From Process Automation To It Orchestration

A Programmatic Approach to Endpoint Management & Process Automation Without the Hassle of Scripting
Why Automate Endpoint Management?

In today’s ever more complex endpoint landscape, comprised of disparate operating systems, software versions, application usage and configuration drift on every PC, server, ATM or point-of-sale system across the enterprise, performing systems management manually is not only not feasible but also a risky proposition.

Whether it is a missing patch or server misconfiguration, human error is the root cause of the majority of data breaches. Automating tasks and orchestrating processes goes beyond just achieving speed or getting rid of mundane, repetitive tasks. The benefits of codification of systems management tasks really is about achieving higher consistency and accuracy in bringing endpoints into compliance.

Furthermore, process automation allows IT departments to increase their agility by being able to remedy a situation before it becomes an issue. Thus, spending more time on mitigating risk rather than putting out fires.

Benefits of Process Automation:

- Eliminate manual, repetitive tasks
- Increase IT agility
- Reduce response time
- Increase accuracy
- Improve delivery of IT Support
- Mitigate risks
Programming Versus Programmatic

The topic is usually framed as pegging one against the other. But it really shouldn’t be the case.

Automating endpoint management with a programmatic tool doesn’t require any programming skills. Comparatively, there are many additional benefits to performing process automation programmatically. For one thing, it is easier to create, modify, maintain a workflow. Furthermore, on the organizational standpoint, transferring or sharing the knowledge of the runbook within the IT department is not an issue, as it requires very little training.

On the other hand, using a specific language or program to automate IT procedures requires more idiosyncratic skills such as for instance knowing PowerShell, the WMI repository, or WQL queries, thus, making the process and knowledge transfer a lot more arduous.

Programmatic essentially means “according to a schedule, or method.” Consequently, programming can be complimentary to programmatic and not necessarily an “either or proposition.” For example, you can use a programmatic tool to dispatch the execution of a PowerShell script on a large batch of machines and measure success thereafter. Having more tools in your arsenal is always a good thing.

“More and more organizations are adopting IT Orchestration and global process automation and it is changing the dynamics of their IT operation. As they shift their focus to pre-emptive global measures, they reduce the burden placed on their help desk technicians and system administrators. As a result, they are spending less time putting out fires and more time getting ahead of the next preventable crisis.”

Pascal Bergeot
CEO of Goverlan
The 3 Pillars of IT Process Automation

IT Process Automation works in three simple steps:

1. Define a Scope: Are you targeting users, computers, or groups?
2. Specify Actions: Build conditions to apply to a set of actions.
3. Access and Execution: Set a time, frequency or a trigger.

Audit Endpoints & Systems:
- System Hardware
- Operating Systems
- Connected Devices
- Network Configuration
- Logged-In Users & Login history
- Software Inventory
- Patches & System updates

Configure & Manage Programatically

- **Users**: Local drive, printer mappings, startup program
- **Machine Identity**: Names and domain membership
- **System Configuration**: Firewall and shared resources
- **System Services and Drivers**: Add or remove, start, stop, modify
- **File & System Registry**: Modify the system, transfer and receive
- **Patches & Updates**: System update schedule or apply patches
- **Monitor Health & Resource Consumption**: Detect system health issues
Define a scope of users, computers or groups

Specify actions build your flow based on a set of rules

If...

- report
- add printer
- wake
- run batch
- OS?

install A
install B
install C

Activate Workflow
When to run flow & how to access machines

- Deploy - Patches & Software EXE / MSI
- Auditing - List Local Admin Membership
- Clean - Low Disk Space
- Disable System Device

Measure Results
Validate success, or discover unresolved issue

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Generate Actionable Insights & Reports

Turning data into actionable insights is the key to managing complexity. It not only allows to monitor the health of a system but to identify potential issues and the best course of action.

Here are a few example of reports that can be generated for discovery, quality control or compliance:

- Recently deleted, added, or modified Users
- Inactive or never logged on users
- Installed software inventory
- Systems with low available memory
- Systems with failing hard drives

Audit, Discover, Remediate & Validate:

Process automation can be used for a variety of IT support tasks from detecting a misconfiguration, dispatching a patch to remediation and compliance. The goal is to discover and remedy a situation before it becomes an issue. Validating success is entirely part of that process.

Here are a few examples of workflows:

- Modify system and registry files, dispatch MySoftware, notify user after silent install
- Detect and disable undesired system devices
- Detect prohibited software applications, and uninstall them
- Detect low disk space on systems and clear log and temp directories
- Detect a missing patch, trigger a remediation workflow, alert stakeholders of success or failure

Why Adopt a Data-driven Approach to Delivering IT Support Services?

Think of a workflow automation as being the same as a campaign designed to achieve a specific goal measurable with its own performance metrics. As more data points are collected, it creates visibility for the IT support services delivered and their impact on the entire organization.