

*Tools for System and Application
Management*

by

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IBM PartnerWorld for Developers
IBM ^ iSeries

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Executive Overview - *this needs to be changed to a focus on System Management*

The strategy of IBM® is clearly directed toward e-business — from the highest corporate level to individual brand marketing. In fact, the consensus among corporations all over the world is that e-business is no longer a technology of the future but **THE** technology of today.

Currently, e-business is driving huge network expansion efforts globally, moving economies and influencing national elections. According to PricewaterhouseCoopers (PwC)¹, "Those companies that use e-business [technologies] can leapfrog the competition and achieve sustained competitive advantage. Today's and tomorrow's e-executives need to know how they can achieve similar results." PwC goes on to make three succinct points:

- ✍ e-business is no longer optional! ... e-business will ... become the standard mode of operating ... EVERYWHERE business is conducted.
- ✍ e-business is fundamental to business strategy and process execution.
- ✍ The time for e-business action is now — especially for companies with assets already in place and customers waiting to be served.

Lou Gerstner, chairman of IBM, could not agree more, and has charted a path for the company that clearly leads toward server-centric, thin-client, network computing based on IBM ^s and open, standards-based interfaces. IBM has incorporated Web-enabled technologies into its product offerings and nowhere is this more evident than in the IBM ^ iSeries **brand ¾ a** flagship IBM e-business system capable of handling the demands of e-business as well as modern application interfaces.

This series of six papers is centered on the "pillars of strength" application development and modernization strategy model for applications and systems management. (See Figure 1 on the next page.) Each paper emphasizes a specific category of tools to aid in the e-business transition.

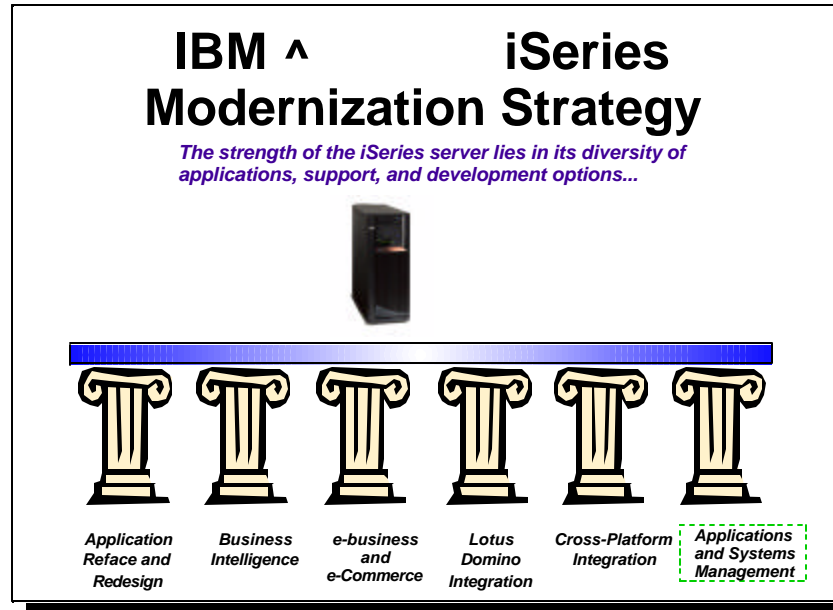


Figure 1 — The six pillars supporting the iSeries Modernization Strategy

iSeries modernization strategy

As complex as application extension and Web-enabling coexistence can seem in planning, it is even more complex when coupled with the reality of diverse internal system platforms and technologies. A few years ago, IBM recognized the potential challenges inherent in e-business transformation and established a modernization strategy to assist iSeries users. As part of this strategy, the AS/400 brand, and now its successor, iSeries, is supported by six pillars, each representing a category of application development. (See Figure 1, above)

The theory behind this modernization strategy is to provide the strength and functionality necessary to catapult iSeries customers into e-business. In fact, iSeries models deliver one of the strongest end-to-end, e-business platforms in the market today. This particular paper focuses on the sixth category, applications and systems management.

- ✍ [Application Reface and Redesign](#) — Tools that provide a graphical user interface (GUI) for existing 5250 applications (whether browser or forms-based GUI) and help redesign existing applications to take advantage of OS/400® features such as Integrated Language Environments (ILE) and DB2® UDB for iSeries.
- ✍ [Business Intelligence](#) — Tools that transform the data of an organization into meaningful business information that can be used to make strategic decisions.
- ✍ [e-business and e-Commerce](#) — Tools that assist in extending core applications to the Web. This can involve the creation of an electronic shopping cart, or can be more complex, involving a complete end-to-end

integrated application from supply chain management to customer relationship management.

- ✍ [Cross-Platform Integration](#) — Tools that help build and manage applications that interoperate across disparate server platforms, databases, and clients.
- ✍ [Lotus® Domino™ and Lotus Notes® Integration](#) — Tools that help build new collaborative Lotus Notes applications and/or to seamlessly integrate Lotus Notes clients with existing iSeries applications.
- ✍ [Application and Systems Management](#) — Tools that make it easier and less costly to manage the system as well as the process of creating applications that run on the system. These tools extend and complement the capabilities of OS/400® security, automate the operations of your iSeries server, streamline backup and recovery, control object distribution, and much more.

IBM supplies various assistance mechanisms to aid iSeries users in the e-business evolutionary process. To name a couple, IBM has created a program called Application Development Tools Network for iSeries. This program promotes a comprehensive listing of application tools available for iSeries servers. In addition, IBM supplies "road maps" to successful migration in this series of papers available at: ibm.com/eserver/iseries/developer/tools/ These resources serve as a guide in determining the tasks that have to be accomplished, the tools that are available, and the strategies that can be followed to move, in an evolutionary manner, toward the deployment of e-business applications to supplement existing line-of-business applications.

Managing IT Resources

Regardless of which path a company chooses to implement the e-business model, carefully managing the IT resources (hardware, software, and networks) will clearly become much more critical to running a successful business. When it comes to managing IT resources, two basic questions are commonly raised from iSeries customers:

- ✍ I only have one or two small systems that seem to run well with no attention, so why should I be interested in systems management?
- ✍ I already use systems management tools to manage my large system(s). Will I need new systems management tools as I move toward e-business on the Internet?

The answer is that as the Internet is used to interface with customers and to run a business. Some changes will be required to the manner in which back office processing is handled today.

To answer the question posed in the first bullet in this section, iSeries users with small systems will find that managing their environments will be significantly impacted as e-business concepts are embraced.

Larger organizations, on the other hand, probably already have a well-honed set of systems management tools in place and are less than thrilled with the thought of change. The truth is that, for these companies, moving to e-business really

does not require the implementation of a whole new way of managing the various systems. However, there are some e-business “survival and success” priorities as they relate to systems management that will need to be considered. (Refer to Figure 2.)

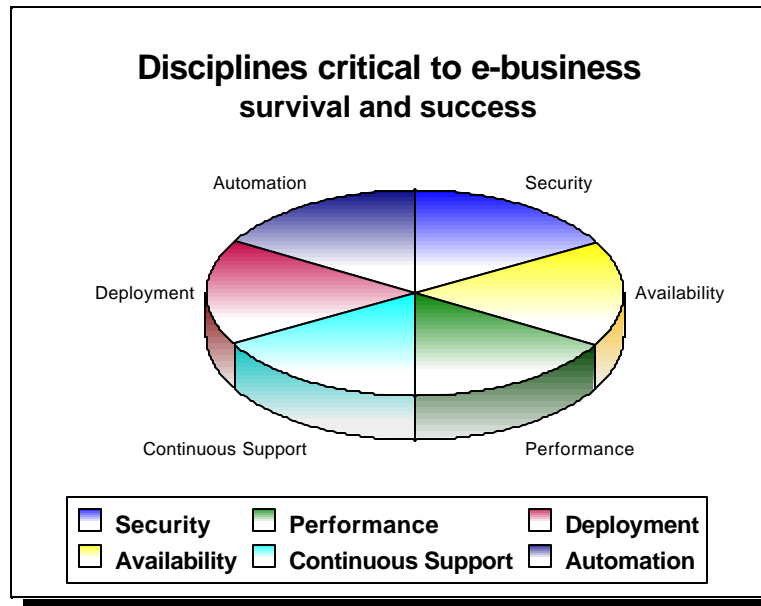


Figure 2 — Managing IT Resources

When looking at the various systems management disciplines, the developer must examine what priorities are important and what disciplines should be addressed.

Security

Because of its inherent nature, an e-business must embrace the concept of supporting Web browser interfaces to its front-end applications. Unfortunately, this requirement for easy browser access can also render the entire IT environment of an organization vulnerable to an intentional attack or inadvertent error. There are four aspects to security that an e-business must consider:

- ✍ **Transaction security** — Online transactions are the lifeblood of any e-business. Usually, these transactions are ultimately melded in with the back-office transaction process that also is applied to more traditionally acquired transactions. Therefore, any security-based systems management tools must be able to ensure the integrity of incoming transactions.
- ✍ **Core business data security** — Web browser access can also mean that outsiders may attempt to change core business data. This means that access to data must be controlled — when they have access to it and what they can do with it.
- ✍ **Privacy protection** — The third aspect of security is that with the Internet's ability to gather information from suppliers or customers. Privacy issues need to be addressed and solved.

- ✍ **Application security** — The fourth aspect of security is that, as business applications interface with Web servers via the public network, there is the possibility of becoming the target of a “viral” attack. For well-publicized reasons, an organization must take all of the necessary precautions to protect itself from these vandalous behaviors.

These four security issues illustrate the need for the integral use of security controls and management tools as businesses today move into e-business.

Availability

Another e-business “survival and success” priority, as illustrated in Figure 2, regards the discipline of availability. Consider the fact that the system(s) must be in operation 24 hours a day, 7 days a week, 365 days a year. In this “always up” environment, there is the inevitability that peak load times will challenge constant availability. Is the staff in place and available for these heavy load times — especially since there will now be load volumes to manage that are outside the traditional work hours of your organization? For instance, there are no holidays on the Internet. The goal is to avoid costly downtime. Routine tasks need to be automated. Tools need to be used to detect pending failures and to have them handled automatically without user assistance if appropriate. Serious errors requiring human experience and intervention need to be routed via beeper or phone to an operator.

Performance

Another area of consideration is performance. The performance impact of the Internet can be significant. The Internet is such a powerful, accessible tool. But to be effective for users, browser response must be fast and easy, and the data must often be real time (product availability, work-in-process status, etc.). Maintaining performance becomes even more complex in an e-business environment. Tools need to be in place, from the beginning, that reliably monitor performance so the IS staff can quickly react to any performance problems.

Continuous Support

Any organization going into the e-business environment must strategize and proactively implement a continuing support initiative. There may be suppliers on the other side of the world that are working on the extranet when you are sleeping! Hopefully, there are users who shop your Web site 24 hours a day. The internal users will begin to work in the off hours more as the Web makes access to their tasks much more convenient. How will continual support for these different groups of people be provided? Will access be provided to a problem-shooting FAQ database? Will trigger points be set up so that the primary staff is alerted via beeper in the case of real emergencies?

Deployment

Deployment is another factor in a successful e-business implementation. Before changes to applications or processes are deployed, there needs to be an understanding of what impact those changes have on the performance workload and capacity. Internet technologies continue to evolve, so make sure that change

management procedures are in place to distribute and trace changes. Changes need to be sent to the right users at the right time.

Automation

By automating as many routine and daily systems management tasks as possible, more time will be free to focus on non-routine tasks. This means there will be more available manpower to address Web user problems, which in turn means that more customers will be able to stay signed on to the Web site because their Web issues have been quickly resolved.

Systems Management Strategy

Today, users are faced with new challenges — moving their businesses to the Internet, expanding their networks, and merging into larger, cross-platform networks. Additional functions are needed to manage these more complex environments. Systems management solutions to address this broad range of iSeries environments are available from IBM and Tivoli®, as well as key systems management partners. Figure 3 on the next page shows a complete set of management offerings available to suit your needs — whether they are basic or very complex.

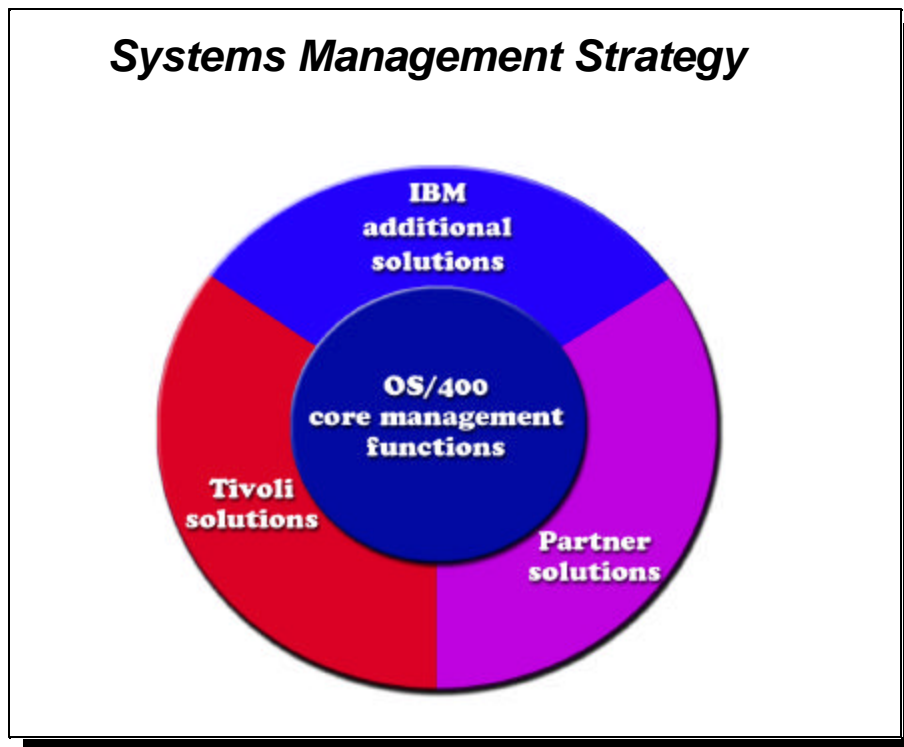


Figure 3 — Components of the iSeries Systems Management Strategy

Because managing applications and data is critical in the e-business world, iSeries servers have tools that are designed with a wide range of key management functions, many of which are integrated into the operating system.

OS/400 Core Management Functions

In addition to operational controls, OS/400 provides a long list of built-in and integrated functions, such as: security, user administration, database administration, performance monitoring, workload management, message management, configuration functions, storage management, problem handling, and much more.

Operations Navigator

A free component of OS/400, [Operations Navigator](#) provides an intuitive graphical user interface to perform these OS/400 core management system functions.

Management Central

[Management Central](#), a component of Operations Navigator, extends these management capabilities to one or more groups of systems. These groups are defined by the unique needs of an organization and can be re-customized at any time. The [Management Central Functions](#) Web site describes the capabilities of this powerful management tool in detail and provides feature demonstrations.

Here is a review of the main features available through Management Central:

✍ **Real Time Monitors** provide the ability to graphically view the real-time performance of a set of remote iSeries servers. Just some of the parameters that can be monitored include: average response times, disk utilization, and CPU utilization. [Additional CPU utilization metrics](#) were added in V4R5 to help manage system performance.

In V5R1, the jobs listed in the monitor can be managed and worked on by integrating the Work Management function. Also in V5R1, the system monitors have been enhanced, allowing greater ease of use in defining how the monitor behaves. See the Management Central Web site for additional information.

Real Time monitors also allows the developer to set and log events based on predetermined thresholds selected when creating the monitor. A threshold is the point at which the operator or an automation routine needs to be involved.

✍ **PTF Management** allows for the managing of PTFs (program temporary fixes) across a group of systems to maintain current software levels across an enterprise. Simplification through Management Central starts with: selecting a particular iSeries model that contains the necessary fixes that have been tested to your satisfaction. Then, use Management Central to send and install fixes, compare and update fixes, uninstall fixes, and so on.

✍ **Inventory Management** provides support for the tracking of all hardware inventory and its related software versions and software fixes. Through the graphical user interface, the developer can schedule regular inventory collections across either a system group or a list of endpoint systems. The inventory is gathered and stored on the central system so that specific information can be easily looked up.

✍ **Remote commands** can be executed against a system. An administrator can use this function in two ways: by selecting a system or group and then

running a command or by creating a command definition for frequently used commands. For example, if administrators have a list of commands that are used regularly to solve specific problems, or daily commands to create reports, a command definition could be used for each command. This helps ensure consistency from day to day. Commands can be set up relative to a particular application and can be scheduled to run across a group of systems.

- ✍ **Packaging and Distribution** provides an easy way to regularly package and distribute program and data information to multiple systems. Distribution is done by using “a package definition” that identifies the list of objects to be sent. Objects and files can automatically be distributed to a group of systems. This is useful for deploying new and updated applications to targeted iSeries servers within a network.
- ✍ **Performance collection control** enables a developer to collect historical performance information on selected categories. The data can be exported to database files.

[NOTE: The fundamental question regards: "When do I use Management Central?" The answer is simpler than many think. Use Management Central to work with networks that contain multiple iSeries servers. However, if the network contains a variety of disparate servers (e.g., iSeries, pSeries and xSeries), consider the benefits of a cross-platform system management tool such as [Tivoli](#) or one of the IBM Business Partners solutions.]

IBM and Tivoli Solutions

In addition to the core management functions, there are applications that offer additional functions such as: [BRMS/400](#) (backup, recovery, and media services), [Advanced Job Scheduler](#), and products from IBM and Tivoli (such as [Tivoli Enterprise](#)) that extend the core systems management functions provided by OS/400. Tivoli Systems, an IBM company, provides management software for e-business infrastructure. Tivoli is a global company dedicated to providing products, services, and programs that enable companies of any size to manage their distributed systems from a single location.

IBM and Tivoli offer application solutions such as: backup and recovery, inventory, scheduling, managing heterogeneous systems, and managing clients.

IBM Additional Solutions — Advanced Job Scheduler

Advanced Job Scheduler from IBM is a job scheduling system that supports unattended operations and automated operator functions. Advanced Job Scheduler has a new, easier-to-use, more functionally rich graphical user interface (GUI) that can integrate with Operations Navigator or Management Central. Advanced Job Scheduler codes allow a developer to quickly describe and set up various job scheduling scenarios. This product can create groups and work with groups. It can submit jobs and groups instantly and runs in a TCP/IP network. TCP/IP connections can conveniently be used for remote job scheduling. Advanced Job Scheduler can also display the status of jobs and create calendars, and much more.

Managing Application Development

Systems management theory and implementation begins much earlier than most would expect. It should begin at the very point of application creation. This is because certain things, such as data and transaction security, are much more tightly ensured when protected at the table definition level. As applications are being designed and coded, issues concerning security, performance, continuous support, and other systems management challenges should be carefully reviewed and protected at the code level.

Building Blocks of Application Management

To control the development process, the developer needs to implement application management techniques such as: change control, application testing, and distribution. Protected development environments also need to be provided for the creation, testing, and deployment of applications on an iSeries server or attached clients. Data needs to be extracted and applications need to be fully tested before they are put into “live” production.

For integrity purposes, **version control** is another area that needs to be addressed. It is, therefore, necessary to impose structure on the developers — that is, they should be required to check in and check out pieces of code for tracking purposes — provided within a team development environment to assist with the workflow.

In controlling all these areas of the application development process, remember that application optimization and tuning is required. Additionally, handling the application distribution process across local or wide area networks, along with the remote install process, is a necessity for implementation. Another developer discipline that must be invoked is that of requiring them to know the kinds of objects needed to manage the development and implementation of an application. These objects will probably include RPG, Lotus Domino, Web, and/or Java components.

Lastly, the developer needs to know the extent of the code distribution. Are there multiples systems? How many systems and what types of systems are there? Will cross-platform tools be needed?

Managing Systems — Day to Day

Thus far, the management of application development with an eye toward considerations that will come into play during the day-to-day systems management task (once those applications are up and running) has been discussed. So, let’s review now those parts of the day-to-day systems management equation that can be automated. Systems management tools today help manage the systems more effectively by routinely (and without your need to intervene) handle many operations (backup, file reordering, and much more). Even the control of many hardware and software functions can be automated. Systems Management tools help streamline the management of IT assets. They

allow the system to react appropriately to specific, predetermined conditions, and the appropriate staff is notified of exception conditions, when necessary. There are many efficient tools to handle mandatory backup and recovery tasks that are critical to every organization. Systems management tools also assist in securing the system from both unintentional application errors and from attack by unauthorized users. There are also Web site analysis and management tools that perform similar automated tasks.

Building Blocks of Systems Management

What needs to be considered before implementing the use of systems management tools in an IT environment? First, make sure the complexities of the systems and networks are known. Systems Management is impossible without a complete understanding of these two key components. There are two other recommendations in regards to analyzing and implementing a systems management solution: a tested backup plan and a recovery plan. A tested backup and recovery plan is imperative. Not just a plan, but a tested plan that has been practiced. Should it ever be needed, this pretested plan will be well worth the time invested.

Be sure to understand what cross-platform requirements your environment demands, if any. Decide whether or not the systems management solution requires an Windows NT node. While many of the tools discussed in this paper support multi-platform systems management needs, the developer needs to clearly and exactly define the dynamics of the system so that the new tools can be effective.

Application Development Tools Network for iSeries

Sorting out the large selection of application development tools can be a daunting task for even the best of developers. The Tools Network identifies and promotes tools to facilitate application development on iSeries. The objective is to keep the application portfolio attractive and current with the latest technology. The Application Development Tools Network for iSeries program was created to not only help developers identify application modernization options, but to recruit and encourage business partners to create advanced development tools for iSeries servers.

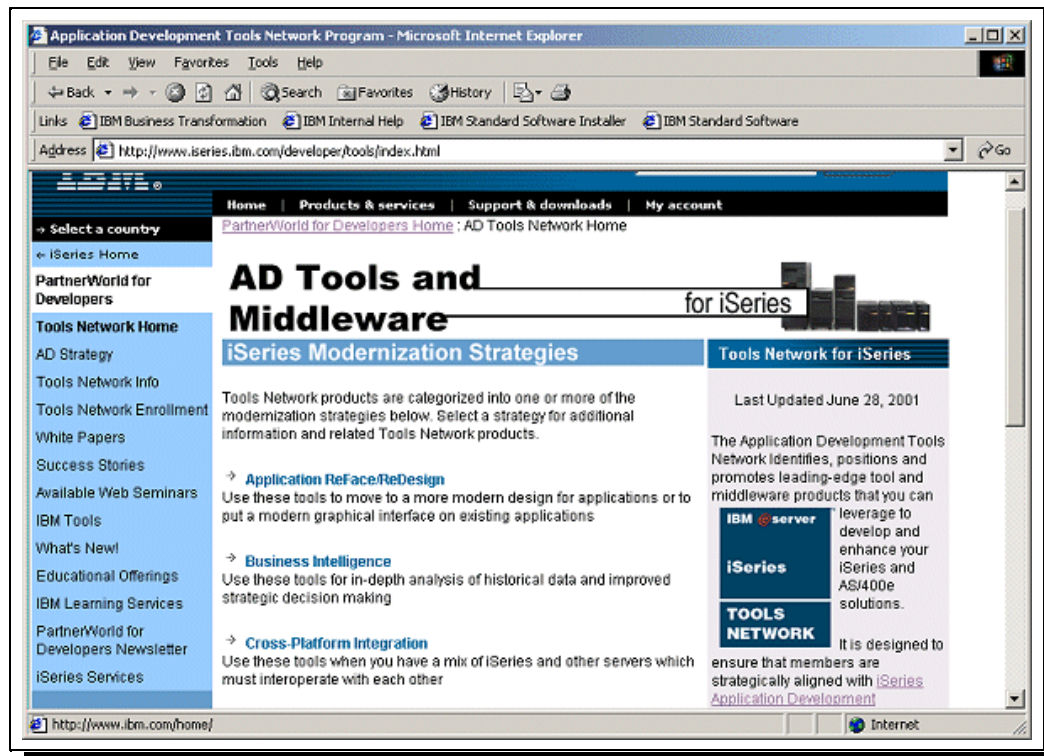


Figure 4 — Application Development Tools and Middleware Web site

The Mechanics of the Tools Network

More than 145 partners and 449 tools are represented in the Tools Network, including both IBM and non-IBM tools. Even though there may be additional tools available, the tools within the IBM Tools Network program are certified as working in-line with the e-business direction of IBM for all of its ^ platforms. In other words, the solution providers represented in the Tools Network are in close contact with IBM on a regular basis, thus assuring a mutual understanding of well-planned and mapped-out future directions for all parties.

Understanding that a long list of tools can be overwhelming to sort through, the [Tools Network Web site](#) serves as a funnel to quickly narrow the selection to those tools that perform a particular task. A tool search can be performed in one of two ways. A tool can be selected by choosing a specific manufacturer or tool

for immediate "quick navigator" drill down. Or, the user can choose a modernization strategy, then drill down to the work-task level to see a list of partners and tools that are available to accomplish a particular task. For example, when the user drills down into the applications and systems management strategy, tools are further categorized by functional area, such as "application deployment."

Within each sub-category or work task, tools are displayed in tables. By clicking on a the company name of a Business Partner, the user is linked directly to their Web site. By selecting a particular tool, the user is transferred to a Web page dedicated to that particular tool. The idea is to help iSeries users and solution providers quickly identify an application development strategy and then filter the available tools to reduce the number of options that must be examined.

Application and Systems Management Tools

A wide variety of tools are available to perform application and systems management functions. Many iSeries customers are using these tools to drive more effective and efficient IT operations. Some customers focus their efforts on application tools. IT departments require the support of multiple iSeries servers and multiple applications. They may find purchasing tools is more advantageous than creating and supporting in-house tools. Some iSeries customers require high application availability. System management tools can ease these efforts for IT staffs. Automating tasks such as system saves, application deployment, and batch workloads can be accomplish by iSeries tools. These types of tools can be found in the Tools Network Program.

NOTE: The following list is a brief description of each type of tool and their functions. When entering the Tools Network Web site, a list similar to this will appear. By choosing a specific category, the tool selection can be narrowed to a specific task, making the search more efficient.

- ✍ **Application Deployment** — Replicate and install applications across multiple servers as well as deploy application fixes.
- ✍ **Application Management** — Facilitate the development of applications, providing change management, version control, and check out as well as library services and distribution.
- ✍ **Application Debug and Test** — Debug and test new applications including extraction of test data, compare utilities and visual debuggers, and information for user chargeback.
- ✍ **Asset Management** — Manage the hardware and software in use in the network and track resource utilization to provide detailed reports for user chargeback.
- ✍ **Availability Solutions** — Provide "hot" backup features that allow a customer to continue to operate if their primary system fails.

- ✍ **Backup and Recovery** — Manage scheduled backups and the media used for the backup. The tools can be used to facilitate application recovery after a failure.
- ✍ **Content Management** — Manage the disparate content required to build web applications which include a variety of object types.
- ✍ **Documentation and Tracking Tools** — Document applications, display database relationships, and manage application projects.
- ✍ **Library Search** — Scan document libraries and program libraries to locate and track existing objects.
- ✍ **Network Management** — Monitor and manage iSeries activity problems in network nodes, device problems, network traffic, and other communication errors.
- ✍ **Operations Management** — Enable the planning, distribution, evaluation, and control of work in a system and/or network.
- ✍ **Performance/Tuning** — Optimize performance of applications, servers, and networks.
- ✍ **Problem/Event Management** — Manage problems and events from their detection through resolution including detection, analysis, recovery, resolution and tracking.
- ✍ **Scheduling** — Initiate tasks on a predetermined basis.
- ✍ **Security Tools** — Work with or extend OS/400 security resources for both local and network resources, including digital certificates.
- ✍ **Software Distribution** — Enable scheduled and controlled movement of objects in a network. These objects include programs, data, and other objects that reside on the iSeries server.
- ✍ **Web Site Management** — Analyze, manage, and report Web site traffic. They provide features to manage performance, availability, and balancing traffic across multiple servers.

Now, for a closer look at these categories of application and system management tools...

Application Deployment

The Tools Network has tools that are used to deploy applications across multiple servers and tools to migrate application updates. **Aldon Harmonizer** is a tool with features that automates the merging of multiple source code updates when deploying new program and module updates. **Electronic Software Distribution** from **Business Computer Design** is a product to submit application changes to remote iSeries servers from a host system. It includes capabilities such as executing prerequisite programs during an application update and removing observability from updated objects. **InstallShield Multi-Platform Edition** is a tool that provides a graphical wizard that can create graphical installation scripts. It can deploy software as either OS/400 licensed programs or library and object

packages. **Kisco SafeNet/400** is a tool that monitors software deployment to both the iSeries server and client workstations. It is a good tool to ensure secure application deployment of client-server applications that may bypass traditional OS/400 security features. **Deploy/400** and **Deploy/PC** from **SoftLanding** are products that deploy either native iSeries applications or client applications in a client-server software environment. These products are integrated with **TurnOver CM** and **Turnover eCM** from **SoftLanding** also. These tools assist the entire process of deploying iSeries applications. **Tango/04[®] Visual Support Pro** is a tool that developers can use to debug application errors while deploying application updates. **Tango/04 VISUAL Debugger for Windows** assists application deployment efforts with its robust source testing tool that has the capability to monitor each line of code in both batch and interactive iSeries jobs. **Touchtone ThinView** is a tool that supports application deployment by allowing iSeries users to emulate traditional programs in a web browser.

Figure 5 (below) shows the Tools Network vendors that provide application deployment solutions.

Aldon Harmonizer	www.aldon.com
BCD Electronic Software Distribution	www.bcdsoftware.com
InstallShield Multi-Platform Edition	www.installshield.com/iemp
Kisco SafeNet/400	www.kisco.com/safenet.htm
SoftLanding Deploy/400	www.softlanding.com
SoftLanding Deploy/PC	www.softlanding.com
SoftLanding TurnOver CM	www.softlanding.com
SoftLanding TurnOver eCM	www.softlanding.com
Tango/04 VISUAL Support Pro	www.tango04.com
Tango/04 VISUAL Debugger for Windows	www.tango04.com
Touchtone ThinView	www.touchtonecorp.com

Figure 5 — Tools Network vendors that provide application deployment solutions

Application Management

Software development on any platform requires tools that can manage and audit all programming efforts. The tools available on the iSeries servers provide functions to migrate application updates, monitor developer updates, create test environments, and provide capabilities to roll-back application versions. **Aldon** has a suite of complimentary products that can be used to manage iSeries applications. **Aldon Affinity** is a tool used to manage cross-platform applications, including Java build features. **Aldon CMS** is a complete change management tool that iSeries customers can use to establish software standards. It includes features such as project management, documentation, project authority, and prerequisite application updates. **Aldon Harmonizer** can be used to merge program source that is being update simultaneously by multiple iSeries developers. If your IT testing standards require testing of all lines of code prior to deployment, **Aldon Intellitest Analyzer** can be used to report what lines of code have not been executed and the total number of times a line of code has been executed. The **Aldon Response Manager**, with its change management tracking features, can assist application management standards.

Mortice Kern Systems has a variety of tools that assist application management activities. **AS/Vu** is a tool that takes a 'snapshot' of all system objects and user authorities. **DesignTracker** is a tool used to manage application change requests. **Implementer** is a change management tool that supports multiple platforms. It has features such as program check-in and check-out, program migration, audit documentation, program roll-back and archive, and test environment tracking. **NewVersion** is a tool that can be used to compare source and object versions. **ProjectMaster** is a product that has project tracking features, including Gantt charts and resource management. If a tool is required to track user application requests, **SupportCenter** has features to log requests, report resolution activity, and prioritize requests. Date information can be corrupted by either end-users or by iSeries programs. **Validate/400** is a tool that reports invalid dates through real-time journaling, file triggers, or off-line batch processing.

R/Utility R/Development Centre allows developers to create models other than their applications and review database relations. **R/Utility RIO Change Management** supports iSeries application development and has integration features with JD Edwards software. **SoftLanding TurnOver CM** is a complete tool for change management activity on the iSeries server. It has features such as help desk call tracking, project management, program version management, source compare utilities, and application recovery features. **SoftLanding Turnover eCM** is a graphical tool to manage Java, HTML, and other client-server objects. **Thenon SEE/Change** supports all change management activity. It contains modules that include problem management, audit reporting, development management, and interfaces to iSeries business software such as BPCS, FISERV, JBA, JDA, JD Edwards, and PALADIGN. **Vertical Sky Collaboration Manager** has workflow features to support change management activity for Web site content management. [*This URL redirects to MKS and the company has changed. What is the new product name?*](#)

Figure 6 (on the next page) shows the Tools Network vendors that provide application management solutions.

Aldon Affiniti	www.aldon.com
Aldon CMS	www.aldon.com
Aldon Harmonizer	www.aldon.com
Aldon Intellitest Analyzer	www.aldon.com
Aldon Response Manager	www.aldon.com
MKS SDM AS/Vu	www.mks.com
MKS SDM Design Tracker	www.mks.com
MKS SDM Implementer	www.mks.com
MKS SDM NewVersion	www.mks.com
MKS SDM ProjectMaster	www.mks.com
MKS SupportCenter	www.mks.com
MKS Validate/400	www.mks.com
R/Utility R/Developer Centre	www.r-utility.com
R/Utility RIO Change Management	www.r-utility.com
SoftLanding TurnOver CM	www.softlanding.com
SoftLanding TurnOver eCM	www.softlanding.com
Thenon SEE/Change	www.thenon.com
Vertical Sky Collaboration Manager	www.verticalsky.com

Figure 6 — Tools Network vendors that provide application management solutions

Application Debug and Test

iSeries servers have a number of tools available to support application testing and troubleshooting. Some products in this category assist in debugging interactive applications, some for batch, and some assist in testing new applications. Another important function of these tools is the capability to create an environment with test data. This is critical to iSeries developers who are testing their large database access programs on non-production systems. **Aldon Intellitest Extrator400** is a tool to create a test database from a production database. **Aldon Intellitest TestBench400** has features that include user acceptance testing, batch program testing, and client-server application testing. Interactive testing is a feature of **Aldon Intellitest TestWorks400** which includes 'record and playback' functions. **ASNA Extermin8 Plus** is a debugging tool that can be used to test both ILE programs or OPM programs. It has advanced debugging features that include monitoring variable changes without recompiling OPM programs. **IBM CODE/400** is a desktop debugging tool that has a real-time syntax checking capability. It allows developers to detect programming errors before issuing iterative batch program compiles on the iSeries server.

Mortice Kern Systems has tools to assist application testing and debugging. **AutoTester** has features to capture interactive 5250 user activity that is used to test application changes. **DesignTracker** tracks the progress of new development or existing enhancements. **ExtractDB** is a tool for testing applications with a subset of the production database. **File Compare** is a test case driven product that allows a developer to compare two sets of data

interactively or in a report form. **Test Monitor** tracks the lines of code that are changed and unchanged, tested and untested during the testing process.

Original Software Extractor400 analyzes file relationships and creates hierarchical reports. **Original Software SimuSys400** allows iSeries development teams to generate application prototypes. This tool can both expedite the application development process and reduce software maintenance. **Original Software TestBench400** is a tool that has user 'record and playback' capabilities. These tool features can be beneficial to iSeries customers that require advanced auditing utilities. **Sky Tech RealTime Program Audit for RPG** captures source code execution and generates audit output that shows relationships between data, fields, files, and programs.

SoftLanding has developed a variety of tools to assist iSeries application testing and debugging. Its **VISUAL Debugger for Windows** provides a graphical interface that allows developers to test and debug both local and remote job attributes. The **SmartTest400** suite provides testing and debugging features that include creating test data, capturing user activity, and analyzing file transactions.

Tango/04 VISUAL Debugger for Windows is a graphical test and debugging tool that can modify iSeries job attributes. It can assist program debugging efforts and eliminates the need to manually monitor program activity. **Tango/04 Support Pro** is a tool that allows developers to debug application attributes remotely.

Thenon SmartTest400 has testing features such as test data creation, interactive user script capture, and data comparison reporting.

Figure 7 shows the Tools Network vendors that provide application debug and test solutions.

Aldon Intellitest Extractor400	www.aldon.com
Aldon Intellitest TestBench400	www.aldon.com
Aldon Intellitest TestWorks400	www.aldon.com
ASNA Extermin8 Plus	www.asna.com
IBM CODE/400	
ibm.com/software/ad/as400/library/code44.html	
MKS SDM AutoTester Suite	www.mks.com
MKS SDM Design Tracker	www.mks.com
MKS SDM ExtractDB	www.mks.com
MKS SDM FileCompare	www.mks.com
MKS TestMonitor	www.mks.com
Original Software Extractor400	www.origsoft.com
Original Software SimuSys400	www.origsoft.com
Original Software TestBench400	www.origsoft.com
Sky Tech RealTime Pgm Audit for RPG	www.skytechnologies.com
Softlanding VISUAL Debug. for Win.	www.softlanding.com
Softlanding SmartTest400	www.softlanding.com
Tango/04 VISUAL Debugger for Win.	www.tango04.com
Tango/04 VISUAL Support Pro	www.tango04.com
Thenon SmartTest	www.thenon.com

Figure 7 — Tools Network vendors that provide application debug and test solutions

Asset Management

The Tools Network includes products that have the capability to track resource utilization. Many companies have business requirements to 'charge-back' system usage to separate departments, divisions, or other corporate companies. Another aspect of this category is system resources. These tools can be used to track iSeries server resources that includes disk space and ownership, spool files and peak printing times, and advanced hardware reporting tools. **Advanced System Concepts OpCenter Resource Accountant** has iSeries resource tracking features that can be incorporated in Operations Navigator from IBM. **Bavarian CD/IT** is a tool capable of managing software on CD-ROM media. **Butler & Curless DiskMiser** is a disk storage management tool that gives a developer a detailed analysis of how disk space is used and highlights changes in the usage. **CCSS QSystem Monitor** has a graphical interface that displays 'real-time' iSeries resource usage. It also includes audio and visual alerts that are triggered when thresholds are exceeded. **Help Systems Robot/CPA** automates the operator duties of monitoring job and device usage, user chargeback, and security auditing. **Revsoft Disk/400** provides resource usage that includes total DASD utilization, growth patterns for specific libraries and applications, and growth patterns of specific objects. **Revsoft Hardware/400** is a graphical tool that can display and configure devices attached to the iSeries server. Some tools are needed to monitor iSeries DASD activity and growth. **Tango/04 VISUAL**

Compressor can be used by iSeries IT system administrators to both view DASD activity and reduce the size of large database objects.

Figure 8 shows the Tools Network vendors that provide asset management solutions.

ASC OpCenter Resource Accountant	www.asc-as400.com
Bavarian CD/IT	www.bavarian-cons.com
Butler & Curless DiskMiser	www.bcafreedom.com
CCSS QSystem Monitor	www.ccssltd.com
Help/Systems Robot/CPA	www.helpsystems.com
Revsoft Disk/400	www.revsoftinc.com
Revsoft Hardware	www.revsoftinc.com
Tango/04 VISUAL Compressor	www.tango04.com

Figure 8 — Tools Network vendors that provide asset management solutions

Availability Solutions

The Tools Network also has products that provide capabilities to support disaster situations where production systems are not available. **DataMirror® High Availability Suite™** captures iSeries objects and database transactions from primary systems and mirrors them in real-time to one or more secondary iSeries server. **Lakeview MIMIX** is a suite of tools that ensures application connectivity. These tools include features such as server clustering, file replication, and SAP interfaces. **Vision Solutions® Vision Suite™** tools can assist iSeries shops in maintaining high-availability in LPAR and multiplatform environments.

Figure 9 shows the Tools Network vendors that provide availability solutions.

DataMirror High Availability Suite	www.datamirror.com
Lakeview MIMIX	www.lakeviewtech.com
Traders Quick-EDD	www.quick-software-line.com
Vision Solutions Vision Suite	www.visionsolutions.com

Figure 9 — Tools Network vendors that provide availability solutions

Backup and Recovery

Tools are available to assist IT system administrators responsible for application and system recovery. **Ascent Solutions PKZIP® AS/400** can reduce the size of large database files. This tool can be used to compress files that can be either migrated to other systems or saved to tape/CD media. **Centerfield CD-ROM Studio** has features to save both user applications or system applications to CD-ROM. **Help/Systems Robot/SAVE** automates the functions of disk drive backup, system restoration, and tape management. **BRMS** from IBM has features to maintain backup media inventory and provides detailed recovery reports. If archiving spool files is an iSeries priority, **InPro® Utility Zone®** provides

a set of tools to backup and manage spool file output. **Pinnacle TRAC/400** is a tool that can manage backup and recovery activities across multiple iSeries servers. **Revsoft Backup/400** can backup traditional iSeries objects and Lotus Notes related objects. **UniComp CD mASter** is a tool that can save applications to CD media.

Figure 10 shows the Tools Network vendors that provide backup and recovery solutions.

Ascent Solutions PKZIP AS/400	www.asizip.com/products
Centerfield CD-ROM Studio	www.centerfieldtechnology.com
Help/Systems Robot/SAVE	www.helpsystems.com
IBM BRMS	www.ibm.com/as400/service/brms.htm
InPro Utility Zone	www.inprointernational.com
Pinnacle TRAC/400	www.pinnsys.com
Revsoft Backup/400	www.revsoftinc.com
UniComp CD mASter	www.unicomp-solutions.com

Figure 10 — Tools Network vendors that provide backup and recovery solutions

Content Management

Content management tools on the iSeries servers are available to assist both native and web enabled iSeries programs. These tools enable the management of different types of files and objects that can be deployed on the iSeries servers. **IBM Content Manager** is a tool to manage pieces of business information such as scanned images, word processing documents, computer coded data, rich media, or spreadsheets. Its server application is a common repository of indexes for easy search and retrieval. **Karora DocConnector™** is a suite of Java-based business components that provide document and content management functionality, designed to be embedded in applications or as a backbone for a web based application.

Figure 11 shows the Tools Network vendors that provide content management solutions.

IBM Content Manager	ibm.com/software/data/cm/cm_general.html
Karora DocConnector	www.karora.com

Figure 11 — Tools Network vendors that provide content management solutions

Documentation and Tracking Tools

Tools are available to assist documentation efforts for iSeries development staffs. The Tools Network has tools that can create detailed program and file relationships. These tools reduce the effort required to produce application support documentation and training. **Advanced Systems Concepts Abstract** provides a set of cross-referencing documentation and programming tools integrated with OS/400 Operations Navigator's graphical user interface. **Abstract** analyzes the applications and builds a "where-used" cross-reference of system objects. **Altech Portfolio Suite™** is a tool to assist the management of

production level objects. **Business Computer Design Docu-Mint™** is an iSeries tool that provides impact analysis documentation and program cross reference information.

Figure 12 shows the Tools Network vendors that provide documentation and tracking solutions.

Advanced Systems Concepts Abstract	www.asc-as400.com
Altech AI Portfolio Suite	www.aitechresearch.com
Aitech AI Portfolio SuiteLite	www.aitechresearch.com
BCD Docu-Mint	www.bcsoftware.com
Linoma Software Surveyor/400	www.linomasoftware.com
Original Software SimuSys400	www.origsoft.com

Figure 12 — Tools Network vendors that provide documentation and tracking solutions

Library Search

The Tools Network includes products that can assist developers who need the capability to search libraries and documents. These tools can reduce company efforts to manage iSeries files and objects.

Figure 13 shows the Tools Network vendors that provide library search solutions.

Linoma Software Surveyor/400	www.linomasoftware.com
Typex BlueNotes Document Warehouse	www.bluenotes.com

Figure 13 — Tools Network vendors that provide library search solutions

Network Management

The iSeries server can support both Internet and intranet environments. Network traffic in these environments can be monitored by tools in the Tools Network. Also, virtual devices can be monitored for availability. **Aldon CMS** has features to monitor application updates deployed over a companies network. Help/Systems **Robot/NETWORK** has functions to manage both applications and systems over an internal network.

Figure 14 shows the Tools Network vendors that provide network management solutions.

Aldon CMS	www.aldon.com
Help/Systems Robot/NETWORK	www.helpsystems.com

Figure 14 — Tools Network vendors that provide network management solutions

Operations Management

Tools for the iSeries server are available to monitor and manage system activities. These tools assist system administrators who are responsible for managing system resources. **Advanced System Concepts OpCenter Monitor**

displays critical information such as CPU usage, DASD usage, interactive response time, page faults, and potential jobs that are using a large amount of system resources. A tool to assist report distribution is **Business Computer Design Catapult™**. It allows a system administrator to set up selection criteria for choosing which reports to download, to send as an e-mail, to send in PDF format, or to archive. **Butler & Curless Recycle Bin** is a tool that manages the deletion of iSeries objects. **CCSS QSystem Monitor** provides a graphical interface to assist monitoring iSeries tasks such as performance statistics. **GEN400 Utilities** include functions to reorganize files, manage application structure, and report program run-time activity.

Help/Systems is a Tools Network member that deploys products with operations management features. **CORRAL** can be used to search for iSeries objects. **REPLAY** is a tool that can duplicate the interactive process of submitting batch jobs. **REPORTS** has operation functions such as e-mail, archive, and report splitting. **SPACE** automates DASD management tasks. It collects DASD usage statistics, predicts future growth, and helps monitor objects that have rapid growth. **UPS** is a tool to provide 'lights-out' automation when an iSeries power supply is lost.

Pinnacle UPS/400 is a tool that can both monitor iSeries hardware and manage volatile software resources. **SafeStone e-CFG** is a systems management configuration tool, which interrogates and manipulates the location, status, date last used, and TCP/IP address of every object configured on the iSeries server. **UniComp mAStermind** includes iSeries management functions such as disk management, job scheduling, spool file management, back-up and recovery, object auditing, and source code management. This tool provides an Internet access feature that allows iSeries system administrators to manage system resources in a web browser.

Figure 15 shows the Tools Network vendors that provide operations management solutions.

ASC OpCenter Monitor	www.asc-as400.com
BCD Catapult	www.bcdsoftware.com
Butler & Curless Recycle Bin	www.bcafreedom.com
CCSS QSystem Monitor	www.ccssltd.com
GEN400 Utilities	www.gen400.com
Help/Systems Robot/CORRAL	www.helpsystems.com
Help/Systems Robot/REPLAY	www.helpsystems.com
Help/Systems Robot/REPORTS	www.helpsystems.com
Help/Systems Robot/SPACE	www.helpsystems.com
Help/Systems Robot/UPS	www.helpsystems.com
Pinnacle UPS/400	www.pinnsys.com
R/Utility R/Operations Centre	www.r-utility.com
SafeStone e-CFG	www.safestone.com
UniComp mAStermind	www.unicomp-solutions.com

Figure 15 — Tools Network vendors that provide operations management solutions

Performance/Tuning

Application and system performance tools are available to aid iSeries customers. These tools provide graphical reporting tools that monitor system and application performance. **Advanced Systems Concepts OpCenter Job Tuner** assists performance tuning activities for iSeries applications. It allows IT staffs to manage performance related activities on the iSeries server. **Advanced Systems Concepts OpCenter Pool Optimizer** is a tool that can be used to manage iSeries CPU resources. Both of these tools have generate performance related reports. **ASNA ACTIV8** includes utilities to manage iSeries memory, job, and network performance. **CCSS QSystem Monitor** is a good tool for large iSeries installations that need advanced performance tools. **Centerfield Advanced Performance Server** collects database performance data and generates performance recommendations. **Robot/AUTOTUNE** works at the operating system level using artificial intelligence techniques to provide automated system tuning. **InPro Utility Zone** provides complete historical graphics for key areas of performance measurement. **MB Software Performance Series** is a suite of tools that collects both application and system statistics. **Midrange Performance Group Performance Navigator** is a graphical PC tool for iSeries performance management, system capacity planning, and performance problem resolution. **Original Software TestBench400** is a tool that identifies potential performance problems in applications. **Softis LOUIS** increases application performance on 'congested' and mobile networks. **Tango/04 Visual Control Center** has features to collect and report detailed performance statistics from a network of iSeries servers. **Thenon SmartTest400** has features to identify potential performance problems for applications before they are placed in production environments.

Figure 16 shows the Tools Network vendors that provide performance and tuning solutions.

ASC OpCenter Job Tuner	www.asc-as400.com
ASC OpCenter Pool Optimizer	www.asc-as400.com
ASNA ACTIV8	www.asna.com
CCSS QSystem Monitor	www.ccssltd.com
Centerfield Adv Performance Server	www.centerfieldtechnology.com
Help/Systems Robot/AUTOTUNE	www.helpsystems.com
InPro Utility Zone	www.inprointernational.com
MB Software Performance Series	www.mb-software.com
Mid-Comp Snapshot/400	www.snapshot400.com
MPG Performance Navigator	www.mpginc.com
Original Software TestBench400	www.origsoft.com
Softis LOUIS	www.softis.com
Tango/04 VISUAL Control Center	www.tango04.com
Thenon SmartTest400	www.thenon.com

Figure 16 — Tools Network vendors that provide performance and tuning solutions

Problem/Event Management

The Tools Network includes tools that can monitor system and application events. Some tools monitor for system alerts and generate programmatic actions. Some tools are application triggered events that be communicated to either responsible iSeries IT staff or end users via pagers or cell phones. **Advanced System Concepts OpCenter Job Intervention** is a tool that provides capabilities to view user displays and local job attributes. It provides functions to execute commands against the monitored job. **Advanced Concepts OpCenter Message Alert** monitors application errors and sends alerts via e-mail, pager, and workstation messages. **Bytware MessengerPlus** performs actions to automate message handling, including paging and e-mail notification. **Bytware MessengerConsole** is an operations console that centralizes the monitoring of multiple iSeries server and application activity. **Candle® OMEGAMON®** is a centralized monitoring tool that monitors and reports specific events. **CCSS QMessage Monitor** provides a centralized GUI interface that allows system administrators to monitor all jobs on the system. It includes features to collect all system events in a secured environment. **Help/Systems Robot/Alert** sends pager messages in reaction to events on the system or events from applications. **Help/Systems Robot/CLIENT** provides a method of programmatic communication between an iSeries server, a UNIX client, or a Windows client. **Help/Systems Robot/CONSOLE** monitors console messages and performs procedures in reaction to those messages. **Pinnacle ICOM/400** includes a remote voice response feature in addition to existing alert modes for pager, e-mail, fax, spooled file, and network messaging. **Revsoft Message/400** has the capability to monitor for specific alerts and send notifications to predefined personnel. If an alert is not answered within a predefined time-frame, and escalation message is sent to alternative personnel. **Revsoft Scope/400** is a graphical tool that monitors for performance problems on multiple iSeries servers. **Tango/04 VISUAL Control Center** monitors both system and application activity and alerts system problems to iSeries administrators and programmers.

Figure 17 shows the Tools Network vendors that provide problem and event management solutions.

ASC OpCenter Job Intervention	www.asc-as400.com
ASC OpCenter Message Alert	www.asc-as400.com
Bytware MessengerPlus	www.bytware.com
Candle Mgt. Server for OS/400	www.candle.com
Candle OMEGAMON	www.candle.com
CandleLight for OS/400	www.candle.com
CCSS QMessage Monitor	www.ccssltd.com
Help/Systems Robot/ALERT	www.helpsystems.com
Help/Systems Robot/CLIENT	www.helpsystems.com
Help/Systems Robot/CONSOLE	www.helpsystems.com
Pinnacle ICOM/400	www.pinnsys.com
Revsoft Message/400	www.revsoftinc.com
Revsoft Scope	www.revsoftinc.com
Tango/04 VISUAL Control Center	www.tango04.com

Figure 17 — Tools Network vendors that provide problem and event management solutions

Scheduling

Robust software is available on the iSeries server to schedule unattended events. Scheduling software allows many activities to run 'lights-out'. These tools provide detailed reports on unattended application activity, allowing application developers and system administrators to review program activity. **Advanced System Concepts OpCenter Scheduler** includes job scheduling features that include distributing reports via FTP and e-mail. **BCD Catapult/Slim Pickins'** automates the distribution of spool files to a variety of clients on an iSeries network. **BMC Software CONTROL-M** provides job and production scheduling across more than 20 different platforms in the iSeries server. **Help/Systems Robot/SCHEDULE** provides a GUI interface to schedule unattended iSeries jobs. It includes exception handling features and can be integrated with other Help/System products that extend scheduling activities to clients on the network. **Revsoft Scheduler/400** is a client-server scheduling product that allows the user to 'drag and drop' activities in a GUI interface. **R/Utility R/Operations Centre** has a job scheduling feature that incorporates the completion commands to run after a job has been completed. **SoftLanding TurnOver CM** is a tool that can be used to schedule application updates. **SoftLanding TurnOver PDQ** provides the capability to schedule file reorganization. **Symtrax Compleo**

Supervisor is a tool that can schedule the distribution of reports via e-mail or the Internet.

Figure 18 shows the Tools Network vendors that provide scheduling solutions.

ASC OpCenter Scheduler	www.asc-as400.com
BCD Catapult/Slim Pickin's	www.bcdsoftware.com
BMC Software CONTROL-M	www.bmc.com
Help/Systems Robot/SCHEDULE	www.helpsystems.com
IBM Advanced Job Scheduler	ibm.com/eserver/iserie/jscheduler/
Revsoft Scheduler/400	www.revsoftinc.com
R/Utility R/Operations Centre	www.r-utility.com
SoftLanding TurnOver CM	www.softlanding.com
SoftLanding TurnOver PDQ	www.softlanding.com
Sytrax Compleo Supervisor	www.symtrax.com

Figure 18 — Tools Network vendors that provide scheduling solutions

Security Tools

There are many iSeries tools for security. Some can be used to assist with overall system security and some can help monitor application security. The iSeries server has a good base of security tools in OS/400 but many environments require extensive monitoring and reporting capabilities. **BMC Software CONTROL-SA[®]** is a tool that provides enterprise-wide security management from a central point of control. **Butler & Curless Recycle Bin** works just like the recycle bin on a PC by providing a temporary holding place for iSeries objects marked for deletion. **HiT SSL Server[™]** is a standards-based encryption and authentication server to secure SQL data flows over TCP/IP networks. **Kisco SafeNet/400** is a tool that enforces security standards for client-server applications. It creates audit logs that can produce a variety of security reports. **Patrick Townsend FTP Security** secures the iSeries FTP communications software from inappropriate access by Internet or internal network users. It monitors every connection to the FTP application and provides security controls and audit trails. **Patrick Townsend Telnet Security** monitors for break-in attempts and will notify the developer by e-mail and messages. **PentaSafe PSAudit-400** tracks key changes to the operating system including changes to user profiles, exit point programs, and object authorities. **PentaSafe PSDetect-400** monitors alerts and takes automatic action such as to send an automatic reply, send a page, or forward a message to another queue or system. **PentaSafe PSSecure-400** prevents unauthorized remote access via commonly used "exit points." It allows system administrators to specify which users may access the system and when users may access the system via FTP, TCP/IP, Telnet, ODBC, and other remote servers. **PowerTech PowerLock** is a tool that incorporates 'Shadow Profile' technology which allows system administrators to specify more restrictive client-server authority for a user or for a group of users. This technology does not interfere with green screen authority or modify existing applications and run-time environment. **R/Utility R/Security Shield** is designed to monitor and control access to an iSeries via FTP, remote commands, ODBC, JDBC, and distributed program calls. **SoftLanding PowerLock** is a tool that

system administrators can use to monitor unauthorized system activities. **SoftLanding SoftMenu** has functions that allow the management of menus across multiple systems and multiple languages. **SafeStone** offers a wide variety of security products for the iSeries server. Its **DetectIT** products contain features such as policy compliance, audit and activity monitoring, client server controls, menu and application controls, object and library controls, and user access controls. It has a graphical interface that gives system administrators a central security point-of-control.

Figure 19 shows the Tools Network vendors that provide security solutions:

APOS CA Security Module	www.apos.ch
BMC Software CONTROL-SA	www.bmc.com
Butler & Curless Recycle Bin	www.bcafreedom.com
HiT SSL Server	www.hit.com
Kisco SafeNet/400	www.kisco.com
Pat Townsend FTP Security	www.patowndsend.com
Pat Townsend Telnet Security	www.patowndsend.com
PentaSafe PSAudit-400	www.pentasafe.com
PentaSafe PSDetect-400	www.pentasafe.com
PentaSafe PSSecure-400	www.pentasafe.com
PowerTech PowerLock	www.400security.com
R/Utility R/Security Shield	www.r-utility.com
SafeStone DetectIT-ACF	www.safestone.com
SafeStone DetectIT-ASC	www.safestone.com
SafeStone DetectIT-AUD	www.safestone.com
SafeStone DetectIT-C/S	www.safestone.com
SafeStone DetectIT-eAUD	www.safestone.com
SafeStone DetectIT-eBZ	www.safestone.com
SafeStone DetectIT-eC/S	www.safestone.com
SafeStone DetectIT-eEXM	www.safestone.com
SafeStone DetectIT-eMON	www.safestone.com
SafeStone DetectIT-EXM	www.safestone.com
SafeStone DetectIT-MAP	www.safestone.com
SafeStone DetectIT-NET	www.safestone.com
SoftLanding PowerLock	www.softlanding.com
SoftLanding SoftMenu	www.softlanding.com

Figure 19 — Tools Network vendors that provide security solutions

Software Distribution

Application distribution tools is another category of products that help manage iSeries environments. Software developed for iSeries servers may need to be delivered as a licensed program or compressed to accommodate distribution media. **Electronic Software Distribution** from **Business Computer Design** is a product to submit application changes to remote iSeries servers from a host system. It includes capabilities such as executing prerequisite programs during an application update and removing observability from updated objects. **Centerfield CD-ROM Studio** allows iSeries customers to distribute applications via CD-ROM. **InstallShield Multi-Platform Edition** is a tool that provides a graphical wizard that can create graphical installation scripts. It can deploy

software as either OS/400 licensed programs or library and object packages. **Linoma Software Surveyor/400** is a graphical tool that can be used to transfer data and objects between iSeries servers or client systems. **Navan CDMaker** is a tool used to distribute applications and files on CD-ROM media. **Deploy/400** and **Deploy/PC** from **SoftLanding** are products for deploying either native iSeries applications or client applications in a client-server software environment. These products are integrated with another **SoftLanding** product, **TurnOver CM**, which is an application change management tool. **Symtrax Bravo** eliminates the need to distribute software via tape. It has a graphical 'drag and drop' user interface that eliminates the requirement of entering OS/400 commands. **SystemObjects UpdateObjects400** is a tool used to distribute client-server applications.

Figure 20 shows the Tools Network vendors that provide software distribution solutions.

BCD Electronic Software Distribution	www.bcdsoftware.com
Centerfield CD-ROM Studio	www.centerfieldtechnology.com
InstallShield Multi-Platform Edition	www.installshield.com/iemp
Linoma Software Surveyor/400	www.linomasoftware.com
Navan CDMaker	www.navan.co.uk
SoftLanding TurnOver CM	www.softlanding.com
SoftLanding Deploy/400	www.softlanding.com
SoftLanding Deploy/PC	www.softlanding.com
Symtrax Bravo	www.symtrax.com
SystemObjects UpdateObjects/400	www.systemobjects.com
Tivoli Enterprise	www.tivoli.com
Vertical Sky Software Manager	www.verticalsky.com

Figure 20 — Tools Network vendors that provide software distribution solutions

Web Site Management

Web site management tools are available for the iSeries server. These tools are used by both system administrators and application programmers. Features of these tools range from Web site performance to Web site activity. **IBM WebSphere Site Analyzer** has features to monitor Web site content, site performance, and user statistics. The **SoftLanding Turnover** products support application management activity for iSeries Web sites. **Typex BlueNotes Document Warehouse** is a GUI tool that can help manage Web site files and programs.

Figure 21 shows the Tools Network vendors that provide Web site management solutions.

IBM WebSphere Site Analyzer	
ibm.com/software/webservers/siteanalyzer/	
SoftLanding TurnOver Deploy/PC	www.softlanding.com
SoftLanding TurnOver eCM	www.softlanding.com
SoftLanding TurnOver PDQ	www.softlanding.com
Typex BlueNotes Document Warehouse	www.bluenotes.com

Figure 21 — Tools Network vendors that provide Web site management solutions

Conclusion

A conclusion needs to be written.

Appendix — Additional Web Site Information

For additional information, please visit the following Web sites:

✍ **Systems Management Partner Group (SMPG)**

ibm.com/eserver/iseriessmpg/

The SMPG helps promote industry-leading systems management tools for the IBM ^ iSeries in ways that: increase system and network availability; contain IT costs; manage security and data integrity; and improve operations productivity.

✍ **Management Central**

ibm.com/eserver/iseriessftsol/MgmtCentral

Management Central allows you to support multiple iSeries', centralize control of them, as well as support a set of systems across a TCP/IP configuration of systems.

✍ **Redbooks**

ibm.com/redbooks

[Management Central - A Smart Way to Manage AS/400 Systems](#)
SG24-5407-00

[Managing AS/400 V4R4 with Operations Navigator](#) SG24-5646-00

✍ **Advanced Job Scheduler for iSeries**

ibm.com/eserver/iseriessjscheduler/

IBM Advanced Job Scheduler for iSeries is a job scheduling system that is designed to allow unattended operations, automate operator functions, and control report distribution. Through the use of schedule codes, Advanced Job Scheduler for iSeries allows you to quickly describe and set up any job scheduling scenario.

✍ **Operations Navigator**

ibm.com/eserver/iseriessoper_nav/

Here you can find an overview of Operations Navigator, a summary of enhancements for the last two releases, frequently asked questions, links and references to Web and magazine articles, as well as other information.

If you are a solutions provider, consider taking advantage of the opportunities and benefits offered by being a member of PartnerWorld for Developers. Visit our Web site to find out more about the wealth of resources and assistance available: ibm.com/eserver/iseriessdeveloper/

To get more details on becoming a member of PartnerWorld for Developers, visit: ibm.com/eserver/iseriessdeveloper/membership/reg_info.html

Check out the various PartnerWorld for Developers service offerings at: ibm.com/eserver/iseriessdeveloper/

For additional tool information, refernce the Application Development Tools Network for iSeries at: ibm.com/eserver/iseriessdeveloper/tools/

Additional white papers available regarding Application Development tools strategies:

✍ **Application Development Directions Update**
ibm.com/eserver/iserries/developer/tools/documents/final_addir.html

✍ **Creating Web Applications**
ibm.com/eserver/iserries/beyondtech/creating_web_apps.htm

Additional white papers related to **this** paper can be found at:
ibm.com/eserver/iserries/developer/tools/documents/addir/index.html

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Catapult is a trademark of ESDI.

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