How to Automate Enterprise Scheduling

By Pat Cameron

Many organizations are disappointed with the results of their complex IT projects that produce only a partial solution because the promised benefits were late or never fully achieved. A project that takes years to complete is no longer acceptable—IT organizations must find ways to deliver clear benefits quickly. Automating your enterprise schedule is no different. While this white paper focuses on automating your job schedule, the same rules apply. A fast-track implementation that capitalizes on process improvements is the best method for automating your enterprise schedule. IT professionals who are considering automating their enterprise schedule should follow two basic rules:

- Buy a proven solution, do not try to write your own.
- Manage an automation project the same way as a software development project.

Where to Start

Thousands of companies have automated their enterprise schedule. By examining their projects, you can understand why they were successful. Successful companies implement a job scheduler before addressing other automation areas because it provides the largest payback. Most batch processing errors are caused by submitting jobs incorrectly, and the major responsibility of night operators is to run batch jobs. By automating this task, you take a giant leap toward eliminating errors and a fully automated environment. Automating your job schedule with Skybot Scheduler™ is the first step to unattended operations.

Getting Down to Details

To help secure funding for your automation project, pay attention to the details. Before seeking management approval, create precise cost estimates, determine the necessary in-house effort, and evaluate the expected benefits.

✦ Costs

Start by identifying the anticipated costs of automation software, hardware, and maintenance fees. (For example, the number of optical disk drives in use has grown steadily over the years.)

The major out-of-pocket cost item is likely to be hardware. Therefore, it's important to look at ways to reduce this expense, possibly through leasing options or server consolidation.

✦ Effort

Next, estimate the necessary in-house effort for the project. Identify a project leader who's responsible for completing the project. Identify and quantify support from the operations staff, your application and system programmers, and your end users.

If you cannot fill critical roles with in-house staff, consider hiring an outside consultant. An operations automation expert can help you define the project scope, select software and hardware, and guide the implementation.

From these resource requirements, and your estimate of software and hardware costs, you can develop a project plan and estimate the overall cost and duration of the project.

✦ Benefits

Finally, evaluate the expected benefits. They can be grouped into two categories: hard and soft.

Hard benefits are quantifiable savings you can assign specific dollar amounts to. For example:

- Improved productivity with automated enterprise scheduling.
- Not needing to hire another operator (or replace one who quit) and being able to reassign operators to other duties.
- Fewer (or no) technical support people needed at remote locations because your network is centrally managed.
- Less downtime and rerunning jobs.

The primary soft benefit is improved quality of operations, since most operation issues are the result of human error. You also benefit by moving operators out of the computer center and into areas where they can help resolve user problems.

Difficult to quantify, but clearly important, is an effective backup and recovery process. Without one, you could lose your job, or ruin your company. You can reduce this exposure by including jobs for critical server backups in your automated job schedule.

Enterprise scheduling automation eliminates disorder because scheduling problems are reduced and the operations department is more organized. A smooth-running department and improved quality of life for operations personnel increases productivity and reduces turnover.

Management Support

Automation projects need proper management support to succeed. You develop that support by planning the project carefully and presenting it in the context of how automated enterprise scheduling can benefit your company. Use graphics to portray the scope of what can be accomplished and include a high-level description of the benefits: increased reliability and availability, high productivity, and better performance. At this stage, your objective is not to cost-justify the total project, but to inform management of the need to automate.

Once management understands the need for automation, discuss the cost and benefit details of the specific project. Here, your goal is threefold:

1. Officially establish the project in the eyes of management.
2. Obtain funding approval.
3. Appoint the project leader and team members.

With these three critical steps behind you, the chances of success are very high. **Figure A** on the following page illustrates the tasks that are important for a successful automation project.
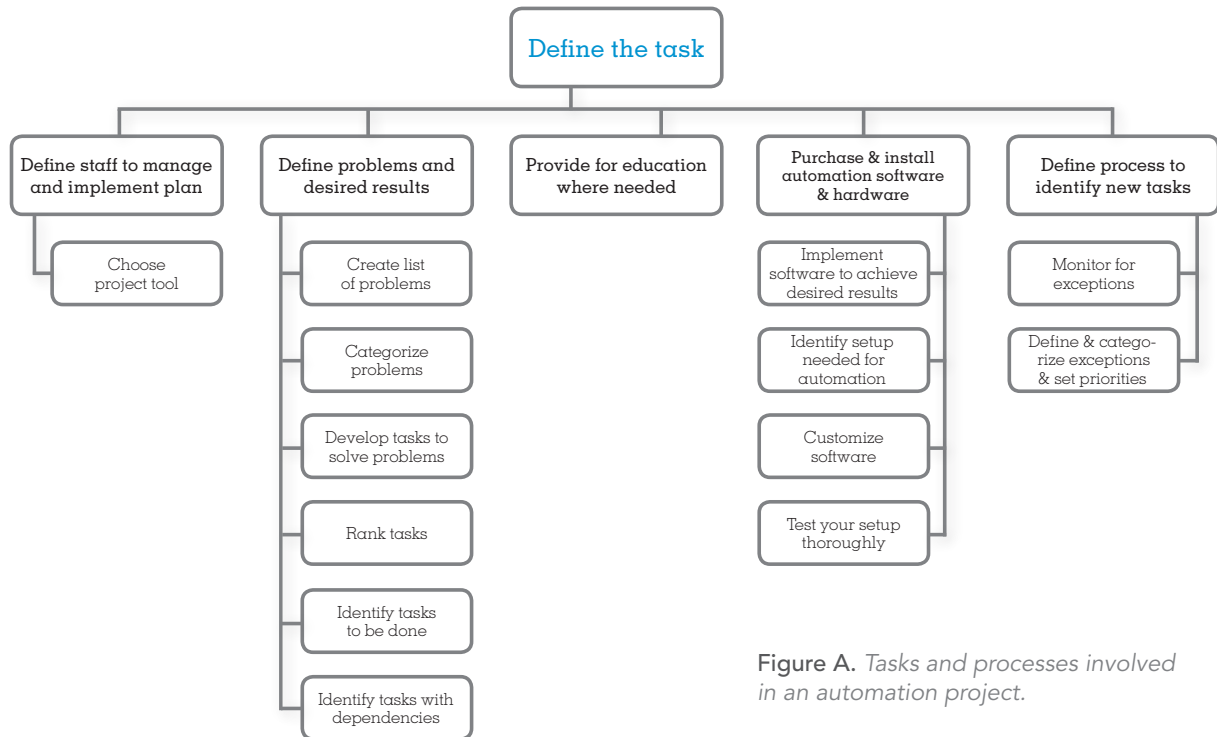
Define the task

Define staff to manage and implement plan

Choose project tool

Define problems and desired results

Create list of problems

Categorize problems

Develop tasks to solve problems

Rank tasks

Identify tasks to be done

Identify tasks with dependencies

Provide for education where needed

Purchase & install automation software & hardware

Implement software to achieve desired results

Identify setup needed for automation

Customize software

Test your setup thoroughly

Define process to identify new tasks

Monitor for exceptions

Define & catego-rize exceptions & set priorities

Figure A. *Tasks and processes involved in an automation project.*

Elements of Enterprise Scheduling Automation

Understanding enterprise scheduling automation is essential to developing an implementation plan.

✦ Enterprise Scheduling Implementation

The goal of job scheduling is to automate the submission of batch computing jobs traditionally performed by operators. If your operators are still manually submitting jobs on a regular schedule (day or night) and performing other batch management functions, automation should be a top priority.

Submitting jobs manually is highly error-prone—operators submit jobs out of order, forget to run them, miss a work day, or enter the wrong parameters. And, humans react more slowly to system events than computers.

Automation organizes the job submission tasks and makes them consistently repeatable. Your system runs more smoothly, helping you deliver better service to your users. Operations managers need a clear, system-wide picture of their scheduled batch jobs, even in a networked environment. With Skybot Scheduler, you can administer the schedules of every server in the enterprise from one place, on one system.

✦ Staffing

Whatever automation path you follow, you need to staff for implementation and maintenance.

The project manager should have a good understanding of server operations and be aware of the project's overall scope. Since that combination is rare, you may need more than one person for this type of project.

The size and knowledge of your staff, the extent of your enterprise, and the scope of the project dictates the number of people you need for implementation. Typically this is two to six people. Large organizations may need more. Occasionally, one person can do the job.

Use programmers on an as-needed basis during the project. For example, you may need application programming to modify jobs for batch submission using Skybot Scheduler.

Designate an operations analyst to configure and oversee the automation software installation. Many organizations assign this task to more experienced operators.

Include the operations administrator(s) responsible for monitoring and maintaining day-to-day operations in the implementation process. They can contribute useful information about the daily functions and tasks to be performed.

Once the initial implementation process is completed, operations administrators take over the role of maintaining the automated systems. This involves analyzing operational tasks for applying automation and refining existing procedures.

Follow-Up

A key (but often neglected) step of any project is follow-up. When major milestones are achieved, report your progress to management. Publish your successes. Look for additional automation tasks and build on what you have already accomplished.

Once you have successfully automated your job schedule, you still need to perform ongoing maintenance. Plan for future upgrades to your operating system, hardware, business applications, and automation software.

As time goes by, you will discover new opportunities for automation. Managing jobs and processes by exception makes it easy to identify problems as they arise. Keep track of them and reiterate the process described earlier for cost/effort/benefit analysis and developing management support. Continuous improvement of your operations is the goal, and keeping the automation cycle going is key.

Some Closing Thoughts

Automation is an ongoing process. New automation opportunities emerge as your computing environment changes. Managing tasks by exception lets you focus on continuing the automation process so that you are in a constant cycle of improvement.

You won't see all the benefits from automation immediately—they build over time. In six to nine months, you will be amazed how much better your enterprise schedule runs and wonder how you ever managed before automation. Skybot Scheduler was designed to adjust to the changes in your enterprise and advances in computing—learn how Skybot Scheduler can help you automate your enterprise schedule.

Visit **www.skybotsoftware.com** or call
1.877.506.4786 for more information
or a FREE 30-day trial.

skybot
software

952.746.4786
info@skybotsoftware.com
www.skybotsoftware.com