A Simplified Approach To Complex Multi-Cloud Deployments With VMware Cloud Director And Terraform

COMPANY

Arvato Systems

INDUSTRY

IT Specialist And Multi-Cloud Provider

HEADQUARTERS

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BENEFITS OF VMWARE CLOUD DIRECTOR

- Multi-tenancy providing economies of scale
- Access to requisite features, especially for network design
- Web GUI and RESTful API
- Ability to offer end customers self-service access to their environment
- Simplify cloud automation with Terraform
- Platform stability and control
- Comprehensive support

About Arvato Systems

As an internationally active IT specialist and multi-cloud service provider, Arvato Systems supports worldwide customers from the commerce, media, utilities, pharma and healthcare industries through their digital transformation journey. With more than 3,000 employees working at 25+ locations worldwide, Arvato Systems's expertise is reflected in its high technical understanding, industry know-how and a clear focus on customer needs. The company develops innovative IT solutions, integrates digital processes and oversees the operation and support of IT systems.

Arvato Systems is one of the few multi-cloud service integrators that accompanies users on their path into the digital future - from consulting to strategy development through to implementation and operations. Arvato System's managed services on private and public clouds are operated via a standardized management platform that emphasizes user-centric management.

The clients' can initiate the setup and operation of hybrid and multiple cloud architectures with the implementation of cloud-based applications and services. Arvato Systems supports their customers through extensive experience in all cloud areas, a proprietary data center in Germany, extensive expertise in managed services and application management services, and a holistic IT transformation approach.

End-Customer Challenges

Arvato System's customers often struggle with legacy IT systems and a lack of deep cloud expertise when transitioning their businesses to the cloud. The demand from business units strains IT capacity while increasing IT costs. These businesses collect and analyze huge amounts of unstructured data spread across different platforms with no single-source of truth to enable data-driven decisions. This hinders IT innovation, scalability, agility and increases IT security risks. One of the challenges was missing the flexibility of other Infrastructure-as-Code (IaC) frameworks. For example, existing frameworks in use - Sparkleformation or HEAT - did not have the possibility to easily import existing machines into the core virtual data center management environment.

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"Terraform on VMware Cloud Director simplifies our approach to multi-cloud deployments. This allows us to more efficiently use our resources. The end result is the ability to offer better services to our end customers."

SÖREN HÜHOLD,
HEAD OF IT TRANSFORMATION & CLOUD
SOLUTIONS, ARVATO SYSTEMS

VMware Partnership Gives Flexibility And Security To Private Cloud Business

VMware Cloud Director is the foundation for Arvato Systems to run stable and flexible private cloud environments of compute, network, security and storage. Arvato Systems runs 10,000 virtual machines for their customers, using VMware Cloud Director and this offers a wide variety of applications. Further, VMware Cloud Director enables Arvato Systems to offer more IT services and enlargen their IT services portfolio, adding more value to end customers and providing a secure tenant platform.

Arvato Systems has taken advantage of VMware's Technical Account Management (TAM) engagement, giving them direct access to VMware's development team. This has helped them to better align to medium and long-term business goals. The open-source public development model for Terraform allows Arvato Systems to interact directly with the developers and also see the feedback from other VMware customers.

By utilizing VMware's Cloud Provider Platform, Arvato Systems has increased automation results with better and faster implementation times. They can also offer faster deployment, provisioning and enablement of multi-cloud services, due to common IT standards. The access to new technologies has enabled their customers' digitalization processes. The overall partnership has resulted in more flexibility in the services Arvato Systems provides to customers.

VMware Cloud Director Delivers A Stable Platform For Multi-Cloud Environments

Arvato Systems has been using VMware Cloud Director since early 2019 and more than 100 of their current end customers deploy VMware's Cloud Director-based offerings. VMware Cloud Director gives Arvato Systems a stable and flexible platform to deploy customer applications in multi-tenant architectures. The elegant web user interface and RESTful API make the platform easy to use without resource-intensive training. The features and functionality enable Arvato Systems to run VMware Cloud Director as a service, especially for network design. And it gives Arvato Systems' end users access to their environments. Arvato Systems is able to focus on their core business knowing that VMware provides comprehensive support.

Arvato Systems looks to future platform changes to provide more capability to their customers. Core to this, is the migration from VMware NSX-v to NSX-T to deliver multi-cloud solutions and improved stability. As Arvato Systems' customers consume their cloud solution, it is essential that the user interface provides them enough functionality for them to accomplish their tasks without hinderance. Recent updates in the VMware Cloud Director HTML5 self-service user interface and particularly improvements in console access, is driving more platform growth for Arvato Systems.

With a cloud environment to manage, monitoring is an essential function to determine what changes are being made in resources in the cloud and to evaluate these. Key to the platform client needs is data analysis and this is reflected in the ability to automate and programmatically add, remove, and change disk size of VM disks to suit data set sizes: This feature was fundamental in providing customers with data disks for their applications, while remaining on a vSphere platform. It retained the ability to take snapshots of the customer's data. Arvato Systems implemented disks as independent resources for customers, enabling them to manage storage in a programmatic, fast, scalable, uniform and efficient way.

Integrating Terraform To Simplify Cloud Automation

The increase in cloud computing automation tools has resulted in increased complexity. This complexity is a barrier to utilization and customers are often not able to fully take advantage of the automation features.

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TERRAFORM BENEFITS

- Simplified and unified multi-cloud operations
- Fast and standardized infrastructure deployment with Infrastructure-as-Code
- Efficient maintenance of consistent processes for all clouds
- Reduced incidents from incorrect configuration and improved service delivery
- Facilitation of Cloud API abstraction
- Access to same flexibility as other Infrastructure-as-Code frameworks

Along with VMware Cloud Director, the VMware Cloud Provider Platform gives partners access to integrated technologies like Terraform, a product that enables customers to use Infrastructure-as-code (IaC) to automate VMware deployments.

With the VMware Cloud Director Terraform Provider, companies can automate their clouds and deliver hyperscale-class capabilities for multi-cloud operations. This enables Arvato Systems to deliver fast, and standardized infrastructure deployments with the same approach and processes across all clouds, public or private. Terraform also facilitates an easy integration into Arvato Systems's existing processes.

With Terraform it is possible to define, build and operate the environments for hyperscalers as well as for their own private cloud in a uniform way. The Terraform provider abstracts many of the cloud characteristics and thus enables a consistent approach. Cloud API abstraction and the ability to implement Infrastructure-as-Code is an essential part of cloud capability, enabling application developers and/or cloud providers to spin up or down the necessary resources to support the dynamic demands of customer business applications on any target cloud.

Like all cloud providers, Arvato Systems focuses on bringing the scale, consistency and simplicity of the public cloud while still making the best efforts to deliver the security and privacy of a private cloud. Terraform's Infrastructure-as-Code approach allows Arvato Systems to easily determine if the current servers are deployed. The technology also helps systematize processes with the global Arvato Systems' teams. Arvato Systems integrates the Terraform code into their GIT repository so the team can always trace the entire server history for any compliance or governance requirements.

Arvato Systems finds Terraform's community-based approach to be very effective. This approach allows companies to directly interact with VMware Terraform developers and with other customers using the technology.

Arvato Systems uses Terraform for all aspects of server deployment and operations. This includes creating new servers, changing or deleting existing servers, monitoring if the servers correspond with the blueprint, as well as undertaking storage management and network interface management. Terraform's cloud infrastructure and service automation technology enables Arvato Systems to provide better service to end customers. Arvato Systems can now deploy new servers faster, with a flexible and standardized approach using configuration files and dynamic values across any cloud that Arvato Systems supports. As a multi-cloud provider, the ability to treat every cloud the same way and unify resources and processes across clouds has made Terraform a key technology for Arvato Systems.