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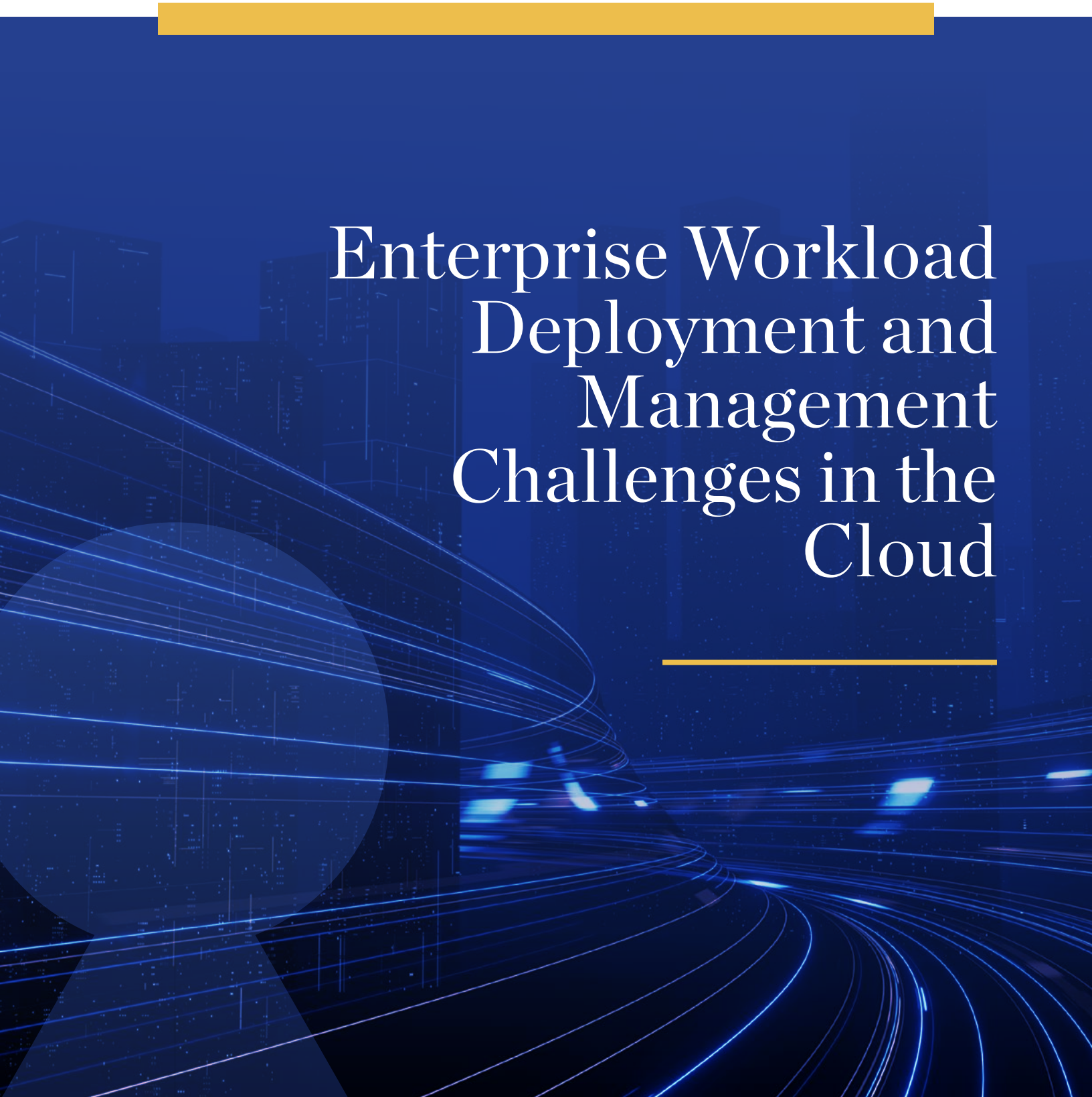
Automated Engineered SAP Landscape as a Service

Enterprise Workload Deployment and Management Challenges in the Cloud



Breaches caused by enterprise workload misconfigurations in the cloud exposed nearly **33.4 billion records** in 2019 and 2020. According to the Ponemon Institute's 2020 report, **the average cost per lost record is $150**. Multiplied by the number of records exposed, enterprise workload misconfigurations cost companies worldwide **nearly $5 trillion** in 2019 and 2020 alone.

Gartner estimates that the worldwide public cloud services market was $214.3 billion in 2019 and $247.6 billion in 2020. This means that the cost to companies due to breaches caused by enterprise workloads deployed on cloud misconfigurations is more than 12 times the amount of worldwide investments in cloud services.

Despite the public cloud's many benefits, deploying and managing enterprise workloads on cloud platforms can be challenging. Whether you are considering the cloud, or have already migrated multiple applications, you will inevitably have to tackle some of the same key tasks with each enterprise class workload: ensuring that workload deployments meet security, governance and compliance requirements and best practices. You will also have to keep data protected, maintain licensing and compliance, prevent downtime and availability issues and minimize transfer costs.

These tasks can be simplified into four categories: deployment, availability, cost optimization and governance. To succeed in the cloud, you must address all the major challenges for each category.

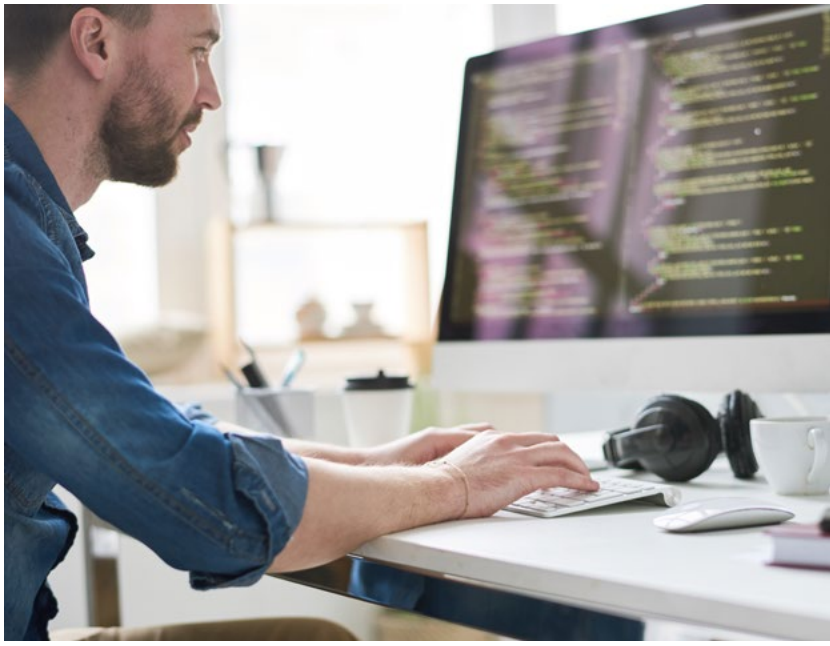
Deployment

For any enterprise workload to be successfully deployed to and managed in the cloud, companies must consider critical factors like enterprise workload deployment best practices along with the type of data or application being deployed. They also have to understand the state of each workload component and infrastructure that needs to be deployed.

Aside from the obvious hurdles of deploying an enterprise workload to the cloud—maintaining controls and compliance (SOX, HIPAA, etc.), preserving encryption and centralized identity management, and network setup—there are a variety of less apparent challenges you need to keep in mind as part of the deployment:

- Security and performance policies and protocols
- Best practices and processes
- Remapping controls to owners

Some people may have reservations about deploying mission critical enterprise applications the public cloud, due to its multi-tenant nature architecture. But, for established providers like Microsoft Azure, Amazon Web Services (AWS) and Google Cloud Platform (GCP), with robust native cloud services and best-of-breed third-party tools, the public cloud allows for a far greater degree of enterprise grade capabilities than traditional computing platforms.



Availability

Maintaining High Availability (HA) for mission-critical applications like SAP is crucial for any enterprise. And, with demanding uptime requirements to meet, it can be daunting to move to a cloud infrastructure you cannot see or touch.

Enterprise applications like SAP are deeply complex. SAP landscapes are deployed across multiple networks and are interconnected with other enterprise applications. Deploying such a heavy workload requires advanced planning and traffic management. The process should raise some pressing questions regarding availability:

- How can you ensure high resiliency and business continuity?
- What kind of automation needs to be in place to ensure proper backups and minimize unscheduled downtime?
- What sort of failures might occur in the cloud at the network, compute, storage, and geographic levels? How will they be handled?
- What effects will new network topology have on existing monitoring capabilities?
- How will network performance and latency be affected?
- What is the most effective HA clustering solution to ensure business resiliency in the cloud?

Anticipating failures, architecting for them in your enterprise workload framework and constantly mitigating risk, are all imperative to leveraging automation and achieving High Availability in the cloud.

Outages affecting Virtual Machines (VMs), storage and network will happen in the cloud. The ones who experience the least disruptions, or no availability issues at all, are companies that have built sophisticated, self-healing HA automation into their workload deployment plans. This way, despite the outage, their mission-critical applications like SAP will remain up and running.

Cost Optimization

Lower Total Cost of Ownership (TCO) is one of the primary benefits of the cloud. It enables you to spin up or tear down servers instantly, as needed, and take advantage of pay-as-you-go billing.

There is no Capital Expense (CapEx) in the public cloud. However, when it comes to the bottom line, the cloud's Operating Expense (OPEX) model is not inherently more cost-efficient. It is easy to rack up transfer costs during migration, along with high usage costs afterward. Your cloud infrastructure needs to be designed for efficiency to enable the real savings opportunities of the cloud.

All functions and efforts that will contribute to minimizing costs must be brainstormed and strategized, such as: archiving, mapping, Disaster Recovery (DR) and HA, testing, developing, and evaluating Proofs of Concept (POCs) and of course, automation.

This is just a small part of the front-end planning needed for an enterprise workload to be cost-efficiently deployed and managed in cloud. Once in the cloud, strong automation, and daily enforcement of the desired state of your environment are what enable true cost optimization. And, that only happens when you treat your entire workload as code and can shut down the workload's resources automatically when they are not needed and restart them automatically when needed, to optimize the cost.

Governance

Managing enterprise workloads in the cloud may happen post deployment, but it necessitates extensive forethought nonetheless. Without the right daily governance and controls, cost overruns can quickly become a legitimate risk in an infinitely scalable computing platform.

The paradigm shifts once you are in the cloud. Instead of servers, workloads run on instances. And, manual input, in the case of automation, is replaced by API calls.

Two of the most recurring problems enterprises encounter once in the cloud are:

- Not having the expertise needed to utilize its advanced capabilities
- Failure to impose proper governance to stay within budget

Expertise and technical capabilities lead to great governance, and great governance enables success. Without the two, keeping up with the public cloud, and leveraging its manifold features will only grow more difficult over time.

Infrastructure as code and workload automation lie at the center of effective cloud operation—and should be at the center of successful enterprise long-term planning.

The enterprises who master them thrive in the cloud, reaping greater business gains each year. Those who fail to are left treading water, never gaining the opportunity to tap into the cloud's transformative potential.

Vnomic Platform

Companies must adopt proper workload cloud delivery and management to protect their investments and prevent devastating costs associated with enterprise workload misconfiguration and data breaches.

Vnomic platform is designed from the ground up to deliver the most comprehensive enterprise workload deployment and management for global enterprises to ensure successful deployment and management of enterprise workloads on clouds.

To learn more about how Vnomic can help you operate cost-efficiently and securely in the cloud, contact Vnomic for a demo and free consultation.

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