

How Holistic, Bi-Directional Enterprise Technology Orchestration Can Improve General Business Productivity

Introduction and Context

The largest challenge for IT organizations seeking to optimize their technology management with IT Asset Management (ITAM) has been limitations on integrations and extensibility. This lack of flexibility means companies cannot treat ITAM as a broadly useful strategic asset for security, compliance, HR, and/or finance teams. Weaving ITAM into critical company workflows within and beyond IT requires considerable customization and may take years to complete. This can balloon the cost of an ITAM deployment to seven figure services fees, on top of the base software license fee.

Because most widely used ITAMs were coded using older monolithic software architectures, they were never designed to accommodate microservices and open APIs. Collectively, these limitations prevented ITAM subsystems from fully integrating with each other, let alone with other systems of record for finance, HR, and security teams.

In contrast, newer Enterprise Technology Orchestration (ETO) solutions deploy open and well-documented APIs and are designed for bi-directional data exchange. This allows much faster implementations of integrations, enabling a much greater degree of flexibility to meet diverse needs. Because these APIs are open and use popular scripting languages such as python, users can quickly program and create their connectors without requiring vendor assistance or paying an integration tax.

Leveraging APIs + extensibility to transform Enterprise Technology Orchestration

By tapping into a multitude of new sources of inbound data, and expanding the ability of an ETO solution to facilitate change in external systems, APIs and extensible connectors can now manage the complete Asset Lifecycle while simultaneously orchestrating bi-directional changes for other teams dependent on IT processes. Some ways that other groups can benefit include:

- ▶ Integrating with HRIS systems to let the HR department know that a new hire has completed technology onboarding and has signed all attestations
- ▶ Integrating with Security Operations and Compliance teams to continuously update the compliance and security status of every member of an organization
- ▶ Integrating with FP&A and Finance teams to facilitate on-the-fly tracking of asset usage and consumption for financial planning
- ▶ Integrating with Procurement teams to create workflows to automate key manual procurement processes and automatically record key asset status data such as purchase and warranty dates in procurement databases

The Baseline: APIs and connectors for holistic asset management

The crucial foundation for a holistic integrations platform for ETO is the ability to quickly create and easily manage custom asset and user connectors. This can be done either through pre-configured APIs or via simplified connector scripts. For APIs, pre-configuration means ETO admins can quickly select and set-up API connections for the software systems they use the most, including:

<p>TICKETING</p> <p>systems like Jira and Zendesk</p>	<p>SOARS</p> <p>like Palo Alto Networks Cortex platform</p>	<p>HRIS</p> <p>systems like Workday</p>	<p>SSO</p> <p>services like Okta</p>	<p>EMPLOYEE</p> <p>directory systems like ActiveDirectory G Suite</p>	<p>CLOUD INFRASTRUCTURE</p> <p>such as Google Cloud, Amazon Web Services, and Microsoft Azure</p>
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Beyond APIs, an ETO effort will also allow for the rapid creation of custom connectors. The connectors will enable data to be aggregated in the ETO from a variety of critical systems that may not have open APIs, including:



By integrating information from these systems and others and synchronizing data in both directions between systems, ETO becomes the “air-traffic control” system for IT-centric processes. This also provides a powerful way to interrogate and ask questions about your entire software landscape.

Opening up new and innovative capabilities with Enterprise Technology Orchestration

By extension, ETO enables greater insights into data hygiene, easier decision making, and more robust process and workflow automation. Some of the additional possibilities generated by this architecture include:

RELATIONSHIP MAPPING:

Define relationships between systems before launching connectors and APIs or running imports. Ideally, custom fields can be created directly in-line during the mappings process, so IT admins can establish the new data streams they need from a single screen in one step.

FLEXIBLE WORKFLOW SETUP:

Set up and manage workflows from any part of the ETO application and any view. For example, an IT admin may recognize that a query they have made regarding a user’s device or status requires a response and that this is a process the admin will likely need to repeat. Rather than go to a specific workflow engine, the admin can set up the workflow right from the query engine. This expands the capability of ETO from workflows being an exception to making them useful even for tightly constrained edge cases.

WORKFLOW VISUALIZATION:

A visualization engine and visual workflow editor allows IT admins and others to quickly understand and modify or construct complicated workflows that might be time-consuming or confusing with other types of editing systems. IT admins should also be able to instantly convert any saved search into a workflow or use it to initiate a workflow.

API PRESETS CATALOG AND CREDENTIAL VAULT:

A searchable catalog of commonly used API endpoints that IT admins can access to quickly create workflows and integrations on-demand. The APIs should be bi-directional, enabling the addition or deletion of data depending on the privilege levels and field capabilities of the native API. Ideally, this catalog is bundled with an API credential and access key vault to simplify API management into a single module.

BLOCK EDITING OF WORKFLOWS:

A “search-and-replace” function for strings of actions in workflows. This can simplify mass updating and allow for easier switches from one service (and API) to another, covering all relevant workflows.

Sample use cases for holistic, bi-directional ETO

Because IT is woven tightly into the fabric of business, the number of high-value use cases increases exponentially with the addition of APIs, connectors, and flexible, extensible architectures. In that sense, any system with an API or a way to move data in and out easily can become a useful touchpoint for ETO workflows. Here are three use cases we have identified from our existing customers.

SYNCHRONIZED MANAGEMENT OF SECURITY INCIDENTS:

When a breach occurs, or a device is lost, or a user account is compromised, then SIEM, SOAR, and ETO that are integrated dramatically simplify and improve the process of response and lockdown. At the first sign of problems, the ETO can instantly provide details about the owner, location, and status of any device, software, or cloud infrastructure element and automatically append them into security incident management systems. As the incident is managed and systems are updated, the security operations team’s activities will automatically sync back into the ETO asset records.

STREAMLINED EMPLOYEE ONBOARDING AND OFFBOARDING:

ETO can simplify onboarding and offboarding by kicking off provisioning or de-provisioning workflows as soon as a new employee is added or an employee’s status is modified to reflect they are departing. For example, if a new engineering hire is made, the HRIS system could send notice to the ETO system. The ETO would then trigger workflows to automate provisioning of AWS or Azure credentials, enable the new engineer to receive access to GitHub or Jenkins for programming, and arrange for the purchase or assignment of their laptop, monitors, keyboards, etc. For offboarded employees, rapid and accurate deprovisioning of licenses can save money and reduce license violation risks and improve security stance.

AUTOMATED COMPLIANCE PROCESSES FOR SOC2:

ETO can automate most critical verification processes for IT system compliance for SOC2. This can include automated attestations that proper controls (AV, malware detection, etc.) are installed on devices or automated verifications of privilege controls and SSO usage on key systems, to name two examples. By automating compliance processes, ETO can reduce time spent on slow and error-prone manual processes.

A business case for holistic, bi-directional Enterprise Technology Orchestration

To begin, consider the immediate benefits and productivity enhancements to be enjoyed by the IT and operations teams: reduced time spent on repetitive ITAM tasks, instant integration of ETO with dozens of other systems of record, cost savings on customizations of ETO connectors, construction of a broader range of workflows to automate more edge cases, and, perhaps most critically, reduction in manual errors by automating imports into an ETO from multiple sub-ITAM systems (SAM, MDM, CMDB, CSM, etc.).

Second, consider the operational and cost benefits that accrue beyond improved IT admin capabilities and agilities, such as:

- ▶ Improved coordination between IT and HR for employee experience efforts
- ▶ Improved security response time and faster device lockdowns in case of breaches or device loss
- ▶ Automation and enhanced accuracy of IT spend planning and forecasting
- ▶ Accelerated and more accurate employee onboarding and offboarding
- ▶ Accelerated compliance checks at the employee, office, and unit levels
- ▶ Faster and more accurate IT audits
- ▶ Faster response to IoCs and remediation of security incidents that could lead to compliance violations
- ▶ Reductions in staff time by finance, HR, compliance, and IT spent on manual tasks
- ▶ Improved overall security and reductions in risk

Calculate your cost/benefits across all of these variables; back-of-the-envelope calculations are usually sufficient as the savings from a transformation like this tend to be quite obvious. A useful framing is to paint a simple before/after picture so approvers can recognize the benefit of moving from manual and hard-to-update asset management systems that require expensive customizations and lots of administration time to simpler ETO. Touch on softer benefits such as improved employee experience, enhanced CISO/C-Suite/BOD confidence in organizational security and compliance, and improved visibility into IT consumption and trends over time.

When properly executed, moving to a holistic, bi-directional ETO can save an organization large sums of money in avoidance of excess device and software license purchases, optimized cloud infrastructure spend, and reduced compliance and audit costs. For employees, the impact can be transformational - a non-trivial percentage of their daily activities will be automated away. They will have far more time to spend on cognitive tasks that require creativity and a human touch. For IT teams, this transformation can unlock their ability to think strategically, align more closely with business objectives, and generate new ways to understand IT consumption and process data that may provide actionable intelligence for productivity improvements.

About Oomnitza

Oomnitza is an agentless enterprise technology orchestration solution for digital business. By consolidating technology asset data from siloed systems into a single pane of glass, our customers are able to optimize their technology spend, automate their governance processes to meet compliance and auditing requirements, protect from security risks, and ensure great employee experience and productivity. Oomnitza is headquartered in San Francisco.

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