

VMware Cloud Automation Design and Deploy IaaS Service

AT A GLANCE

The VMware Cloud Automation Design and Deploy IaaS Service expands the power of virtualization and moves IT services away from existing infrastructure delivery methods to a new model in which virtual machine infrastructure is delivered as a service. The service provides infrastructure services in a production environment. The cloud automation solution includes VMware recommended practices in a practical design.

KEY BENEFITS

- Reduce costs of managing IT by optimizing the provisioning process through a self-service portal to provide on-demand access to personalized infrastructure services.
- Increase time to value by reducing the provisioning time from days down to hours.
- Increase agility not only by standardizing the provisioning process, but also by addressing the computing resources life cycle, allowing the IT team to redirect resources to revenue-generating projects.
- Leverage the value of existing infrastructure investments, IT processes, and ecosystem and support extensibility for any new services.

Overview

The VMware Cloud Automation Design and Deploy IaaS Service expands the power of virtualization and moves IT services away from existing infrastructure delivery methods to where virtual machine infrastructure is delivered as a service in a production environment. The cloud automation solution includes VMware recommended practices in a practical design.

This project includes the following module:

- Design a cloud automation foundation – Tailored design to provide a foundation for the automated delivery of a base Infrastructure-as-a-Service (IaaS). The service includes an assessment of platform prerequisites, the design for virtual machine automation technology based on VMware vRealize Automation, and a knowledge transfer session.
- Deploy a cloud automation foundation – Deployment of the vRealize Automation platform in a highly available solution to help Customer create a Private Cloud environment for provisioning virtual workloads.
- Enable custom hostnames for virtual workloads – Custom host name configuration of provisioned workloads enables Customer to apply naming conventions that align with their standards.
- Leverage cloud automation for workload placement based on requestor input – Configuration of VMware vRealize® Automation™ to allow the Customer to provide tailored placement based on reservation and storage tier. This also allows for tailored placement into specific VMware vSphere® constructs.

The following are the high-level activities included in this project:

- Design – Solution design through a series of workshops and consultation.
- Implement – Deployment and verification of the solution.
- Knowledge Transfer – Knowledge transfer of the design, deployment, and operations procedures.

This project requires the following VMware On-Premises, VMware SaaS and third-party products, with vendor-supported versions as agreed to by VMware and Customer at project kickoff, but limited to those that are in general availability (GA) on the date of SOW signing:

VMware vRealize® Automation™

This solution provides the following capabilities:

- Automate workload provisioning
- Provide a self-service portal for IT users

IT Outcomes Developed

The service being delivered by VMware Professional Services contributes to the delivery of the following IT outcomes:

- A unified service portal for users to access applications, infrastructure, and platforms on demand
- Automated IT service requests
- Reduced delivery time
- Automation and standardization will allow linear growth following the business pace
- Being perceived as business partner for new solutions and rapid business development
- Expedite service requests
- Faster time to market of service for specific use case
- Increased agility
- Shorter reaction time to business requests

Project Scope

The scope of the service includes the following:

Design a cloud automation foundation

Tailored design to provide a foundation for the automated delivery of a base Infrastructure-as-a-Service (IaaS). The service includes an assessment of platform prerequisites, the design for virtual machine automation technology based on VMware vRealize Automation, and a knowledge transfer session.

SPECIFICATION	PARAMETERS	DESCRIPTION
vRealize Automation sites	Up to one (1)	Unique sites for which vRealize Automation is designed.

Deploy a cloud automation foundation

Deployment of the vRealize Automation platform in a highly available solution to help Customer create a Private Cloud environment for provisioning virtual workloads.

SPECIFICATION	PARAMETERS	DESCRIPTION
vRealize LifeCycle Manager Installation	Up to one (1)	Deployment and configuration of vRealize LifeCycle Manager for the purpose of deploying vRealize Automation.
Load Balancer		Guidance on configuration of DNS CNAME records and Load Balancers for the virtual IP addresses of the following: vRealize Automation Appliances, IaaS web servers, and IaaS Manager servers.
Distributed High Availability Installation using vRealize LifeCycle Manager	Up to one (1)	Using vRealize LifeCycle Manager a deployment of a distributed installation of vRealize Automation within a single data center with support for provisioning workloads.
vRealize Automation Appliances	Up to three (3)	Using vRealize LifeCycle Manager the vRealize Automation appliances will be installed and configured with embedded database replication.

SPECIFICATION	PARAMETERS	DESCRIPTION
IaaS Components	Up to two (2)	Using vRealize LifeCycle Manager the vRealize IaaS components will be installed and configured from the following: IaaS web servers, manager servers, DEM Orchestrators, DEM Workers, and vSphere Agents. These are installed and configured for high availability.
vRealize Automation Component sets	Up to two (2)	Configuration of one (1) component set that makes up an IaaS environment. This will consist of a customer tenant, a fabric group, a service catalog, an IaaS service definition, a VMware vSphere® endpoint, Entitlements, Approval Policies, and email notifications.
IaaS blueprints	Up to three (3)	IaaS blueprints configured (Windows or Linux using the existing templates in the Customer environment).
Business Group Components	Up to two (2)	Business groups and reservations configured.
Network profiles	Up to two (2)	Network profiles configured for IP allocation through vRealize Automation.
Active Directory	Up to one (1)	Active Directory LDAP connectors configured.
Active Directory Synchronization	Up to one (1)	Active Directory Groups Synchronized.
vRealize Automation Operational Activities		Additional activities performed in conjunction with this service include the following:

Enable custom hostnames for virtual workloads

Custom host name configuration of provisioned workloads enables Customer to apply naming conventions that align with their standards.

SPECIFICATION	PARAMETERS	DESCRIPTION
Environments	Up to one (1)	vRealize Automation environment is in scope.
Tenants	Up to one (1)	vRealize Automation tenant per environment is in scope.
Blueprints	Up to two (2)	vRealize Automation blueprints per environment are in scope.

SPECIFICATION	PARAMETERS	DESCRIPTION
Dynamic Machine Naming		A user can request a virtual machine through a blueprint selecting appropriate naming convention values from a drop-down menu. The resulting machine will use a unique VM name matching selected values and naming standards.
Static drop-down menu fields	Up to three (3)	Static drop-down menu fields, or blueprint properties, are provided as naming inputs.
Name sequence number		The resulting machine name uses the next available sequence number within the selected drop-down menu pairing or blueprint properties. If a unique name cannot be found, or if there are no more available sequence numbers, the machine request fails and the machine is destroyed.
Verification		The resulting machine name is verified against a VMware vRealize® Orchestrator™ configured DNS server and all configured vRealize Orchestrator Active Directory connections for uniqueness.

Leverage cloud automation for workload placement based on requestor input

Configuration of VMware vRealize® Automation™ to allow the Customer to provide tailored placement based on reservation and storage tier. This also allows for tailored placement into specific VMware vSphere® constructs.

SPECIFICATION	PARAMETERS	DESCRIPTION
Environments	Up to one (1)	vRealize Automation environments in scope.
Tenants	Up to one (1)	vRealize Automation tenants per environment.
Blueprints	Up to two (2)	vRealize Automation blueprints per environment.

SPECIFICATION	PARAMETERS	DESCRIPTION
Custom Workload Placement		The user can request a virtual machine through a vRealize Automation blueprint, making selections that dictate placement of the VM within the vSphere infrastructure, including which compute resource, VM folder, and vSphere network port group to use. Placement is subject to the user's allowable set of reservations (quotas for each business unit). In addition this will provide a method of correctly picking the right quota and infrastructure tier entitlements through the same set of blueprints.
Static drop-down menu fields	Up to three (3)	Static drop-down menu fields, or blueprint properties, are provided as naming inputs.
Placement combinations		The mappings of user selections to final placement items is statically defined within VMware vRealize® Orchestrator™ (as JSON or CSV values). Updates to the mappings are out of scope. If final placement is not strictly mapped to each input combination, the resulting set of acceptable items is chosen randomly.

Estimated Schedule

VMware estimates that the duration of this project will not exceed seven (7) weeks. VMware consulting services will operate according to a schedule agreed to by both parties. Typically, consulting services are performed during normal business hours and workdays (weekdays and non-holidays).

Project Activities

The services provided in this data sheet are organized in the work streams and phases shown in the following table.

ACTIVITIES / WEEK	1	2	3	4	5	6	7
Phase 1: Planning							
Phase 2: Kickoff							
Phase 3: Solution Overview							
Phase 4: Assess							
Phase 5: Design							
Phase 6: Deploy							
Phase 7: Validate							
Phase 8: Knowledge Transfer							
Phase 9: Project Conclusion							

Out of Scope

The following are the out of scope items for this project:

General

- Installation and configuration of custom or third-party applications and operating systems on deployed virtual machines.
- Operating system administration including the operating system itself or any operating system features or components.
- Management of change to virtual machines, operating systems, custom or third-party applications, databases, and administration of general network changes within Customer control.
- Remediation work associated with any problems resulting from the content, completeness, accuracy, and consistency of any data, materials, or information supplied by Customer.
- Installation or configuration of VMware products not included in the scope of this document.
- Installation and configuration of third-party software or other technical services that are not applicable to VMware components.
- Installation and configuration of Customer-signed certificates.
- Configuration of VMware products used for the service other than those implemented for the mutually agreed to use cases.
- Customer solution training other than the defined knowledge transfer session.

Project Activities

Phase 1: Initiate

The VMware Project Manager hosts one (1) project initiation call with key Customer and VMware stakeholders. Topics to be discussed include the following:

- Project business drivers, scope, and objectives.
- Project deadlines, estimated timelines, scheduling, and logistics.
- Identification of key Customer team members with whom VMware will work to perform the tasks defined in this SOW.
- Participating team members are confirmed and contact details are exchanged to schedule the project kickoff meeting.

Deliverables

- One (1) project initiation call

Phase 2: Plan

VMware leads one (1) project kickoff meeting with Customer project sponsors and stakeholders to review expectations about the purpose of the engagement, the delivery approach, and estimated timelines. The following are the objectives of the meeting:

- Introducing the VMware team, roles, and responsibilities.
- Describing the project goals, phases, and key dates.
- Agreeing on communication and reporting process and creating a communications plan.

- Validating the project expectations and clarifying roles and responsibilities.
- Confirming prerequisites are met as detailed in the solution checklist for specified solutions.
- Presenting the solution overview for specified solutions including expected project results and deliverables.

The VMware Project Manager and the Customer Project Manager collaborate to develop the project plan.

Deliverables

- Private Cloud solution checklist
- Private Cloud solution overview presentation
- IaaS solution checklist
- IaaS solution overview presentation
- Communications plan
- One (1) project kickoff meeting
- Project plan

Phase 3: Execute

The key activities for this phase are organized in the following sub-phases:

- Design
- Implement
- Knowledge Transfer

Execute: Design

VMware leads the Customer project team in a series of workshops to develop a design. VMware does the following:

- Conducts up to seventy-two (72) hours of design workshops.
- Documents the design for the specified VMware solutions in the solution design document(s).

Deliverables

- Up to seventy-two (72) hours of design workshops
- Private Cloud solution design document
- IaaS solution design document

Execute: Implement

VMware implements the solution according to the VMware solution specification. VMware does the following:

- Conducts up to twenty-four (24) hours of implementation workshops.
- Implements the specified solutions as detailed in the specification workbooks.
- Verifies the implementation and documents results in the verification workbooks for the specified solutions.

Deliverables

- Up to twenty-four (24) hours of implementation workshops
- Private Cloud solution specification workbook
- Private Cloud solution verification workbook
- IaaS solution specification workbook
- IaaS solution verification workbook

Execute: Knowledge Transfer

VMware conducts knowledge transfer sessions covering the design, implementation, and operational considerations relating to the scope of this project. VMware does the following:

- Conducts up to twenty-seven (27) hours of knowledge transfer sessions for appropriate Customer representatives.
- Provides an adoption guide document(s) containing operational guidance for the specified solutions.

Note: For the avoidance of doubt, the Knowledge transfers herein do not comprise VMware product training or certification courses as offered by the VMware Education unit (<http://mylearn.vmware.com/mgrreg/index.cfm>).

Deliverables

- Up to twenty-seven (27) hours of knowledge transfer sessions
- Private Cloud adoption guide document
- Private Cloud knowledge transfer workshop presentation
- IaaS adoption guide document
- IaaS knowledge transfer workshop presentation

Phase 4: Close

The VMware Project Manager conducts one (1) closure meeting with Customer covering project status, next steps, and how to engage further with VMware.

Deliverables

- Engagement summary presentation
- One (1) closure meeting

Appendix – Service Checklist

Customer is responsible for executing all items discussed in the Service Checklist prior to arrival of VMware consultants on site.

The participation of the following Customer stakeholders is required for the Service to be performed:

- Entire VMware operations team
- Application operations leads
- Enterprise Architect
- Infrastructure Architect
- Server provisioning team leads
- Active Directory architects
- Network Architecture team leads
- Director IT
- Cloud Architect
- Cloud Service Architect
- Cloud Operations Manager
- VMware operations team leads

The following prerequisites are required to enable VMware to perform this Service:

Deploy vRealize Automation for use in a private cloud.

- Virtual Appliance Virtualized RAM Capacity(GB). Defined minimum: 18GB
- Virtual Appliance Virtualized CPU Capacity(GHz). Defined minimum: 4 vCPU
- Virtual Appliance Virtualized Storage Capacity(GB). Defined minimum: 140GB
- DNS must be configured and tested for forward, reverse, short and long name resolution
- Virtualized RAM capacity (GB). Defined minimum: 8GB for IaaS Virtual Machines
- Active Directory Certificate Services
- Virtualized storage capacity (GB). Defined minimum: 40GB for IaaS Virtual Machines
- Virtualized CPU capacity (GHz). Defined minimum: 2 vCPU for each IaaS Virtual Machine
- Number of Active Directory service accounts. Defined minimum: 1.0

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About VMware Professional Services

VMware Professional Services transform IT possibilities into business outcomes. Our comprehensive portfolio of services uncovers and exploits the unique opportunities made possible by VMware technology. Drawing on our unparalleled product expertise and customer experience, we collaborate with your team to address the technical, people, process, and financial considerations for IT transformation to deliver results that are positive, tangible, and material to IT and your business.