



# Introduction to AutoMate 6

## White Paper

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### Abstract

Businesses today are under constant pressure to lower costs while improving overall operational efficiency. Enterprises of all sizes can reduce costs and improve business agility if they can automate various operational aspects of their IT and business processes. Recognizing this need, Network Automation has designed AutoMate to provide customers with a platform for rapid development of automation tasks at a low total cost of ownership (TCO).

This white paper describes the automation, systems integration, and replication challenges currently facing information technology (IT) organizations. It also introduces AutoMate as a complete development, execution and maintenance platform for automated tasks within an organization describing its features, which provide the best-in-class solution to those automation challenges.

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## **Today's Automation Challenges**

Business Process Automation is the process of designing, developing, deploying and managing routines to handle transactions on IT systems that are repetitive or of a high volume and better suited to automation. Today, the primary way to automate IT operations is to write scripts, batch files or custom “applets”. These methods usually involve programming and are written in languages such as Visual BASIC or C++. Drawbacks to this approach are speed (time-to-deploy), development cost, scalability and code maintenance costs.

### **More Applications, More Users = Exploding Business Process Transaction Growth**

Businesses everywhere are facing massive increases in the amount of digital information they need to process and handle. This growth is being driven by an ever increasing number of applications and users. In many cases this is a result of new government regulations and compliance requirements, such as HIPPA and Sarbanes-Oxley and the additional demands they place on information processing. Driven by the relentless digitization of business documents and processes, data transaction growth has been, and continues to be, exponential.

### **Demand for Lower IT Budgets**

In today's tough economic climate, CEOs and other business executives are also focused on lowering their IT spending. In many organizations, the custom application development budget consumes up to one-third of the total IT budget. One of the few ways to reduce overall IT costs is to reduce the amount of manual labor and time required to automate critical business processes. Savings can be realized through the speeding up of critical business transactions, reductions in labor costs and reductions in human error. Fast, easy and cost effective automation development, deployment and maintenance are crucial to lowering overall IT costs.

### **Human Error Caused By Manual Process Execution**

Some studies estimate that human error — primarily typographical errors and accidental data deletion or modification — cause between 33 to 40 percent of all data-entry errors. For the average business, whatever the size, the impact of incorrectly transferred information is, at a minimum, an inconvenience; and, at worst, it is a critical blow to daily operations.

The problem is not the integration of the systems, but the fact that much of the integration between systems is currently done manually. Automation of these business process transactions can substantially reduce errors therefore saving an organization valuable resources.

### **What This Means to IT Professionals**

IT professionals realize that they should automate systems to the greatest degree possible in order to realize cost-savings, on the other hand, current solutions available are often causing more work in development and maintenance than they were designed to correct. At the same

time IT professionals are pressured to handle additional requirements with a lower budget. In the next section we shall see why.

## **Potential Solutions: Scripting Coupled with Job Scheduling**

Some customers have begun to experiment with scripting as a possible way to solve some of their automation problems. The WSH (Windows Scripting Host) technology and .NET object library has resulted in a somewhat more cost-effective alternative to writing C++ code and is more powerful than using feature-limited batch files (.BAT/.CMD files).

### **Critical Failing: Loosely coupled scripts and other technologies results in high TCO.**

#### **Development Phase Problems**

Many IT departments are finding that writing these scripts still essentially boils down to writing code; essentially, WSH scripts still require syntax memorization, knowledge of programming logic and flows, and are difficult to interpret for others who may need to maintain the scripts in the future.

#### **Maintenance Phase Problems**

The automated/unattended execution of these scripts usually requires an investment in often cost prohibitive job-scheduling software, monitoring software and other tools. Combining these loosely bound technologies together frequently results in an untenable solution with error points that are difficult to diagnose, and in all too many cases, the full architecture of the solution is known only by the designers of the system.

### **The Solution: “AutoMate” automation software**

To solve today’s automation problems, Network Automation has developed AutoMate, which is designed specifically for integrated design, development, deployment and execution of systems automation and integration tasks. AutoMate provides rapid development of routines via drag-and-drop, several built-in triggers (such as Job Scheduling, Event Log monitoring, process/service watching), English language display so that tasks are easier for other team members to review and maintain – all in one easy to use system.

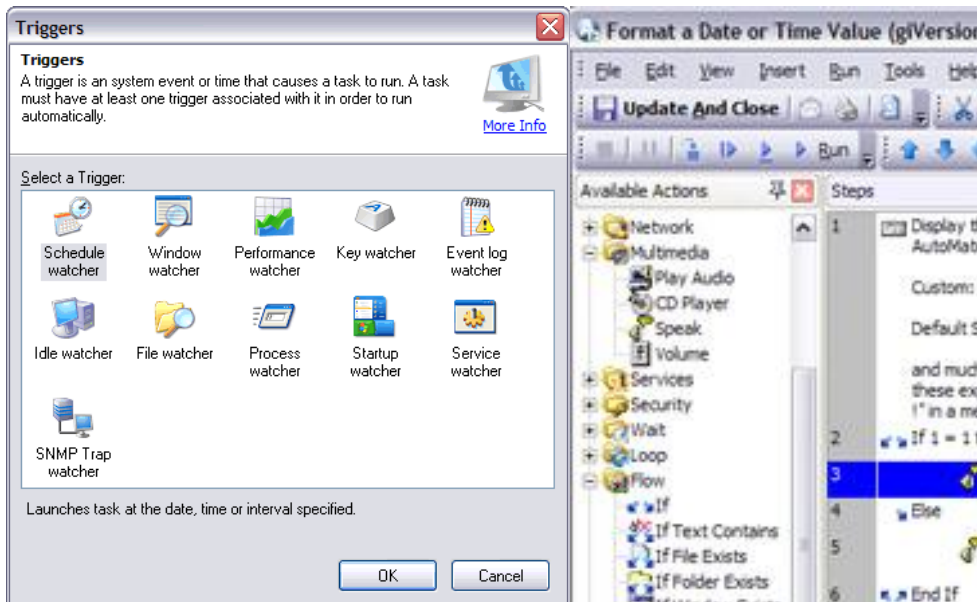
## **The Basics: AutoMate Highlights**

AutoMate focuses on providing a complete, integrated system for the automation of critical business processes. AutoMate works with Microsoft Windows® NT, Windows® 2000, Windows® XP and Windows Server™ 2003 to deliver a best-in-class automation platform for IT professionals. AutoMate runs as a true Win32 system service to execute automated tasks 24/7. It's rich, drag-and-drop based development environment provides businesses of all sizes with a true rapid-development platform that requires no programming knowledge to use and maintain.

AutoMate is designed to be a solution for organizations of all sizes. IT departments who have any of the following issues should consider AutoMate as a solution:

1. Have numerous repetitive tasks currently requiring manual human intervention, such as report generation, data transfers, data replication, duplicate data-entry, application or server restarts, error log monitoring, etc.
2. Would like to save money by increasing reliability while cutting down on time required by human intervention.
3. Have an ever increasing number of scripts, batch files and executables scattered about the organization with no central point of management.
4. Have a shortage or unwillingness to hire expensive programmers to create new scripts and maintain current ones.
5. Have too many disparate software programs for job scheduling, event-log monitoring, software error monitoring and other automation tasks (i.e. the need for an integrated solution)

## How AutoMate Works: an Example



**Figure 1. AutoMate in Action: AutoMate’s Trigger/Action metaphor provides a complete integrated solution.**

The following example describes how AutoMate works in a typical installation:

In a production environment consisting of a production server (Windows 2000 Server, Windows Server 2003), an administrator installs AutoMate either onto an existing server or onto new hardware.

From the AutoMate Task Administrator console, the administrator can create new “tasks” and place them in descriptive hierarchical folders appropriate to their use.

To create each task, a wizard interface is used. For the first choice the administrator can determine which triggers should launch the “task”. A trigger is an event or condition that causes an AutoMate “task” to run. Available triggers include:

**Schedule Watcher - Provides functions similar to a job-scheduler software.**

**Event-Watcher - Monitor the Windows Event-Log for specific events.**

**Process Watcher - Monitors an application’s state (i.e. not responding).**

**Service Watcher - Monitors the state of a Win32 Service (i.e. stopped/started).**

**Window Watcher - Monitors the system for the appearance/disappearance of certain windows or dialog boxes (such as error messages).**

**File Watcher - Monitors a folder for file system changes/additions.**

**Performance Watcher - Monitors critical metrics of system performance such as CPU usage and memory consumption.**



**SNMP watcher - Monitor for SNMP traps; useful for integration with other tools such as Microsoft MOM.**

Triggers can be used alone or combined together to cause the task to launch if any of the event conditions occur. Additionally a task may be created without a trigger if the administrator wishes to launch the task manually.

After the IT administrator selects the trigger(s) for the task, the wizard then allows the administrator to create the “task steps”. The task steps are the step-by-step instructions for AutoMate to perform. The AutoMate Task Builder tool is launched to facilitate the construction of the AutoMate task steps. The Task Builder allows the administrator/developer to select from a list of over 150 available “actions”. The actions include starting applications, transferring files via FTP, performing SQL queries, sending keystroke and much more. To add a step, the administrator/developer selects it from the list of available actions and drags it to the right window-pane called the “current steps”. This process is repeated for all the steps in a task. A task may contain an unlimited number of steps. Once this process is complete, the Task Builder is closed, remaining options are set in the wizard and the task will appear in the list of available tasks in the Task Administrator.

The administrator uses AutoMate Task Administrator to perform the following activities:

1. View current tasks and folder structure.
2. Check task last result and run history.
3. Create and name tasks and folders.
4. Modify task properties, triggers and/or steps.
5. View the system Event-Log
6. Connect to other AutoMate installations.
7. Set System Options such as email notification and security.

## Four Common Automation Scenarios

AutoMate enables four common automation scenarios:

1. Launch an application on a schedule— Applications can be launched on schedule just like a traditional job-scheduler. However, AutoMate contains the additional capability to manipulate application menus, send input and gather application from the application after it is launched.
2. File Replication — AutoMate can be used in a variety of replication scenarios. AutoMate can synchronize folders across network shares or via FTP either on a schedule or on any other available trigger such as when a file is modified.
3. Integrating legacy applications with other applications or databases — AutoMate can be used to either enter or extract data to and from legacy systems. AutoMate can work with two applications open at once, switching between them and simulating keystrokes to automate data-entry or it can communicate via SQL using OLEDB technology directly to the data-source.
4. Monitor an application and take corrective action — AutoMate can monitor the state of an application through a variety of means such as monitoring the process itself, events in the Windows Event Log, service status or Windows errors. Upon detecting a failure, AutoMate can send notification via email, restart the application or server and anything else deemed necessary.

Because AutoMate contains over 150 available actions, this list does not begin to address all the possible automated solutions that can be built and deployed using AutoMate. A task can contain any number of triggers and actions in any order creating limitless possibilities.

## **Major Benefits Of AutoMate**

Many IT business processes are manually intensive with little automation. IT administrators must concentrate on the operational aspects of systems integration and process automation. With AutoMate, IT administrators gain the following benefits:

### **Standard Benefits of Automation**

Increased transaction speed over manual methods results in reduction in human error and improved auditing capability.

### **Rapid development and deployment of automated tasks**

AutoMate's visual drag-and-drop task-building metaphor eliminates syntax and object structure memorization, making the automated task building process fast and easy.

### **More Manageable**

AutoMate's "Plain English" mode displays tasks in an easy-to-read format, eliminating the need to interpret other people's code and/or hire expensive programmers to maintain existing automation solutions.

### **Conclusion**

#### **AutoMate results in a lower total cost of ownership across the spectrum of automation: from development, to execution, to maintainability**

With AutoMate, organizations can automate many of the tasks that are currently performed manually, saving both time and money. A business can integrate AutoMate into its existing environment, realize its benefits quickly and manage it easily in future.

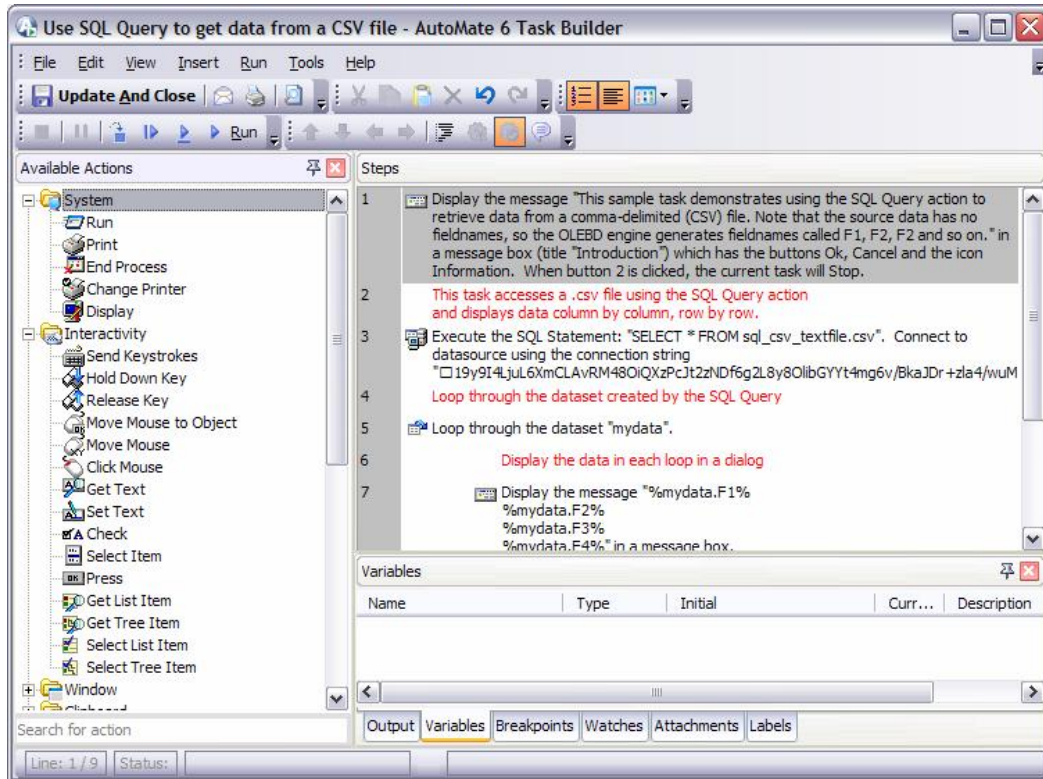


Figure 2. AutoMate's Task Builder interface allow rapid drag-and-drop construction of Automated "tasks"

## Low Total Cost of Ownership

AutoMate provides three ways to lower your TCO:

- Lower initial costs
- Lower development costs
- Lower ongoing maintenance and labor costs

### Lower initial costs

- **Lower cost of acquisition.** Because AutoMate is more affordable than most job-schedulers (even those containing only a fraction of AutoMate's capabilities), its acquisition cost is much lower than that of the cost of paying a developer to write scripts and integrating them with an expensive job-scheduling software.
- **Lower training costs.** AutoMate is a Windows-only application. As such it follows Windows interface guidelines that are familiar to Windows administrators.

AutoMate also lowers training costs because of its task-based administration model. This enables the administrator to get the job done with the fewest number of steps and the most intuitive commands. Because of this design, in many cases, training is not even required for the experienced IT professional.

### Lower development costs

- AutoMate's drag-and-drop, rapid development environment makes building tasks possible without writing code, thereby speeding up the development process substantially, as well as opening up the world of systems automation to non-programmers.

### Lower ongoing maintenance and labor costs

- AutoMate's "Plain English" mode displays tasks in an easy-to-read format, eliminating the need to interpret other people's code and/or hire expensive programmers to maintain existing automation solutions.

## Summary

Responding to the need for businesses to automate processes in a manner that is rapid, manageable and integrated, Network Automation has developed AutoMate as the best-in-class automation product for a Windows-based environment. With AutoMate, businesses of all sizes can realize cost-effective, easy-to-manage automation for business critical processes.

Businesses can be assured that their automation goals will be achieved and perform reliably. Developers and administrators can be confident that they will be able to develop automation solutions more rapidly and manage them in an integrated fashion. Ultimately, AutoMate provides lower total cost of ownership while providing the most powerful way to automate business and IT processes.

## Additional Resources

For the latest information about AutoMate , see the [AutoMate web site](http://www.networkautomation.com/automate/) ( [www.networkautomation.com/automate/](http://www.networkautomation.com/automate/) )