addresses can be randomly and dynamically generated each time a machine logs on. After all, how can someone connect to a machine whose address is continually changing, and often unknown?

The developers of SecureAgent have taken this potential remote access pitfall, and used it to add yet another level of security to remote connections. Unauthorized users have a more challenging time breaking into a system they can't locate. In order to prevent approved personnel from facing the same challenge; SecureAgent Software has created the Secure Name Server (SNS) to work in conjunction with SecureAgent in establishing remote connections.

SecureAgent running on a Windows NT/2000/XP server enables it to operate as a Secure Name Server (SNS), which acts as a continually updated address-and-status database. This database is the key to

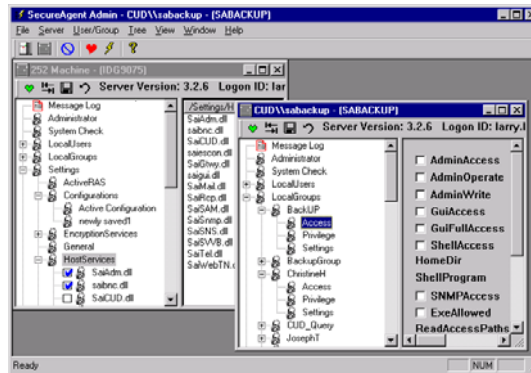


Figure 10: SecureAgent Admin Program

“I Need to Gather System Information and History”

In addition to enabling access to multiple mainframes that are running multiple platforms, SuperVision also provides supplemental tools that aid in troubleshooting system error.

- **EXTENSIVE, SEARCHABLE LOG FILES**

Each SuperVision PC workstation has up to 24 hours of console log data available on-line (with previous days stored on disk and limited only by available disk space). That data can be qualified, separated, and displayed in sub-windows dedicated to specific messages. These normally pertain to general operation, errors, and system responses. However, SuperVision’s log also captures the crucial messages that are generated prior to and during Initial Program Loading—providing a valuable tool for troubleshooting an IPL failure.

Because SuperVision resides separately from the mainframe, messages that do not go into the host system log are captured and written into the SuperVision log, including messages that are generated prior to and during IPL. This extensive and searchable history provides technical support engineers with a way to evaluate the circumstances surrounding an error, plus what occurred during an unsuccessful start-up.

- **TROUBLESHOOTING WITH EMULATED SCREENS**

In addition, SuperVision offers what no other service package does... the patented ability to browse through captured 3270, 5250, and VTXX-emulated screens. Now technical support can see a console exactly as it was displayed for the operator when a specific system error occurred. One engineer, or several, can scroll back and forth through this history to view the exact point at which the error occurred. *And* the most recent history is loaded first, so the user does not waste time digging through information that may not pertain to the immediate problem.

“I May Need to Conference with Other Personnel”

- **SIMULTANEOUS ACCESS TO THE SAME INFORMATION**

Good communication between remote engineers and the local operator attempting to respond to a system error contributes to fast, effective problem resolution. SuperVision enables both remote users and local operators to view the same emulated and log history simultaneously—without conflict, so multiple resources can be brought to bear on a problem.

For example: while viewing an emulation of the operator’s console, an engineer can evaluate the situation and talk the operator through corrective measures step-by-step. A specialist in Atlanta can log on to a system already being remotely evaluated by an engineer in Chicago as well as an engineer in Dallas, thereby pooling resources without physically relocating people—saving time and expenses.

“I Need to Implement the Solution”

As outlined in CONSOLIDATION, SuperVision provides access to multiple system consoles from one PC screen. The information displayed in each connection window is passed as it is generated, and all emulated screens are exact replications of the system terminal.

- **EMULATED SCREENS**

SuperVision’s ability to emulate the dumb terminal of a local coax, twinax, or VTX connection is useful for viewing several types of screens, including master console, hardware screens, operating system screens, and application screens.

A field engineer often requires wide access to all aspects of a computer system in order to resolve problems and reduce downtime. SuperVision provides this access by emulating all types of system screens and making them easily accessible to local operators and remote users. The field engineer may access screen emulations from your company’s system (without disrupting operator access to the same screens), enter commands through the emulations, adjust logical partitioning, conference with other users who are simultaneously viewing the same screens, and take necessary measures to get a system back online and resolve the error.

AUTOMATION: STREAMLINING SCHEDULED TASK INITIATION AND EVENT RESPONSE

If you want to streamline system operation with automation without the headaches of major modifications...look no further. SuperVision gives you the tools necessary to:

- Enable an operator to **perform additional tasks**
- Guarantee jobs are initiated **error-free and on schedule**
- Gain a **competitive edge** with better performance
- Create **peace-of-mind**, knowing that the system is up and running efficiently
- Thoroughly **test and train** with our patented host simulator

One of the core features of SuperVision is its ability to respond automatically to any message received from the host system. The built-in Automation Rules Editor, directly accessible from SuperVision, enables you to designate response-sensitive words and phrases, control the color and suppression of messages, and initiate your own REXX or Visual Basic programs—giving you total control over daily operations.

Automation Rules Editor also lets you break automation down into smaller, more manageable pieces. It allows you to create up to 16 independent keyword groups that can be individually enabled to trigger responses, or disabled to suspend sections of a routine without bringing down the entire automation process.

Cross-System and Cross-Platform Integration and Task Scheduling

SuperVision allows you automate cross-system, and cross-platform scheduling. For example, when a task completes on TPF or VM, schedule a task to start automatically on z/OS. This guarantees prompt and accurate job initiation, while freeing operators to carry out other tasks.

Since SuperVision resides on a PC apart from the host machine, it can be easily incorporated into the processing system...running hand-in-hand with existing automation and providing supplemental message capture and response—which has proven invaluable in responding to errors generated during IPL.

Automating Startup-IPL-Shutdown

SuperVision can be configured to automatically:

- perform a Power-On-Reset (POR)
- load host operating systems
- set the Time-Of-Day clock
- respond to any operating system prompts
- launch REXX or Visual Basic executables
- initialize subsystems
- link with any "inboard" automation tool
- initiate and monitor the shutdown of all required tasks
- reset the system
- initiate IPL

all while capturing crucial performance messages. With this broad range of automation capability, it's easy to see how SuperVision can help you achieve complete “lights out” automation, or any degree thereof.

Remote Automation Administration

Because enabling our products to adapt to the customer's existing method of operation is important, flexibility is central to all SecureAgent Software-developed products. This is why SuperVision automation can be used in a number of ways, allowing the incorporation of strategies that help your company achieve optimum operating levels.

One such strategy may be the ability to centrally administer and control automation at remote sites, achievable by combining the above-mentioned automation capability with the power of SecureAgent remote access.

Using the SecureAgent Secure File Manager program, an automation administrator can directly load REXX and Visual Basic executables to an individual remote SuperVision PC, making the programs available for automatic response to the host message stream.

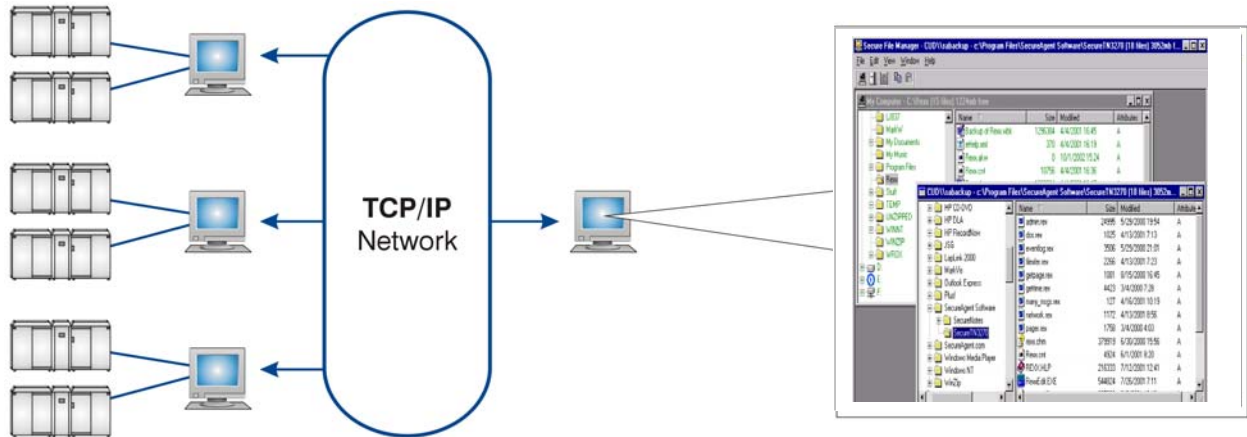


Figure 11: Remote Automation Administration using File Transfer

or

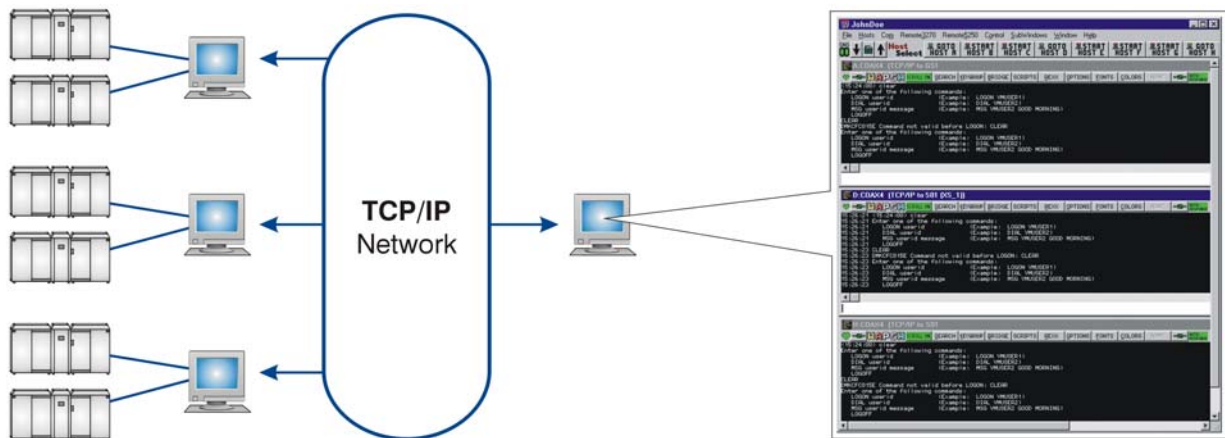


Figure 12: Remote Automation Administration using Central Control through Scrolling Windows in SuperVision

The administrator can control automation of remote sites through SuperVision at a central location. In this case, the administrator establishes a remote TCP/IP connection from a SuperVision scrolling host window to each individual host system. From the administrator's PC, he or she can view each host's activity in its own window, remotely designate keywords specific to the host, remotely launch REXX or Visual Basic programs... all of the same functions which can be automated at the local level.

Thorough Testing and Training

While automation is crucial to increasing efficiency and accuracy, it doesn't have the "human" ability to compensate for programming errors. Therefore, to effectively automate, you need to **KNOW** the routines work. You need the assurance that your automation has been tested to the limits **BEFORE** it's incorporated into normal operations. Regression testing on a system that has been designed for programming development is not sufficient. What about testing response to a hard crash? To restart or shutdown? Can you afford to test these on your development system?

Host Command Simulator

TESTING automation routines, or TRAINING operators, on a system designed for programming development doesn't provide the complete range of message response that you need. That's exactly why the developers of SuperVision have formulated a Host Command Simulator that emulates host activity separate from your live and test systems.

Our patented simulator software runs on a stand-alone PC and emulates a host by generating response messages, non-response messages, and random events. You can connect through SuperVision to the simulator workstation, which replicates the functions of a mainframe console, right down to critical events that would be difficult or unfeasible to generate on a "live" system—such as a hard disk crash or shutdown, restart, and Initial Program Loading.

1. Send commands to the simulator that **THOROUGHLY TEST new automation programs**, without jeopardizing normal operations by using actual live data or interrupting test system development in progress.
2. Create an environment that **THOROUGHLY TRAINS new or existing operators** by allowing them to work through critical situations or new procedures before they are implemented.

What Can It Do?

The Host Simulator can generate all potential messages and situations, even those that may not be feasible to create on an active system. It provides an independent environment for more thorough testing, and makes it easy to test "on-the-fly" changes before they are implemented.

The Host Simulator acts as an effective training device that enables you to orient operators as a group, or individually, on everything from an IPL to fallback procedures. Because the simulator works in conjunction with SuperVision, an instructor can monitor multiple screens at once and see operator training responses as they are entered.

EFFICIENT USE OF HUMAN RESOURCES: EQUALING SIGNIFICANT LONG-TERM SAVINGS

SuperVision provides money-saving benefits at every turn by facilitating better use of people, making their work easier, more effective, and broader in availability.

Better Communication Among Technical Support and Operators

Remote access not only gives technical support the ability to reach a system quickly, but also allows them to download history files—with the most CURRENT HISTORY LOADED FIRST. They can quickly see what has just happened, without being forced to wade through pages of unneeded data.

Field service engineers can also see EXACTLY and SIMULTANEOUSLY the same screens that operators are viewing locally, in the equivalent of video playback. They can call up console emulations in one location and more effectively work through problems with an operator in another site, who is sitting in front of a SuperVision PC displaying the SAME emulation. In addition, they can click back through a history of emulated screens and see what took place before the error occurred.

Coverage without Relocation or Centralization

Personnel who are away from the office can use the remote access feature to telecommute, allowing them to complete their work even if they aren't locally networked to the system. For instance, suppose you have a staff member in one city who will be on vacation or sick leave, but the only person qualified to cover them is at a branch office in another city. Do you incur the time and expense of bringing that person on site? With SecureAgent™ remote access, you won't have to.

The same principal applies to having technical support staff spread all over the country. In times of crisis, you need them to be immediately accessible—and they need to get into the system quickly. In such times, do you uproot and relocate them, and their families, to one centralized facility? SuperVision makes it feasible to accomplish the same ends, without the cost and compromise of forcing personnel to be locally networked.

LEADING WITH PROVEN INDUSTRY STANDARDS: WINDOWS NT[®]/2000/XP AND VISUAL BASIC

By basing SuperVision on the Microsoft operating systems, we have given it the capabilities to achieve the caliber of performance your company seeks.

- **Reliability**
- **Functionality**
- **Speed**
- **Power**
- **Flexibility**

Microsoft Windows NT/2000/XP is the foundation on which SuperVision is based, and it continues to prove itself as an extremely stable platform. NT/2000/XP allows SuperVision to carry out the many simultaneous tasks that hallmark its functionality, while performing with speed in a C2-secure environment. In addition, the installation base for Microsoft operating systems is extensive, with NT/2000/XP the system of choice. We believe this will continue to be the case on a broad scale well into the future.

With a solid Windows NT/2000/XP foundation, SuperVision developers have continued to enhance its flexibility by creating interfaces to Microsoft development software such as Visual Basic[®]. This allows programmers to rapidly produce Windows-based applications.

Development in the Visual Basic[®] environment requires no compromise between performance and productivity, scalability and rapid application development (RAD), local area network (LAN) and Internet deployment models, and in-house or purchased technologies. Most importantly, it allows SuperVision to offer users remote access and automation capability that can be customized to their specific needs.

With the proven longevity of these products, and their continued support in the information processing industry, SuperVision's future of utilizing reliable and innovative Microsoft technology is a bright one.

HARDWARE REQUIREMENTS & IMPLEMENTATION

Listed below are the SuperVision hardware requirements:

- **Processor**—A processor large enough to handle adequately the current and proposed system activity. We recommend the largest Pentium® or equivalent processor.
- **Hard Drive**—A number of variables determine hard drive size, including the number and type of connections to the computer on which SuperVision resides. We recommend 20 gigabytes as the minimum.
- **Random Access Memory (RAM)**—The memory available will determine the speed of operation, so you should include enough RAM to accommodate current and proposed activity. We recommend a minimum of 128 megabytes for Windows NT and 256 megabytes for Windows 2000 and Windows XP.
- **Color Monitor**—SuperVision can display multiple host and history windows, so the monitor should have a screen size and resolution sufficient to accommodate the number of systems to be monitored. We recommend a minimum resolution of 800 × 600 pixels.
- **Keyboard**—Standard PC keyboard.
- **Mouse**—SuperVision requires only a two-button mouse or other pointing device.
- **Operating System**—Microsoft Windows NT, Windows XP, or Windows 2000 (or Windows 98 for SuperVision Lite on a remote PC).
- **LAN Adapter**—Either Token Ring or Ethernet, or a minimum 28.8 kbps modem.
- **Sound (Optional)**—Any model of Sound Blaster® card with speakers.

For **local coax connectivity**, select either the IBM® PCI Adapter or the IBM or Attachmate™ ISA 3270 Emulation Card. Neither is required for remotely connected 3270 sessions.

For **local twinax connectivity**, we recommend the 5250 WinTwin ISA Adapter by Synapse Communications, Inc.

SuperVision provides secure TN3270 and 3215 connectivity via TCP/IP through the IDG 9074® Secure Communications Controller® and other TN3270-compatible control units.

"Outboard" Implementation

Because SuperVision is installed on a PC outside the main processing environment, it can be easily incorporated without disrupting a system's processing routine. There are no host system resource requirements or modifications necessary for installation, and changes in automation requirements can be made in a matter of minutes without host interaction.

This "outboard" placement also creates the ability to capture error messages that may be generated during Initial Program Loading, and prior to sys log—making SuperVision an invaluable tool for troubleshooting IPL failure.

RELIABILITY AND LONGEVITY

In a world in which technology changes daily and software companies come and go, we at SecureAgent Software want you to be confident of two things:

- (1) the **longevity** of our commitment to produce quality data center management tools, and
- (2) the **reliability** of those tools.

Product Maturity

With years of industry use and all the product capabilities mentioned here, it is clear that the maturity of SuperVision lays a strong, supportive foundation for your company as it begins a new century of operation. It is also clear that SuperVision provides reliable backup to primary systems that may still be in their infancy.

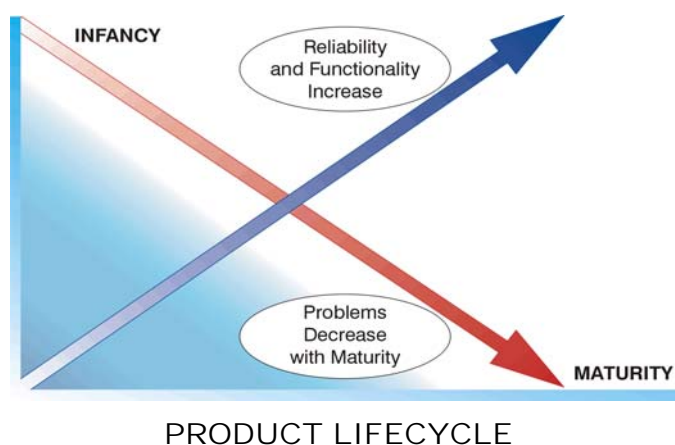


Figure 13: Lifecycle of a Product from Infancy to Maturity

In the lifecycle of a product, its infancy stage is filled with problems and errors; it lacks reliability, and may only allow minimal functionality. As the product matures, those problems are resolved and decrease, while stability and functionality increase.

The key to productive, reliable operation is a mature product. The key to a secure, solid fallback is a mature product—tested by time. SuperVision **is this product**. It is innovative, adaptable, and proven.