TECHNICAL WHITE PAPER:
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VMware Cloud Foundation Automation Adoption Path

VCF Automation 5.2

vmware by Broadcom

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Introduction to VCF Automation

Hello from VCF Automation, and welcome!

You can use this site as a roadmap for your automation journey to success. It includes a variety of use cases from getting started to becoming a power user. You can jump about as you want; you are not required to read it in order, but you may do so as needed. Besides, if you are looking to expand your automation skills, we can help. Skip to the last section and let the fun begin!

If you're wondering how other customers are using VCF Automation, please visit the Product webpage.

Getting Started

Try these Simple Steps to Get Started with VCF Automation!

Use automation to deploy basic workloads and manage resources in your existing environment. Learn how VCF Automation can help your organization free up IT resources by streamlining and ensuring consistent machine deployments for developers and administrators.

Get Started by Adding your Cloud Environments

Define the cloud environment you intend to use for deployment. Organize and control the placement of the deployments. Resources such as virtual machines, networking, and storage are discovered after adding your cloud.

- Get Started by Adding your Cloud Environments
- Adding cloud accounts

Take Quick Actions on your Discovered Resources

Gain visibility and perform day two actions on discovered resources from the specified cloud accounts to achieve quick time to value.

- Getting Started - Take Quick Actions on Your Discovered Resources
- Running Day 2 Actions on Resources

Organize Resources and Users into Projects

Create projects to install and set controls for quotas, resource limits, and map which users have access to specific clouds. You can assign the appropriate cloud resources to various groups within the organization by adding users to projects. This allows for self-service consumption.

- Getting Started - Organize Resources and Users into Projects
- Adding and Managing Projects
- Try the Hands on Lab – Module 2 Custom Naming and Projects

Create Quick Virtual Machines

Utilize the quick create wizard, after defining cloud accounts and projects in VCF Automation, to spin up workloads, reduce complexity, and accelerate time to value.

- Getting Started - Create Quick Virtual Machine

Onboard Existing Workloads for Day-to-Day Management

For existing workloads, you can identify machines that have been discovered but are not yet managed by VCF Automation Assembler. You can create a comprehensive onboarding plan for workloads in the environment using a step-by-step wizard. The machines are now set up, and you can manage them with VCF Automation policies and perform advanced day 2 actions.

- Creating onboarding plans

Getting More Out Of

Empower your Organization with Automation!

Create the automation building blocks and self-service catalog from which users can request applications and resources. Build templates for VCF Automation by dragging and dropping objects in a canvas designer or by using YAML. Use VCF Automation Config and VCF Automation for Secure Hosts to harden and secure the deployed automation workloads. Take your automation strategy to the next level by enabling integration, extensibility, and developer-focused capabilities.

Construct a Cloud Abstraction Layer

Within VCF Automation abstract storage, networking, and compute for flexible and agnostic provisioning. Allocate tags and assign resources such as security groups, clusters, and load balancers. Implement a cloud agnostic automation strategy and boost agility by deploying applications to any cloud. VCF Automation can also onboard existing workloads via Onboarding Wizard that walks admins through a process to onboard VMs and apply policies and properties to the onboarded deployment.

- Try the Hands on Lab - Module 1 - Create a Cloud Abstraction Layer
- Add Cloud Accounts to VCF Automation

Create VCF Automation Templates (IaC)

Create and deploy cloud templates declaratively using YAML IaC and integrate them with distributed version control platforms like GitHub. Develop cloud-agnostic templates to specify the machines, applications, and services that users in the organizations can deploy. Using cloud templates from VCF Automation, standardize and expedite automation with repeatable and consistent results.

- Try Hands On Lab - Module 3 - Create Aria Automation Templates
- Using IaC and Git to manage Templates
- Design IaC Templates in VCF Automation
- Creating and Designing Cloud Templates in VCF Automation
- More Automation Assembler Template Examples

Access a Cloud Consumption Interface

Allow developers to spin up infrastructure with familiar Kubernetes commands via UI or command line. Empower developers to streamline their processes and get applications to production faster.

- CCI Video Series - Deploying Opencart Application using Cloud Consumption Interface(CCI)
- Configuring and working with the Cloud Consumption Interface

Enhance lifecycle management using extensibility in VCF Automation

Build subscriptions to trigger actions based on deployment lifecycle events such as create, read, update, and delete. Actions are version controlled and polyglot (e.g., NodeJS, Python, JSON). Reduce complexity by adding extensibility when events happen in the deployments and save time by automating operations.

- Try Hands on Lab - Module 6 Enhance Lifecycle Management Using Extensibility in VCF Automation
- Extending and Automating Application Lifecycles with Extensibility

Applying Governance and Policies for the Private Cloud

VCF Automation provides a set of policies that can be applied to deployment such as lease and approval policies. Apply governance via tags and other constraints in order to ensure workloads go to the proper location based on compliance or company standards.

- Setting up Automation Service Broker policies

Create a catalog for Self-Service Consumption

Empower users with self-service consumption of Kubernetes and infrastructure resources “as a Service” via Self-Service Catalog, API, or Cloud Consumption Interface (CCI). Learn how to build a curated content catalog where users can request items to deploy application and services. As-a-service such as XaaS, IaaS, CaaS, and more are available via items backed by orchestrator or ABX actions. Also each catalog item form can be highly customized using a form designer with drag and drop elements.

- Create a Catalog for Self-Service Consumption
- Adding Content to the Catalog

Becoming a Power User

Take Automation to a New Level!

Step up your automation game with advanced topics, from DevOps to building complex workflows. Leverage 3rd party integrations and dive deeper into customizing content for scripts and catalog items. Expand VCF Automation Config capabilities by implementing a patching solution or hardening an operating system. Get more out of automation by improving agility, productivity, and efficiency to prepare for the future of your business!

Include Network Automation into your Deployments!

Extend network and security policies across workloads and leverage modern infrastructure automation. Take advantage of integrations with IPAM providers, such as Infoblox, to incorporate your existing network policies. Provision networks for consumption or create networks on-demand to provide flexibility, governance, and consistency.

- Everything VMware VCF - Automate the VMware Cloud (VCF)
- Try the Hands on Lab – Module 5 – Network Automation
- Using AVI Load Balancer Resources

Automating the Deployment of Kubernetes Clusters

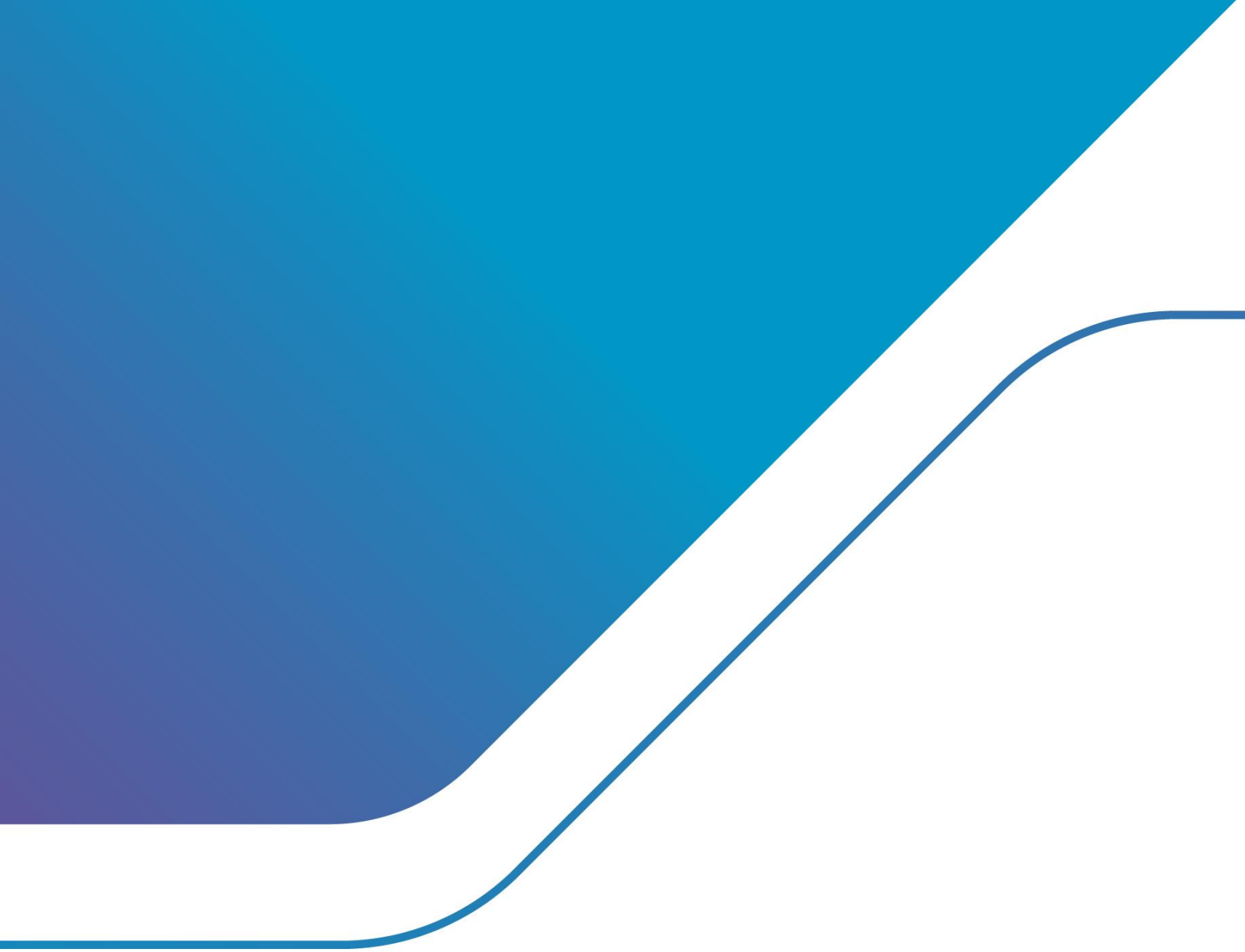
Cloud administrators can automate the configuration and deployment of Tanzu Kubernetes clusters and Supervisor Namespaces for Developers using VCF Automation Templates (IaC) in Assembler while maintaining governance and control.

- Try the Hands on Lab - Module 1 - Kubernetes Automation
- Automating the deployment of Kubernetes clusters

Customize Catalog Request Forms

Create custom forms to determine how the information of a request appears when a user clicks on a catalog item. By creating a more advanced form, you can have conditional drop-down selections, connect to a CMDB, data grids, and much more. Accelerate agility and add value to your organization by providing relevant and specific options at the time of request.

- Try the Hands on Lab - Module 5 - Customize Catalog Request Forms
- VCF Automation Service Broker Custom Forms



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