



Process Automation for IT: What is it?

Just as any other business function, IT runs on processes on a day-to-day basis. IT processes are complex, since they involve a number of tools and applications. They can touch a variety of hardware as well, be it network switches, virtual infrastructure, or cloud services. A great example is new employee onboarding. Although on the surface, this seems like an HR job, the process usually starts with an IT ticket in an ITSM tool and can cut across multiple IT teams for completion. The processes often require very specific and specialized skillsets, making it complicated for a single person to orchestrate across these different systems.

Most organizations are at a maturity level that has defined standard workflows or steps for each process. For example it's tracked in an ITSM tool and starts with a ticket; it is then assigned to a subject matter expert (SME), and the ticket is updated with progress and resolution.

Some examples of processes that various IT teams deal with are:



IT Operations

Service requests,
password reset,
employee onboarding
and offboarding



IT Service Management

Incident response,
observability/AIOps alert
remediation, resource/
app provisioning, patch
management



Network Operations

Device onboarding,
software upgrades, alert
troubleshooting

Process automation touches all of these different technologies and applications, automating workflows and hand-offs, fostering cross-team collaboration, and unleashing productivity. For example, IT service desk teams empower employees by fulfilling time-sensitive service requests. Processes ensure that there is structure to how these come in and how they are fulfilled:

- 1** Capture incoming request with all requirements: Enable via multiple channels — Chat Ops, ITSM platforms, email, phone etc, and ensure everything is captured in IT's system of record.
- 2** Ensure information completion: Back-and-forth with the requestor to make sure IT has all the information needed to service the request.
- 3** Route tickets & approval: Assign and route tickets to the right team that can provide resources requested; incorporate approvals where needed.
- 4** Ticket updates and stakeholder notification: Ensure the system of record is updated with progress.
- 5** Resolution: Ensure the requestor is satisfied with the resolution and close the ticket with appropriate documentation.

Although this is a very high-level workflow that can be applied to any incident, there are nuances based on the type of incident and the SMEs working on it, according to severity.

Efficient process workflows allow IT to respond faster, reducing impact of incidents, and consistently maintain and deliver on their service-level agreements (SLAs). This positively impacts **organizational productivity**.

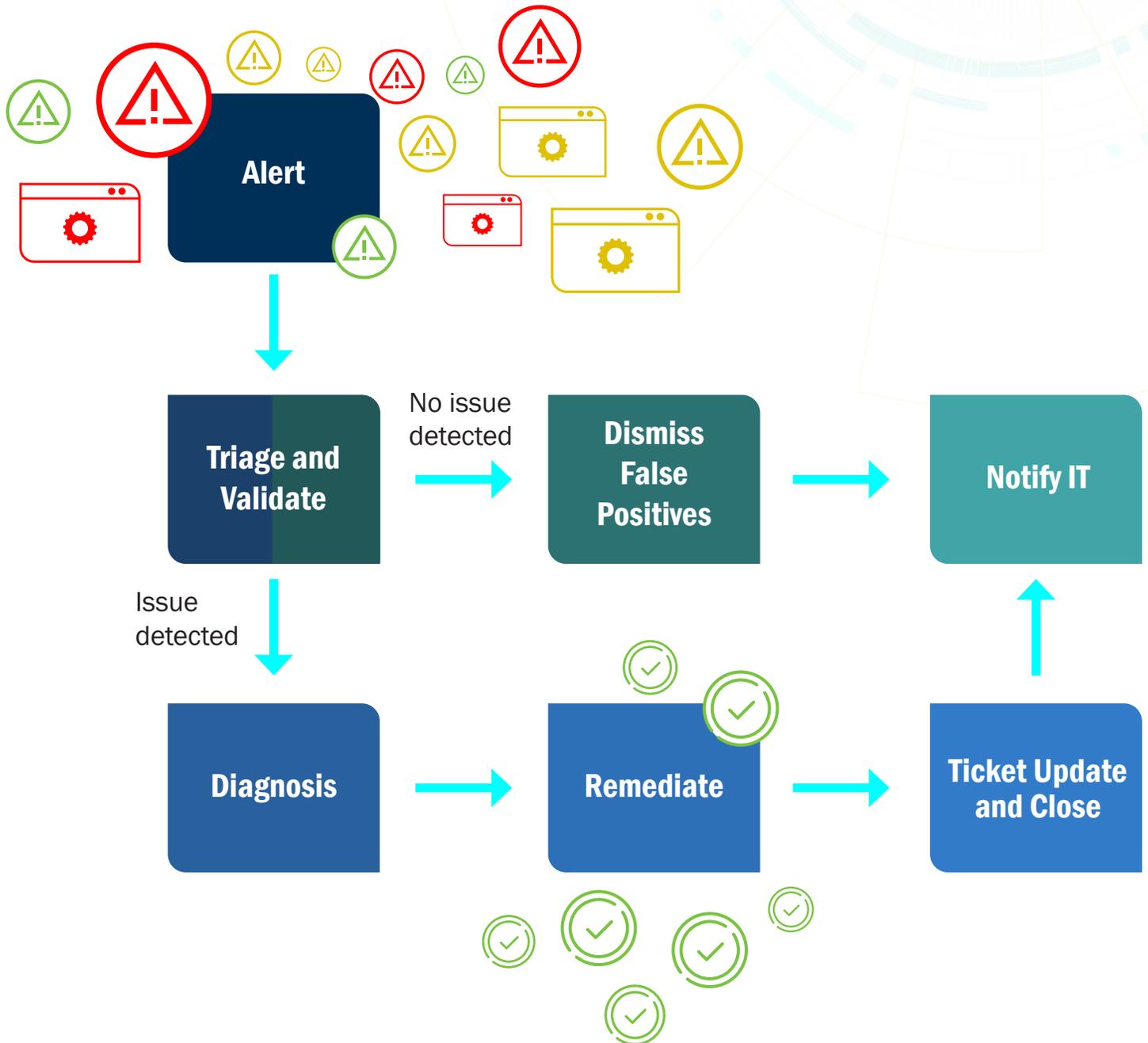
SCRIPTS AND TASK AUTOMATIONS ALREADY EXIST, SO WHY DOES IT NEED ITPA?

Most IT teams have some form of automations or scripts performing a task. But process efficiency doesn't necessarily come from automation of a single or even a couple of tasks. It's about ensuring that hand-offs happen when they need to. This confirms a single system of record, whether an alert update or a ticket update, while also stitching together a combination of individual actions and administrative tasks.

Improving operational velocity cannot be done at an individual task level, but rather must be done at a process level.

Automating specific tasks is not enough and leaves significant opportunity on the table. This opportunity can strategically transform your process to eliminate delays, streamline hand-offs, and deliver service excellence, governed by an overarching playbook.

For example, can scripts and task automation tools perform this end-to-end process?



IT PROCESS AUTOMATION: YOUR KEY TO UNLEASHING OPERATIONAL EFFICIENCY

Approaching automation from a process context is the only way to strategically transform. ITPA can do that for you. In Gartner's own words "ITPA solutions coordinate the execution of work, sequence the timing of subordinate workflows and scripts, and orchestrate the delivery of multiple tasks and services across different IT groups and models".

ORCHESTRATION AND ITS PLACE IN ITPA

Orchestration plays an important role in process automation. It is the thread that ties together the different tasks and point automations to build a process workflow. Bringing your scripts into an automation platform can achieve a whole new level of standardization, helping you:



Reuse scripts for multiple automations by conversion into a library



Maintain an audit log, revealing when it was run and what the output was



Sequence tasks into a workflow—make decisions based on the output and take another action



Standardize platform and use source control to track changes



Make information available for use by various IT teams

- For example, SME-approved scripts can be triggered directly from ITSM platforms to give SMEs a head start on diagnosis of the IT incident

While orchestration and automation are sometimes used interchangeably, both have their place in ITPA and are equally important for building automation workflows:



Trigger

- User/Developer requests a resource/update
 - Through Resolve self-service portal
 - ITSM ticketing system



Validate and Triage

- Classify and confirm severity of the IT ticket
- Create a ticket if the request came through the Resolve self-service portal



Diagnose

- Run diagnostics to gather additional data
- Execute runbooks based on the ticket type
 - Use pre-built diagnostics (for networking)
 - Update ITSM ticket real-time



Remediate

- Auto-remediate commonly known issues
- Use interactive remediation for changes in mission-critical systems. Involve L3 experts
- Perform post checks to ensure configuration updates
- Update ticket for compliance/audit trail

ITPA is not about re-doing your automations. It's about standardizing your existing automations while building out new workflows and runbooks.

HOW IT WORKS

To facilitate orchestration of workflows across multiple IT systems, ITPA provides connectors to these third-party systems and applications. ITPA orchestrates workflows using connectors to leverage integration with many different technology end points [IT infrastructure and applications]. Some connectors are application-specific, while others are more generically related to protocols and APIs.

- Generic Protocol Gateways to bi-directionally communicate and integrate to third-party systems (HTTP, SSH, EWS, Email, Telnet, TCP, SOAP, etc.), including Gateway Builder
- Generic Protocol Connectors connect to and take action on third-party systems or devices (HTTP, SSH, TCP, FTP, Rest, SOAP, ElasticSearch, etc.)
- Utilities/Tools for troubleshooting, workflow, and platform functions

DEFINING TRIGGERS FOR ITPA WORKFLOWS

- Monitoring alerts that track business applications and IT infrastructure
- ITSM platforms and service tickets
- ChatOps and conversational AI platforms
- Self-service by opening up automation workflows via HTML pages

Most ITPA platforms enable adoption of the technology by offering out-of-the-box connectors—a library of integrations to accelerate time-to-value—and a low-code/no-code designer to build custom integrations.

DEFINING TRIGGERS FOR ITPA WORKFLOWS

To truly transform every business function, an organization must also step up. A process can only be as fast as its slowest task. Leaders, therefore, need to look at automation as a strategy. As every business function is enabled with a way to design and implement automations, ITPA and RPA co-exist to allow broad coverage on different types of tasks.

Both ITPA and RPA automations move data in or out of third-party application systems. Where they differ is in nuances of scope, where they work best, and which technologies they tie together. RPA tools mostly work at the user interface (UI) and surface level. They allow users to mimic their actions of data transcription and other tasks to complete a process.

ITPA and RPA complement each other—they are both automation technologies enabling operational efficiency applied to complementary processes; they automate different aspects of processes and take different approaches.

RESOLVE

RPA

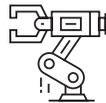
ITPA tools automate and orchestrate the delivery of IT services across multiple end points using CLI or API calls (not interface dependent).

Tech-savvy IT personnel:

- Operations
- Networking
- IT Security

Acts as a bridge between multiple systems, applications, and platforms, unifying the underlying infrastructure. Comprises specified procedures scheduled in advance or activated by triggers.

- IT Operations: VM Management, Health Checks, App Troubleshooting, AD Health Check, and Maintenance
- Networking: Network provider path trace, Alert remediation (validation, triage, diagnostics)



Technology



Primary Users



How It Works



Top Processes

Robotic Process Automation tools operate at a user-interface level to mimic business user keystrokes.

Line of business users

- HR
- Finance
 - Customer Service

Extracts data from digital screens across applications to reduce the time needed to collect data manually to automate repetitive UI-dependent business processes.

- Finance: excel modeling; invoice processing
- HR: Onboarding requests; payroll
- Marketing: Lead nurturing
- Customer Service: Handling service requests; processing customer data

