

## Hybrid IT and the Rise of Enterprise Technology Management



### Introduction and Context

Over the past decade, Cloud computing has rapidly grown in popularity, driving fundamental shifts in the way IT services are delivered, paid for, secured, networked and scaled. In a typical enterprise, IT assets and services may take many different forms. What were once physical servers today may be virtual entities, running applications in public Clouds like Amazon Web Services Elastic Compute Cloud (EC2), on private compute Clouds, or atop virtualization systems like VMWare vSphere.

Complex application software such as CRM or productivity suites are increasingly delivered as Software-as-a-Service (SaaS) via HTTP and browsers. In a more recent development, core tiers of application architectures, such as databases or application delivery controllers, may either be run on Containers as a service or delivered as a SaaS product by a dedicated provider such as Confluent (Kafka) or MongoDB. Across the board, makers of IT and software products have recognized that delivery via the cloud and as a service is more profitable and increasingly preferred by IT teams. This is why Adobe, Microsoft and many other software giants are rapidly moving customers away from installed software and towards SaaS products.

At the same time, the number of physical devices that IT teams must manage continues to skyrocket. Even as SaaS and Cloud have become more common and even dominant in certain realms, the average knowledge worker is using more devices to access those services—a laptop, a smartphone, tablets, smart watches and more.

Concurrently, the rise of Connected Devices means that IT teams must manage, secure and procure far more systems that are capable of connecting to and compromising corporate networks. These devices now include bluetooth headsets and mice or trackpads, video conferencing and telephony gear, and billions of sensors that monitor environmental or physical systems (IoT).

In addition, there is the additional layer of a highly dynamic workforce, driven by an increasingly remote or mobile employment base, along with all the IT infrastructure that moves around with employees, all in response to a pandemic that shows no signs of abating.

This dual-reality of IT has created a new approach and set of operational tactics that blends the two realms into what is now called “Hybrid IT”. Likewise, Hybrid IT requires a different approach to IT asset management and enterprise technology management, with solutions that are flexible enough to easily incorporate both Cloud and traditional IT systems into a single management and orchestration platform. This holistic approach to enterprise technology management allows IT teams the flexibility they need by breaking down data and system silos and linking different sub-systems for IT management via well structured APIs.

## What is Hybrid IT?

Hybrid IT is a strategy and practice where enterprises simultaneously use both in-house and Cloud-based IT assets and resources to deliver IT services to users or customers. Under a hybrid IT model, IT organizations can secure or “lease” designated portions of needed IT assets and resources from public Clouds, or from private Clouds hosted within a public Cloud infrastructure. Resources secured can range from SaaS products, such as CRM or productivity suites like Office365, to core IT infrastructure capabilities such as elastic computing, networking, security, and operational management.



## Why Has Hybrid IT Become So Popular?

There are a host of reasons behind the increasing popularity of Hybrid IT deployments. Ever since the rise of the personal computer, followed by mobile devices, enterprise IT has been driven by consumer trends. SaaS variants have become more popular with consumers for email and productivity. Knowledge workers—who are consumers in their other lives — naturally brought this preference to the office. Consumers have also adopted more and more devices. Office workers mirrored this trend. This confluence forced IT teams to more actively pursue and architect for Hybrid IT.

Cloud computing has moved from the fringe and bleeding edge to becoming widely accepted even for mission-critical applications. Driving the adoption of Cloud infrastructure has been the “shift left” where developers and DevOps teams demand more flexibility and faster spin-up of resources to improve productivity and software development velocity. For operations teams, this more flexible approach allows companies to burst resources either upwards or downwards depending on need and demand. That variability more accurately tracks business demands, which are dynamic and driven by seasonality and other external factors.

In addition, a hybrid IT shifts the operational model from IT as a capital expenditure (CapEx) to IT as an operational expenditure (OpEx), serviced by a third party organization. Shifting to an OpEx model allows greater financial flexibility and enables lighter resource requirements for maintaining and upgrading IT assets. In a Hybrid IT scenario, enterprises can choose to keep the most critical and valuable assets and functionalities in-house. They may choose to do this for reasons of security and compliance, or because those capabilities are more specialized and harder to replicate in a Cloud computing environment. Most organizations have a blend of Cloud and in-house IT assets and resources, depending on their maturity level and their comfort level for putting mission critical capabilities in the Cloud.

## How IT Teams Can Leverage Enterprise Technology Management to Improve Hybrid IT

Traditionally, IT asset and resource management has spanned multiple disconnected software solutions. This led to piecemeal data collection and challenges in generating a unified view of enterprise technology portfolios. It also created challenges executing modern orchestration, automation and workflows including multiple steps, systems, or departments. The rise of Cloud and Hybrid IT made these already splintered IT buckets harder to manage and orchestrate; getting accurate, up-to-date data across all systems was challenging and required considerable manual labor.



To remedy these problems and better equip IT teams to handle the modern Hybrid IT architectures, teams can deploy Enterprise Technology Management (ETM) solutions. ETMs are designed to connect all the different silos of information from various point solutions, synthesize the information into a datasource of record for IT assets, and power workflows and configurations that automate key IT-related processes. Unlike legacy ITAM solutions, ETM systems are designed from the ground up to ingest and clean API data from sub-systems and data sources to then present a holistic, accurate and trustworthy view of every IT asset.

ETMs are designed to work with minimal impact: modern ETMs are agentless—collecting data via other installed agents, and require minimal integration work. ETM solutions use common and well-documented scripting languages such as Python for connectors. This allows enterprises to create their own integrations and connectors, adapting their ETM to their own purposes without creating too much technical debt to maintain. This flexibility and extensibility is crucial for addressing Hybrid IT challenges because new classes of assets are appearing every few years.

Due to these characteristics, modern, flexible, and holistic ETM can:

- Acquire and unify data from multiple siloed IT management systems to create a single source of truth across Cloud and traditional IT, including all classes, locations and types of assets
- Deduplicate and normalize asset data to improve accuracy and make all data easily searchable or exposable to other teams via APIs
- Decrease resolution times of help desk tickets and deliver more responsive IT support by streamlining and automating ticketing processes
- Enable DIY procurement and “shift left” options for employees who need additional software, SaaS or Cloud infrastructure assets to perform their jobs
- Support bi-directional integrations with HRIS, SSO and other relevant tools to break down silos between teams and make IT an enabler for business excellence, IT and procurement
- Allow anyone to create automated multi-step workflows to improve efficiency such as putting in place all required steps to follow when a potential security anomaly is detected
- Automatically discover all Cloud and traditional assets attached to an enterprise network and aggregate status, age, usage, and encryption status
- Integrate all asset types with crucial security processes including incident response and threat analysis



## How ETM Solves Risks Introduced by Hybrid IT

Hybrid IT introduces additional challenges for security, compliance, optimization, orchestration and enablement of IT resources. Securing Cloud and traditional IT requires different approaches. Compliance is challenging when consumption of assets is variable and infrastructure is constantly morphing. Enabling employees to easily consume IT assets and services depends on solid operational infrastructure across credentialing and automated provisioning. Optimizing the use of IT assets is more complex due to ever-changing consumption levels. Lastly, orchestration of IT assets becomes more complicated because there are more asset types and they are not all easy to connect or manage from a single pane of glass.

The benefits of properly deployed holistic ETM for Hybrid IT to address those challenges are numerous and include:



### SECURITY

ETM improves security by enabling a more uniform security stance and policy adherence across all IT modalities and asset types. ETM also allows Infosec teams to set up multi-step automated workflows to address any type of anomaly detected and validated by the ETM.



### COMPLIANCE

ETM can simplify compliance and audit completion by automating core compliance processes, providing data flows from IT systems into finance and auditing solutions, creating push-button audit playbooks which are repeatable and scalable.



### ENABLEMENT

ETM empowers dynamic DIY procurement and provisioning of all types of assets from Cloud infrastructure to laptop refreshes.



### OPTIMIZATION

By visualizing spend and consumption trends across all IT asset types, ETM can help IT teams reduce over-provisioning of variable/virtual resources and right-size procurement of software and hardware to fit the precise present and future needs of the enterprise.



### ORCHESTRATION

ETM can orchestrate technology assets across their entire lifecycle and enable smart triggers to kick off multi-step workflows. This orchestration can be two-way, with ETM data triggering workflows and actions in other systems and vice versa.

## Conclusion: Hybrid IT is Here. ETM is Now a Core Requirement.

Hybrid IT is no longer an optional discipline for enterprises. Various forces are driving Hybrid IT towards mainstream status and beyond. COVID-19 and its variants cemented remote work as a permanent part of the work landscape, forcing IT teams to rely more on Cloud resources which are easier to configure and manage remotely. The rise of DevOps and decentralized applications pushes more compute infrastructure to public Clouds. The increase in multi- device use and connected devices, conversely, raise the requirements for managing standard devices, albeit with newer types of systems for security and configuration standardization.

**All of this is happening while requirements for security, compliance and auditing continue to increase in complexity.** Consequences of failing to manage an IT asset properly are now more significant than ever. At the same time, IT teams are under tremendous pressure to optimize spend and automate processes for orchestrating IT assets. Hybrid IT complicates and expands these challenges. Modern, holistic ETM is the best solution to this problem. By delivering a flexible platform that can consume data from all the legacy solutions while allowing for API-driven data consumption and two-way data flows, smart, modular ETM can serve as the crucial eyes, ears and brains needed to manage the complex realities of today's Hybrid IT.

### About Oomnitza

Oomnitza offers the industry's most versatile Enterprise Technology Management platform that delivers key business process automation for IT. Our SaaS solution, featuring agentless integrations, best practices and low-code workflows, enables enterprises to quickly achieve operational, security and financial efficiency leveraging their existing endpoint, application, network infrastructure and cloud infrastructure systems. We help some of the most well-known and innovative companies to optimize resources, mitigate cyber risk, expedite audits and fortify digital experience.

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