

Custom Properties Reference

vRealize Automation 7.0



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VMware, Inc.
3401 Hillview Ave.
Palo Alto, CA 94304
www.vmware.com

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Custom Properties Reference

Custom Properties Reference provides information about the custom properties, and their use, that are available when you use VMware vRealize™ Automation.

This documentation is intended to be used with the vRealize Automation product documentation available from the VMware vRealize™ Automation Documentation page at <https://www.vmware.com/support/pubs/vcac-pubs.html>.

Note Not all features and capabilities of vRealize Automation are available in all editions. For a comparison of feature sets in each edition, see <https://www.vmware.com/products/vrealize-automation/>.

Intended Audience

This information is intended for IaaS administrators, fabric administrators, and business group managers of vRealize Automation. This content is written for experienced Windows or Linux system administrators who are familiar with virtualization technology and the basic concepts described in *Foundations and Concepts*.

VMware Technical Publications Glossary

VMware Technical Publications provides a glossary of terms that might be unfamiliar to you. For definitions of terms as they are used in VMware technical documentation, go to <http://www.vmware.com/support/pubs>.

Updated Information

This *Custom Properties Reference* is updated with each release of the product or when necessary.

This table provides the update history of the *Custom Properties Reference*.

Revision	Description
001840-02	Removed Amazon.Placement.Tenancy from Custom Properties A Table .
001840-01	<ul style="list-style-type: none">Updated the following topics to include a caveat about the VirtualMachine.NetworkN.ProfileName property:<ul style="list-style-type: none">Custom Properties V TableCustom Properties for NetworkingUpdated Create a Property Definition to add more information about Name and Label.Added Use a vRealize Orchestrator Script Action to Populate a Property Value.Updated Custom Properties for Naming and Analyzing Deployments.
001840-00	Initial release.

Using Custom Properties

You use custom properties to control aspects of the machines that users can provision.

Some properties are determined by standard settings that you must specify for all machines. For example, memory and disk size values are required for all blueprints. You can specify additional properties individually or in property groups in blueprints and in reservations. Use custom properties to add values or override existing or default values for the following information.

- Machine operating system
- Virtualization platform
- Build settings such as disk size
- Integration with an external system

When you add a property to a blueprint or a property group, you can mark it as a required property. When a property is specified as required, the user must provide a value for that property when they request a machine, such as in the following examples.

- Require information about multiple disks sharing the machine's allocated storage.
- Require information about users or groups to be added to a local group on the machine.
- Require the host name of the machine.

The Windows guest agent records property values on the provisioned machine in the %SystemDrive%\VMGuestAgent\site\workitem.xml file.

The Linux guest agent records property values on the provisioned machine in the /usr/share/gugent/site/workitem.xml file.

This chapter includes the following topics:

- [Adding Custom Properties](#)
- [Using Properties in Machine Provisioning](#)
- [Understanding Custom Properties Precedence](#)

Adding Custom Properties

You can use custom properties to control machine provisioning. You can add properties and property groups to overall blueprints, components in a blueprint, and reservations.

You can add properties and property groups when you create a blueprint, or later when the blueprint is in the draft or published state. Alternatively you can add custom properties and property groups to individual components in the blueprint.

Blueprint-level custom properties take precedence over custom properties that are configured at the component level. You can edit blueprint-level properties by using the blueprint properties page.

A custom property can optionally require that the user specify a property value when they create a machine request. Property values are typically case-sensitive.

You can add supplied custom properties and also create and add your own properties and property groups. For information about creating properties and property groups, see [Chapter 4 Using the Property Dictionary](#).

For information about custom property precedence, see [Understanding Custom Properties Precedence](#).

Using Properties in Machine Provisioning

Custom properties are built-in or vRealize Automation-supplied properties. You can also create your own properties. Properties are name-value pairs used to specify attributes of a machine or to override default specifications.

You can use custom properties to control different provisioning methods, types of machines, and machine options as in the following examples:

- Specify a particular type of guest OS.
- Enable WIM-based provisioning, in which a Windows Imaging File Format (WIM) image of a reference machine is used to provision new machines.
- Customize the behavior of Remote Desktop Protocol when connecting to a machine.
- Register a virtual machine with a XenDesktop Desktop Delivery Controller (DDC) server.
- Customize a virtual machine's system specifications, such as adding multiple disk drives.
- Customize the guest OS for a machine, for instance, by including specified users in selected local groups.
- Specify network and security settings.

When you add a property to a blueprint, reservation, or other form you can specify if the property is to be encrypted and also if the user must be prompted to specify a value when provisioning. These options cannot be overridden when provisioning.

A property specified in a blueprint overrides the same property specified in a property group. This enables a blueprint to use most of the properties in a property group while differing from the property group in some limited way. For example, a blueprint that incorporates a standard developer workstation property group might override the US English settings in the group with UK English settings.

You can apply custom properties in reservations and business groups to many machines. Their use is typically limited to purposes related to their sources, such as resource management or line of business accounting. Specifying the characteristics of the machine to be provisioned is generally done by adding properties to blueprints and property groups.

Understanding Custom Properties Precedence

Properly authorized users can specify custom properties for blueprints, endpoints, business groups, and reservations. When the same property exists in more than one source, vRealize Automation follows a specific order of precedence when applying properties to the machine.

You can add custom properties that apply to provisioned machines to the following elements:

- A reservation, to apply the custom properties to all machines provisioned from that reservation.
- A business group, to apply the custom properties to all machines provisioned by business group members.
- A blueprint, to apply the custom properties to all machines provisioned from the blueprint.
- Property groups, which can be included in a blueprint, to apply all the custom properties in the group to all machines provisioned from the blueprint.

A blueprint can contain one or more property groups.

- A machine request to apply the custom properties to the machine being provisioned.
- An approval policy, if advanced approval support is enabled, to require approvers to provide values for the machine being approved.

The following list shows the order of precedence for custom properties. Property value specified in a source that appears later in the list override values for the same property specified in sources that appear earlier in the list.

Note If a conflict exists between a vRealize Automation-supplied custom property name and a user-defined property name, the vRealize Automation-supplied custom property name takes precedence.

- 1 Property group
- 2 Blueprint
- 3 Business group
- 4 Compute resource
- 5 Reservations
- 6 Endpoint
- 7 Runtime

This order is further clarified as follows:

- 1 Custom properties and groups at the overall blueprint level

- 2 Custom properties and groups at the component level
- 3 Custom properties for the business group
- 4 Custom properties for the compute resource
- 5 Custom properties for the reservation
- 6 Custom properties for the endpoint
- 7 Custom properties at the nested blueprint request level
- 8 Custom properties at the component request level

A runtime property takes higher precedence over other properties. A runtime property meets the following conditions:

- The property is marked as Prompt User, which specifies that the user must supply a value for it when requesting a machine. This requires that the machine requestor customize individual characteristics of each machine, or gives them the option of doing so when a default value is provided for the property.
- A business group manager is requesting a machine and the property appears in the custom properties list on the **Confirm Machine Request** page.

Custom Property Types

You can use vRealize Automation external and updated property types for cloned machines. You cannot use Internal and read-only property types for cloned machines.

The following vRealize Automation custom property types are available.

- Internal

The specified value is maintained in the database only. For example, the email address of the manager who approved a machine request is recorded in the `VirtualMachine.Admin.Approver` property but the property has no effect on the machine.

- Read-only

The specified value is implemented on the machine and cannot be changed. For example, `VirtualMachine.Admin.UUID` specifies the UUID of the machine, which cannot be changed.

- External

A machine's external properties are determined when the virtualization platform creates the machine or during the WinPE phase of the build process. To set these properties, their values must be provided to the proxy agent, which passes them on to the virtualization platform, or to the guest agent, which implements them in the WinPE phase.

The specified value is implemented on the machine but is never updated. For example, if the property `VirtualMachine.Admin.AddOwnerToAdmins` is set to true, the owner of the machine is added to its local administrators group. If the owner is later removed from this group, the property is not updated to false.

- Updated

The specified value is implemented on the machine and is updated through data collection. For example, if the compute resource of a machine is changed, a proxy agent updates the value of the machine's `VirtualMachine.Admin.Hostname` property.

Internal and read-only property types set attributes that the template determines.

You can use the vRealize Automation machine menu to change all reserved custom properties except the read-only properties `VirtualMachine.Admin.AgentID`, `VirtualMachine.Admin.UUID`, and `VirtualMachine.Admin.Name`.

Custom Properties Grouped by Function

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You can use custom properties to provide additional vRealize Automation controls.

Custom properties have been grouped here by function. To explore custom properties grouped by name, see [Chapter 3 Custom Properties Grouped by Name](#).

This chapter includes the following topics:

- [Custom Properties for Basic Workflow Blueprints](#)
- [Custom Properties for Clone Blueprints](#)
- [Custom Properties for FlexClone Blueprints](#)
- [Custom Properties for Linked Clone Blueprints](#)
- [Custom Properties for Linux Kickstart Blueprints](#)
- [Custom Properties for SCCM Blueprints](#)
- [Custom Properties for WIM Blueprints](#)
- [Custom Properties for vCloud Air and vCloud Director Blueprints](#)
- [Custom Properties for vRealize Automation Guest Agent](#)
- [Custom Properties for Naming and Analyzing Deployments](#)
- [Custom Properties for Networking](#)
- [Custom Properties for PXE Provisioning](#)
- [Custom Properties for BMC BladeLogic Configuration Manager Integration](#)
- [Custom Properties for HP Server Automation Integration](#)

Custom Properties for Basic Workflow Blueprints

vRealize Automation includes custom properties that you can use to provide additional controls for basic workflow blueprints.

Table 2-1. Custom Properties for Basic Workflow Blueprints

Custom Property	Description
<code>VirtualMachine.CDRom.Attach</code>	Set to <code>False</code> to provision the machine without a CD-ROM device. The default is <code>True</code> .
<code>VirtualMachine.Admin.ThinProvision</code>	Determines whether thin provisioning is used on ESX compute resources using local or iSCSI storage. Set to <code>True</code> to use thin provisioning. Set to <code>False</code> to use standard provisioning. This property is for virtual provisioning.
<code>VirtualMachine.DiskN.StorageReservationPolicy</code>	Specifies the storage reservation policy to use to find storage for disk <i>N</i> . Also assigns the named storage reservation policy to a volume. To use this property, substitute the volume number for <i>N</i> in the property name and specify a storage reservation policy name as the value. This property is equivalent to the storage reservation policy name specified on the blueprint. Disk numbering must be sequential. This property is valid for all Virtual and vCloud reservations. This property is not valid for Physical, Amazon, or OpenStack reservations.
<code>VirtualMachine.Storage.AllocationType</code>	Stores collected groups to a single datastore. A distributed environment stores disks round-robin style.
<code>VirtualMachine.Storage.Name</code>	Identifies the storage path on which the machine resides. The default is the value specified in the reservation that was used to provision the machine.
<code>VirtualMachine.Storage.ReserveMemory</code>	Set to <code>True</code> to manage vSwap storage allocation to ensure availability and set allocation in the reservation. vSwap allocation is considered when you create or reconfigure a virtual machine. vSwap allocation checking is only available for vSphere endpoints. Note If you do not specify the <code>VirtualMachine.Storage.ReserveMemory</code> custom property when you create or provision the machine from vRealize Automation, swap space availability is not ensured. If you add the property for an already provisioned machine, and the allocated reservation is full, the storage allocated in the reservation might exceed the actual allocated storage.
<code>VMware.Hardware.Version</code>	Specifies the VM hardware version to be used for vSphere settings. Supported values are currently <code>vmx-04</code> , <code>vmx-07</code> , <code>vmx-08</code> , <code>vmx-09</code> and <code>vmx-10</code> . This property is applicable for VM Create and VM Update workflows and is available only for basic workflow blueprints.

Custom Properties for Clone Blueprints

vRealize Automation includes custom properties that you can use to provide additional controls for clone blueprints.

Table 2-2. Custom Properties for Clone Blueprints

Custom Property	Description
<code>VirtualMachine.DiskN.StorageReservationPolicy</code>	<p>Specifies the storage reservation policy to use to find storage for disk <i>N</i>. Also assigns the named storage reservation policy to a volume. To use this property, substitute the volume number for <i>N</i> in the property name and specify a storage reservation policy name as the value. This property is equivalent to the storage reservation policy name specified on the blueprint. Disk numbering must be sequential. This property is valid for all Virtual and vCloud reservations. This property is not valid for Physical, Amazon, or OpenStack reservations.</p>
<code>VirtualMachine.NetworkN.ProfileName</code>	<p>Specifies the name of a network profile from which to assign a static IP address to network device <i>N</i> or from which to obtain the range of static IP addresses that can be assigned to network device <i>N</i> of a cloned machine, where <i>N</i>=0 for the first device, 1 for the second, and so on.</p> <p>If a network profile is specified in the network path in the reservation on which the machine is provisioned, a static IP address is assigned from that network profile. You can ensure that a static IP address is assigned from a specific profile by setting the value of this property to the name of a network profile.</p> <p>Note that changing this property value after the network is assigned has no effect on the expected IP address values for the designated machines.</p> <p>With WIM-based provisioning for virtual machines, you can use this property to specify a network profile and network interface or you can use the Network section of the Virtual Reservation page. You can also assign the network interface to a virtual network using the <code>VirtualMachine.NetworkN.Name</code> custom property.</p> <p>The following attributes of the network profile are available to enable static IP assignment in a cloning blueprint:</p> <ul style="list-style-type: none"> ■ <code>VirtualMachine.NetworkN.SubnetMask</code> ■ <code>VirtualMachine.NetworkN.Gateway</code> ■ <code>VirtualMachine.NetworkN.PrimaryDns</code> ■ <code>VirtualMachine.NetworkN.SecondaryDns</code> ■ <code>VirtualMachine.NetworkN.PrimaryWins</code> ■ <code>VirtualMachine.NetworkN.SecondaryWins</code> ■ <code>VirtualMachine.NetworkN.DnsSuffix</code> ■ <code>VirtualMachine.NetworkN.DnsSearchSuffixes</code> <p><code>VirtualMachine.NetworkN</code> custom properties are designed to be specific to individual blueprints and machines. When a machine is requested, network and IP address allocation is performed before the machine is assigned to a reservation. Because blueprints are not guaranteed to be allocated to a specific reservation, do not use this property on a reservation.</p>

Table 2-2. Custom Properties for Clone Blueprints (Continued)

Custom Property	Description
<code>Linux.ExternalScript.Name</code>	Specifies the name of an optional customization script, for example <code>config.sh</code> , that the Linux guest agent runs after the operating system is installed. This property is available for Linux machines cloned from templates on which the Linux agent is installed. If you specify an external script, you must also define its location by using the <code>Linux.ExternalScript.LocationType</code> and <code>Linux.ExternalScript.Path</code> properties.
<code>Linux.ExternalScript.LocationType</code>	Specifies the location type of the customization script named in the <code>Linux.ExternalScript.Name</code> property. This can be either <code>local</code> or <code>nfs</code> . You must also specify the script location using the <code>Linux.ExternalScript.Path</code> property. If the location type is <code>nfs</code> , also use the <code>Linux.ExternalScript.Server</code> property.
<code>Linux.ExternalScript.Server</code>	Specifies the name of the NFS server, for example <code>lab-ad.lab.local</code> , on which the Linux external customization script named in <code>Linux.ExternalScript.Name</code> is located.
<code>Linux.ExternalScript.Path</code>	Specifies the local path to the Linux customization script or the export path to the Linux customization on the NFS server. The value must begin with a forward slash and not include the file name, for example <code>/scripts/linux/config.sh</code> .

If your administrators installed the guest agent to run scripts that accept custom properties and customize provisioned machines, you can use custom properties to further customize cloned machines that use the guest agent.

Table 2-3. Custom Properties for Customizing Cloned Machines with a Guest Agent

Custom Property	Description
<code>VirtualMachine.Admin.AddOwnerToAdmins</code>	Set to <code>True</code> (default) to add the machine's owner, as specified by the <code>VirtualMachine.Admin.Owner</code> property, to the local administrators group on the machine.
<code>VirtualMachine.Admin.AllowLogin</code>	Set to <code>True</code> (default) to add the machine owner to the local remote desktop users group, as specified by the <code>VirtualMachine.Admin.Owner</code> property.
<code>VirtualMachine.Admin.UseGuestAgent</code>	If the guest agent is installed as a service on a template for cloning, set to <code>True</code> on the machine blueprint to enable the guest agent service on machines cloned from that template. When the machine is started, the guest agent service is started. Set to <code>False</code> to disable the guest agent. If set to <code>False</code> , the enhanced clone workflow will not use the guest agent for guest operating system tasks, reducing its functionality to <code>VMwareCloneWorkflow</code> . If not specified or set to anything other than <code>False</code> , the enhanced clone workflow will send work items to the guest agent.

Table 2-3. Custom Properties for Customizing Cloned Machines with a Guest Agent (Continued)

Custom Property	Description
<code>VirtualMachine.DiskN.Active</code>	Set to True (default) to specify that the machine's disk <i>N</i> is active. Set to False to specify that the machine's disk <i>N</i> is not active.
<code>VirtualMachine.DiskN.Size</code>	Defines the size in GB of disk <i>N</i> . For example, to give a size of 150 GB to a disk G, define the custom property <code>VirtualMachine.Disk0.Size</code> and enter a value of 150. Disk numbering must be sequential. By default a machine has one disk referred to by <code>VirtualMachine.Disk0.Size</code> , where size is specified by the storage value on the blueprint from which the machine is provisioned. The storage value on the blueprint user interface overwrites the value in the <code>VirtualMachine.Disk0.Size</code> property. The <code>VirtualMachine.Disk0.Size</code> property is not available as a custom property because of its relationship with the storage option on the blueprint. More disks can be added by specifying <code>VirtualMachine.Disk1.Size</code> , <code>VirtualMachine.Disk2.Size</code> and so on. <code>VirtualMachine.Admin.TotalDiskUsage</code> always represents the total of the <code>.DiskN.Size</code> properties plus the <code>VMware.Memory.Reservation</code> size allocation.
<code>VirtualMachine.DiskN.Label</code>	Specifies the label for a machine's disk <i>N</i> . The disk label maximum is 32 characters. Disk numbering must be sequential. When used in conjunction with a guest agent, specifies the label of a machine's disk <i>N</i> inside the guest operating system.
<code>VirtualMachine.DiskN.Letter</code>	Specifies the drive letter or mount point of a machine's disk <i>N</i> . The default is C. For example, to specify the letter D for Disk 1, define the custom property as <code>VirtualMachine.Disk1.Letter</code> and enter the value D. Disk numbering must be sequential. When used in conjunction with a guest agent, this value specifies the drive letter or mount point under which an additional disk <i>N</i> is mounted by the guest agent in the guest operating system.
<code>VirtualMachine.Admin.CustomizeGuestOSDelay</code>	Specifies the time to wait after customization is complete and before starting the guest operating system customization. The value must be in HH:MM:SS format. If the value is not set, the default value is one minute (00:01:00). If you choose not to include this custom property, provisioning can fail if the virtual machine reboots before guest agent work items are completed, causing provisioning to fail.
<code>VirtualMachine.Customize.WaitComplete</code>	Set to True to prevent the provisioning workflow from sending work items to the guest agent until all customizations have been completed.
<code>VirtualMachine.SoftwareN.Name</code>	Specifies the descriptive name of a software application <i>N</i> or script to install or run during provisioning. This is an optional and information-only property. It serves no real function for the enhanced clone workflow or the guest agent but it is useful for a custom software selection in a user interface or for software usage reporting.

Table 2-3. Custom Properties for Customizing Cloned Machines with a Guest Agent (Continued)

Custom Property	Description
<code>VirtualMachine.SoftwareN.ScriptPath</code>	<p>Specifies the full path to an application's install script. The path must be a valid absolute path as seen by the guest operating system and must include the name of the script file name.</p> <p>You can pass custom property values as parameters to the script by inserting <code>{CustomPropertyName}</code> in the path string. For example, if you have a custom property named <code>ActivationKey</code> whose value is <code>1234</code>, the script path is <code>D:\InstallApp.bat -key {ActivationKey}</code>. The guest agent runs the command <code>D:\InstallApp.bat -key 1234</code>. Your script file can then be programmed to accept and use this value.</p>
<code>VirtualMachine.SoftwareN.ISOName</code>	<p>Specifies the path and file name of the ISO file relative to the data store root. The format is <code>/folder_name/subfolder_name/file_name.iso</code>. If a value is not specified, the ISO is not mounted.</p>
<code>VirtualMachine.SoftwareN.ISOLocation</code>	<p>Specifies the storage path that contains the ISO image file to be used by the application or script. Format the path as it appears on the host reservation, for example <code>netapp-1:it_nfs_1</code>. If a value is not specified, the ISO is not mounted.</p>

Custom Properties for FlexClone Blueprints

vRealize Automation includes custom properties that you can use to provide additional controls for FlexClone blueprints.

Table 2-4. Custom Properties for FlexClone Blueprints

Custom Property	Description
VirtualMachine.NetworkN.ProfileName	<p>Specifies the name of a network profile from which to assign a static IP address to network device <i>N</i> or from which to obtain the range of static IP addresses that can be assigned to network device <i>N</i> of a cloned machine, where <i>N</i>=0 for the first device, 1 for the second, and so on.</p> <p>If a network profile is specified in the network path in the reservation on which the machine is provisioned, a static IP address is assigned from that network profile. You can ensure that a static IP address is assigned from a specific profile by setting the value of this property to the name of a network profile.</p> <p>Note that changing this property value after the network is assigned has no effect on the expected IP address values for the designated machines.</p> <p>With WIM-based provisioning for virtual machines, you can use this property to specify a network profile and network interface or you can use the Network section of the Virtual Reservation page. You can also assign the network interface to a virtual network using the <code>VirtualMachine.NetworkN.Name</code> custom property.</p> <p>The following attributes of the network profile are available to enable static IP assignment in a cloning blueprint:</p> <ul style="list-style-type: none"> ■ <code>VirtualMachine.NetworkN.SubnetMask</code> ■ <code>VirtualMachine.NetworkN.Gateway</code> ■ <code>VirtualMachine.NetworkN.PrimaryDns</code> ■ <code>VirtualMachine.NetworkN.SecondaryDns</code> ■ <code>VirtualMachine.NetworkN.PrimaryWins</code> ■ <code>VirtualMachine.NetworkN.SecondaryWins</code> ■ <code>VirtualMachine.NetworkN.DnsSuffix</code> ■ <code>VirtualMachine.NetworkN.DnsSearchSuffixes</code> <p><code>VirtualMachine.NetworkN</code> custom properties are designed to be specific to individual blueprints and machines. When a machine is requested, network and IP address allocation is performed before the machine is assigned to a reservation. Because blueprints are not guaranteed to be allocated to a specific reservation, do not use this property on a reservation.</p>
Linux.ExternalScript.Name	<p>Specifies the name of an optional customization script, for example <code>config.sh</code>, that the Linux guest agent runs after the operating system is installed. This property is available for Linux machines cloned from templates on which the Linux agent is installed.</p> <p>If you specify an external script, you must also define its location by using the <code>Linux.ExternalScript.LocationType</code> and <code>Linux.ExternalScript.Path</code> properties.</p>

Table 2-4. Custom Properties for FlexClone Blueprints (Continued)

Custom Property	Description
<code>Linux.ExternalScript.LocationType</code>	Specifies the location type of the customization script named in the <code>Linux.ExternalScript.Name</code> property. This can be either local or nfs. You must also specify the script location using the <code>Linux.ExternalScript.Path</code> property. If the location type is nfs, also use the <code>Linux.ExternalScript.Server</code> property.
<code>Linux.ExternalScript.Server</code>	Specifies the name of the NFS server, for example <code>lab-ad.lab.local</code> , on which the Linux external customization script named in <code>Linux.ExternalScript.Name</code> is located.
<code>Linux.ExternalScript.Path</code>	Specifies the local path to the Linux customization script or the export path to the Linux customization on the NFS server. The value must begin with a forward slash and not include the file name, for example <code>/scripts/linux/config.sh</code> .

If you installed the guest agent to customize cloned machines, the Custom Properties for Customizing FlexClone Machines with a Guest Agent table describes the most commonly used custom properties for your situation.

Table 2-5. Custom Properties for Customizing FlexClone Machines with a Guest Agent

Custom Property	Description
<code>VirtualMachine.Admin.UseGuestAgent</code>	If the guest agent is installed as a service on a template for cloning, set to True on the machine blueprint to enable the guest agent service on machines cloned from that template. When the machine is started, the guest agent service is started. Set to False to disable the guest agent. If set to False, the enhanced clone workflow will not use the guest agent for guest operating system tasks, reducing its functionality to <code>VMwareCloneWorkflow</code> . If not specified or set to anything other than False, the enhanced clone workflow will send work items to the guest agent.
<code>VirtualMachine.DiskN.Size</code>	Defines the size in GB of disk <i>N</i> . For example, to give a size of 150 GB to a disk G, define the custom property <code>VirtualMachine.Disk0.Size</code> and enter a value of 150. Disk numbering must be sequential. By default a machine has one disk referred to by <code>VirtualMachine.Disk0.Size</code> , where size is specified by the storage value on the blueprint from which the machine is provisioned. The storage value on the blueprint user interface overwrites the value in the <code>VirtualMachine.Disk0.Size</code> property. The <code>VirtualMachine.Disk0.Size</code> property is not available as a custom property because of its relationship with the storage option on the blueprint. More disks can be added by specifying <code>VirtualMachine.Disk1.Size</code> , <code>VirtualMachine.Disk2.Size</code> and so on. <code>VirtualMachine.Admin.TotalDiskUsage</code> always represents the total of the <code>.DiskN.Size</code> properties plus the <code>VMware.Memory.Reservation</code> size allocation.

Table 2-5. Custom Properties for Customizing FlexClone Machines with a Guest Agent (Continued)

Custom Property	Description
<code>VirtualMachine.DiskN.Label</code>	Specifies the label for a machine's disk <i>N</i> . The disk label maximum is 32 characters. Disk numbering must be sequential. When used in conjunction with a guest agent, specifies the label of a machine's disk <i>N</i> inside the guest operating system.
<code>VirtualMachine.DiskN.Letter</code>	Specifies the drive letter or mount point of a machine's disk <i>N</i> . The default is C. For example, to specify the letter D for Disk 1, define the custom property as <code>VirtualMachine.Disk1.Letter</code> and enter the value D. Disk numbering must be sequential. When used in conjunction with a guest agent, this value specifies the drive letter or mount point under which an additional disk <i>N</i> is mounted by the guest agent in the guest operating system.
<code>VirtualMachine.Admin.CustomizeGuestOSDelay</code>	Specifies the time to wait after customization is complete and before starting the guest operating system customization. The value must be in HH:MM:SS format. If the value is not set, the default value is one minute (00:01:00). If you choose not to include this custom property, provisioning can fail if the virtual machine reboots before guest agent work items are completed, causing provisioning to fail.
<code>VirtualMachine.Customize.WaitComplete</code>	Set to True to prevent the provisioning workflow from sending work items to the guest agent until all customizations have been completed.
<code>VirtualMachine.SoftwareN.ScriptPath</code>	Specifies the full path to an application's install script. The path must be a valid absolute path as seen by the guest operating system and must include the name of the script file name. You can pass custom property values as parameters to the script by inserting <code>{CustomPropertyName}</code> in the path string. For example, if you have a custom property named <code>ActivationKey</code> whose value is 1234, the script path is <code>D:\InstallApp.bat -key {ActivationKey}</code> . The guest agent runs the command <code>D:\InstallApp.bat -key 1234</code> . Your script file can then be programmed to accept and use this value.

Custom Properties for Linked Clone Blueprints

vRealize Automation includes custom properties that you can use to provide additional controls for linked clone blueprints.

Certain vRealize Automation custom properties are required to use with linked clone blueprints.

Table 2-6. Custom Properties for Linked Clone Blueprints

Custom Property	Description
VirtualMachine.DiskN.Storage	Specifies the datastore on which to place the machine disk <i>N</i> , for example DATASTORE01. This property is also used to add a single datastore to a linked clone blueprint. <i>N</i> is the index (starting at 0) of the volume to assign. Enter the name of the datastore to assign to the volume. This is the datastore name as it appears in the Storage Path on the Edit Compute Resource page. Disk numbering must be sequential.
VirtualMachine.DiskN.StorageReservationPolicy	Specifies the storage reservation policy to use to find storage for disk <i>N</i> . Also assigns the named storage reservation policy to a volume. To use this property, substitute the volume number for <i>N</i> in the property name and specify a storage reservation policy name as the value. This property is equivalent to the storage reservation policy name specified on the blueprint. Disk numbering must be sequential. This property is valid for all Virtual and vCloud reservations. This property is not valid for Physical, Amazon, or OpenStack reservations.
VirtualMachine.DiskN.Size	Defines the size in GB of disk <i>N</i> . For example, to give a size of 150 GB to a disk G, define the custom property <code>VirtualMachine.Disk0.Size</code> and enter a value of 150. Disk numbering must be sequential. By default a machine has one disk referred to by <code>VirtualMachine.Disk0.Size</code> , where size is specified by the storage value on the blueprint from which the machine is provisioned. The storage value on the blueprint user interface overwrites the value in the <code>VirtualMachine.Disk0.Size</code> property. The <code>VirtualMachine.Disk0.Size</code> property is not available as a custom property because of its relationship with the storage option on the blueprint. More disks can be added by specifying <code>VirtualMachine.Disk1.Size</code> , <code>VirtualMachine.Disk2.Size</code> and so on. <code>VirtualMachine.Admin.TotalDiskUsage</code> always represents the total of the <code>.DiskN.Size</code> properties plus the <code>VMware.Memory.Reservation</code> size allocation.
VirtualMachine.DiskN.Label	Specifies the label for a machine's disk <i>N</i> . The disk label maximum is 32 characters. Disk numbering must be sequential. When used in conjunction with a guest agent, specifies the label of a machine's disk <i>N</i> inside the guest operating system.
VirtualMachine.DiskN.Letter	Specifies the drive letter or mount point of a machine's disk <i>N</i> . The default is C. For example, to specify the letter D for Disk 1, define the custom property as <code>VirtualMachine.Disk1.Letter</code> and enter the value D. Disk numbering must be sequential. When used in conjunction with a guest agent, this value specifies the drive letter or mount point under which an additional disk <i>N</i> is mounted by the guest agent in the guest operating system.
MaximumProvisionedMachines	Specifies the maximum number of linked clones for one machine snapshot. The default is unlimited.

Table 2-6. Custom Properties for Linked Clone Blueprints (Continued)

Custom Property	Description
<code>Linux.ExternalScript.Name</code>	<p>Specifies the name of an optional customization script, for example <code>config.sh</code>, that the Linux guest agent runs after the operating system is installed. This property is available for Linux machines cloned from templates on which the Linux agent is installed.</p> <p>If you specify an external script, you must also define its location by using the <code>Linux.ExternalScript.LocationType</code> and <code>Linux.ExternalScript.Path</code> properties.</p>
<code>Linux.ExternalScript.LocationType</code>	<p>Specifies the location type of the customization script named in the <code>Linux.ExternalScript.Name</code> property. This can be either <code>local</code> or <code>nfs</code>.</p> <p>You must also specify the script location using the <code>Linux.ExternalScript.Path</code> property. If the location type is <code>nfs</code>, also use the <code>Linux.ExternalScript.Server</code> property.</p>
<code>Linux.ExternalScript.Server</code>	<p>Specifies the name of the NFS server, for example <code>lab-ad.lab.local</code>, on which the Linux external customization script named in <code>Linux.ExternalScript.Name</code> is located.</p>
<code>Linux.ExternalScript.Path</code>	<p>Specifies the local path to the Linux customization script or the export path to the Linux customization on the NFS server. The value must begin with a forward slash and not include the file name, for example <code>/scripts/linux/config.sh</code>.</p>

If you installed the guest agent to customize cloned machines, you use some custom properties more often than others.

Table 2-7. Custom Properties for Customizing Cloned Machines with a Guest Agent

Custom Property	Description
<code>VirtualMachine.Admin.UseGuestAgent</code>	<p>If the guest agent is installed as a service on a template for cloning, set to <code>True</code> on the machine blueprint to enable the guest agent service on machines cloned from that template. When the machine is started, the guest agent service is started. Set to <code>False</code> to disable the guest agent. If set to <code>False</code>, the enhanced clone workflow will not use the guest agent for guest operating system tasks, reducing its functionality to <code>VMwareCloneWorkflow</code>. If not specified or set to anything other than <code>False</code>, the enhanced clone workflow will send work items to the guest agent.</p>
<code>VirtualMachine.Admin.CustomizeGuestOSDelay</code>	<p>Specifies the time to wait after customization is complete and before starting the guest operating system customization. The value must be in <code>HH:MM:SS</code> format. If the value is not set, the default value is one minute (<code>00:01:00</code>). If you choose not to include this custom property, provisioning can fail if the virtual machine reboots before guest agent work items are completed, causing provisioning to fail.</p>

Table 2-7. Custom Properties for Customizing Cloned Machines with a Guest Agent (Continued)

Custom Property	Description
<code>VirtualMachine.Customize.WaitComplete</code>	Set to True to prevent the provisioning workflow from sending work items to the guest agent until all customizations have been completed.
<code>VirtualMachine.SoftwareN.ScriptPath</code>	Specifies the full path to an application's install script. The path must be a valid absolute path as seen by the guest operating system and must include the name of the script file name. You can pass custom property values as parameters to the script by inserting <code>{CustomPropertyName}</code> in the path string. For example, if you have a custom property named <code>ActivationKey</code> whose value is 1234, the script path is <code>D:\InstallApp.bat -key {ActivationKey}</code> . The guest agent runs the command <code>D:\InstallApp.bat -key 1234</code> . Your script file can then be programmed to accept and use this value.

Custom Properties for Linux Kickstart Blueprints

vRealize Automation includes custom properties that you can use to provide additional controls for Linux Kickstart blueprints.

Certain vRealize Automation custom properties are required to use with Linux Kickstart blueprints.

Table 2-8. Required Custom Properties for Linux Kickstart Blueprints

Custom Property	Description
<code>VMware.VirtualCenter.OperatingSystem</code>	Specifies the vCenter Server guest operating system version (<code>VirtualMachineGuestOsIdentifier</code>) with which vCenter Server creates the machine. This operating system version must match the operating system version to be installed on the provisioned machine. Administrators can create property groups using one of several property sets, for example, <code>VMware[OS_Version]Properties</code> , that are predefined to include the correct <code>VMware.VirtualCenter.OperatingSystem</code> values. This property is for virtual provisioning. For related information, see the enumeration type <code>VirtualMachineGuestOsIdentifier</code> in vSphere API/SDK Documentation. For a list of currently accepted values, see the vCenter Server documentation.
<code>Image.ISO.Location</code>	Values for this property are case sensitive. Specifies the location of the ISO image from which to boot, for example <code>http://192.168.2.100/site2/winpe.iso</code> . The format of this value depends on your platform. For details, see documentation provided for your platform. This property is required for WIM-based provisioning, Linux Kickstart and autoYaST provisioning, and SCCM-based provisioning.

Table 2-8. Required Custom Properties for Linux Kickstart Blueprints (Continued)

Custom Property	Description
Image.ISO.Name	Values for this property are case sensitive. Specifies the name of the ISO image from which to boot, for example <code>/ISO/Microsoft/WinPE.iso</code> . The format of this value depends on your platform. For details, see documentation provided for your platform. This property is required for WIM-based provisioning, Linux Kickstart and autoYaST provisioning, and SCCM-based provisioning.
Image.ISO.UserName	Specifies the user name to access the CIFS share in the format <code>username@domain</code> . For Dell iDRAC integrations where the image is located on a CIFS share that requires authentication to access.
Image.ISO.Password	Specifies the password associated with the <code>Image.ISO.UserName</code> property. For Dell iDRAC integrations where the image is located on a CIFS share that requires authentication to access.

Optional custom properties are available.

Table 2-9. Optional Custom Properties for Linux Kickstart Blueprints

Custom Property	Description
VirtualMachine.Admin.ThinProvision	Determines whether thin provisioning is used on ESX compute resources using local or iSCSI storage. Set to True to use thin provisioning. Set to False to use standard provisioning. This property is for virtual provisioning.
Machine.SSH	Set to True to enable the Connect Using SSH option, on the vRealize Automation Items page, for Linux machines provisioned from this blueprint. If set to True and the Connect using RDP or SSH machine operation is enabled in the blueprint, all Linux machines that are provisioned from the blueprint display the Connect Using SSH option to entitled users.

Custom Properties for SCCM Blueprints

vRealize Automation includes custom properties that you can use to provide additional controls for SCCM blueprints.

Certain custom properties are required to use with SCCM blueprints.

Table 2-10. Required Custom Properties for SCCM Blueprints

Custom Property	Description
Image.ISO.Location	Values for this property are case sensitive. Specifies the location of the ISO image from which to boot, for example <i>http://192.168.2.100/site2/winpe.iso</i> . The format of this value depends on your platform. For details, see documentation provided for your platform. This property is required for WIM-based provisioning, Linux Kickstart and autoYaST provisioning, and SCCM-based provisioning.
Image.ISO.Name	Values for this property are case sensitive. Specifies the name of the ISO image from which to boot, for example <i>/ISO/Microsoft/WinPE.iso</i> . The format of this value depends on your platform. For details, see documentation provided for your platform. This property is required for WIM-based provisioning, Linux Kickstart and autoYaST provisioning, and SCCM-based provisioning.
Image.ISO.UserName	Specifies the user name to access the CIFS share in the format <i>username@domain</i> . For Dell iDRAC integrations where the image is located on a CIFS share that requires authentication to access.
Image.ISO.Password	Specifies the password associated with the <code>Image.ISO.UserName</code> property. For Dell iDRAC integrations where the image is located on a CIFS share that requires authentication to access.
SCCM.Collection.Name	Specifies the name of the SCCM collection that contains the operating system deployment task sequence.
SCCM.Server.Name	Specifies the fully qualified domain name of the SCCM server on which the collection resides, for example <i>lab-sccm.lab.local</i> .
SCCM.Server.SiteCode	Specifies the site code of the SCCM server.
SCCM.Server.UserName	Specifies a user name with administrator-level access to the SCCM server.
SCCM.Server.Password	Specifies the password associated with the <code>SCCM.Server.UserName</code> property.

Certain custom properties are used most often with SCCM blueprints.

Table 2-11. Common Custom Properties for SCCM Blueprints

Custom Property	Description
SCCM.CustomVariable.Name	Specifies the value of a custom variable, where <i>Name</i> is the name of any custom variable to be made available to the SCCM task sequence after the provisioned machine is registered with the SCCM collection. The value is determined by your choice of custom variable. If your integration requires it, you can use SCCM.RemoveCustomVariablePrefix to remove the SCCM.CustomVariable. prefix from your custom variable.
SCCM.RemoveCustomVariablePrefix	Set to <i>true</i> to remove the prefix SCCM.CustomVariable. from SCCM custom variables you created by using the custom property SCCM.CustomVariable.Name.

Custom Properties for WIM Blueprints

vRealize Automation includes custom properties that provide additional controls for WIM blueprints.

Certain vRealize Automation custom properties are required for WIM blueprints.

Table 2-12. Required Custom Properties for WIM Blueprints

Custom Property	Description
Image.ISO.Location	Values for this property are case sensitive. Specifies the location of the ISO image from which to boot, for example <i>http://192.168.2.100/site2/winpe.iso</i> . The format of this value depends on your platform. For details, see documentation provided for your platform. This property is required for WIM-based provisioning, Linux Kickstart and autoYaST provisioning, and SCCM-based provisioning.
Image.ISO.Name	Values for this property are case sensitive. Specifies the name of the ISO image from which to boot, for example <i>/ISO/Microsoft/WinPE.iso</i> . The format of this value depends on your platform. For details, see documentation provided for your platform. This property is required for WIM-based provisioning, Linux Kickstart and autoYaST provisioning, and SCCM-based provisioning.
Image.ISO.UserName	Specifies the user name to access the CIFS share in the format <i>username@domain</i> . For Dell iDRAC integrations where the image is located on a CIFS share that requires authentication to access.
Image.ISO.Password	Specifies the password associated with the Image.ISO.UserName property. For Dell iDRAC integrations where the image is located on a CIFS share that requires authentication to access.
Image.Network.Letter	Specifies the drive letter to which the WIM image path is mapped on the provisioned machine. The default value is K.
Image.WIM.Path	Specifies the UNC path to the WIM file from which an image is extracted during WIM-based provisioning. The path format is <i>\\server\share\$</i> format, for example <i>\\lab-ad\dfs\$</i> .

Table 2-12. Required Custom Properties for WIM Blueprints (Continued)

Custom Property	Description
Image.WIM.Name	Specifies the name of the WIM file, for example win2k8.wim, as located by the Image.WIM.Path property.
Image.WIM.Index	Specifies the index used to extract the correct image from the WIM file.
Image.Network.User	Specifies the user name with which to map the WIM image path (Image.WIM.Path) to a network drive on the provisioned machine. This is typically a domain account with access to the network share.
Image.Network.Password	Specifies the password associated with the Image.Network.User property.
VirtualMachine.Admin.Owner	Specifies the user name of the machine owner.
VMware.VirtualCenter.OperatingSystem	Specifies the vCenter Server guest operating system version (VirtualMachineGuestOsIdentifier) with which vCenter Server creates the machine. This operating system version must match the operating system version to be installed on the provisioned machine. Administrators can create property groups using one of several property sets, for example, VMware[OS_Version]Properties, that are predefined to include the correct VMware.VirtualCenter.OperatingSystem values. This property is for virtual provisioning. For related information, see the enumeration type VirtualMachineGuestOsIdentifier in vSphere API/SDK Documentation. For a list of currently accepted values, see the vCenter Server documentation.

Optional custom properties are also available for WIM blueprints.

Table 2-13. Common Custom Properties for WIM Blueprints

Custom Property	Description
SysPrep. <i>Section.Key</i> <ul style="list-style-type: none"> ■ SysPrep.GuiUnattended.AdminPassword ■ SysPrep.GuiUnattended.EncryptedAdminPassword ■ SysPrep.GuiUnattended.TimeZone 	<p>Specifies information to be added to the SysPrep answer file on machines during the WinPE stage of provisioning. Information that already exists in the SysPrep answer file is overwritten by these custom properties. <i>Section</i> represents the name of the section of the SysPrep answer file, for example GuiUnattended or UserData. <i>Key</i> represents a key name in the section. For example, to set the time zone of a provisioned machine to West Pacific Standard Time, define the custom property GuiUnattended.UserData.TimeZone and set the value to 275. For a full list of sections, keys, and accepted values, see the System Preparation Utility for Windows documentation. The following <i>Section.Key</i> combinations can be specified for WIM-based provisioning:</p> <ul style="list-style-type: none"> ■ GuiUnattended <ul style="list-style-type: none"> ■ AdminPassword ■ EncryptedAdminPassword ■ TimeZone ■ UserData <ul style="list-style-type: none"> ■ ProductKey ■ FullName ■ ComputerName ■ OrgName ■ Identification <ul style="list-style-type: none"> ■ DomainAdmin ■ DomainAdminPassword ■ JoinDomain ■ JoinWorkgroup
Sysprep.Identification.DomainAdmin	Specifies a user name with administrator-level access to the target domain in Active Directory. Do not include the user domain in the credentials that you send to vCloud Director or vCloud Air.
Sysprep.Identification.DomainAdminPassword	Specifies the password to associate with the Sysprep.Identification.DomainAdmin property.
Sysprep.Identification.JoinDomain	Specifies the name of the domain to join in Active Directory.
Sysprep.Identification.JoinWorkgroup	Specifies the name of the workgroup to join if not using a domain.
SysPrep.UserData.ComputerName	Specifies a machine name, for example lab-client005.
SysPrep.UserData.FullName	Specifies the full name of a user.
SysPrep.UserData.OrgName	Specifies the organization name of the user.
SysPrep.UserData.ProductKey	Specifies the Windows product key.
VirtualMachine.Admin.ThinProvision	Determines whether thin provisioning is used on ESX compute resources using local or iSCSI storage. Set to True to use thin provisioning. Set to False to use standard provisioning. This property is for virtual provisioning.

Custom Properties for vCloud Air and vCloud Director Blueprints

You can add certain custom properties to a vCloud Air or vCloud Director machine component definition in a blueprint.

For machine components that do not have a **Network** or **Security** tab, you can add network and security custom properties, such as `VirtualMachine.Network0.Name`, to their **Properties** tab in the blueprint canvas. However, NSX load balancer properties are only applicable to vSphere machines.

Table 2-14. Custom Properties for vCloud Air and vCloud Director Machine Components in the Blueprint Canvas

Custom Property	Description
<code>Sysprep.Identification.DomainAdmin</code>	Specifies a user name with administrator-level access to the target domain in Active Directory. Do not include the user domain in the credentials that you send to vCloud Director or vCloud Air.
<code>Sysprep.Identification.DomainAdminPassword</code>	Specifies the password to associate with the <code>Sysprep.Identification.DomainAdmin</code> property.
<code>Sysprep.Identification.JoinDomain</code>	Specifies the name of the domain to join in Active Directory.
<code>VirtualMachine.DiskN.IsFixed</code>	Disables the editing of a specific disk when reconfiguring a machine. Set to True to disable display of the edit capacity option for a specific volume. The True value is case-sensitive. The <i>N</i> value is the 0-based index of the disk. Alternatively, you can set the <code>VirtualMachine.DiskN.IsFixed</code> custom property to True in the <code>VirtualMachineProperties</code> table in the database or use the Repository API to specify a URI value such as <code>.../Repository/Data/ManagementModelEntities.svc/VirtualMachines(guid'60D93A8A-F541-4CE0-A6C6-78973AC0F1D2')/VirtualMachineProperties</code> .
<code>VirtualMachine.DiskN.StorageReservationPolicy</code>	Specifies the storage reservation policy to use to find storage for disk <i>N</i> . Also assigns the named storage reservation policy to a volume. To use this property, substitute the volume number for <i>N</i> in the property name and specify a storage reservation policy name as the value. This property is equivalent to the storage reservation policy name specified on the blueprint. Disk numbering must be sequential. This property is valid for all Virtual and vCloud reservations. This property is not valid for Physical, Amazon, or OpenStack reservations.
<code>VirtualMachine.EULA.AcceptAll</code>	Set to true to specify that all the EULAs for the VM templates of the vCloud Air or vCloud Director endpoints are accepted during provisioning.

Table 2-14. Custom Properties for vCloud Air and vCloud Director Machine Components in the Blueprint Canvas (Continued)

Custom Property	Description
VirtualMachine.NetworkN.Name	<p>Specifies the name of the network to connect to, for example the network device <i>N</i> to which a machine is attached. This is equivalent to a network interface card (NIC).</p> <p>By default, a network is assigned from the network paths available on the reservation on which the machine is provisioned. Also see <code>VirtualMachine.NetworkN.AddressType</code>.</p> <p>You can ensure that a network device is connected to a specific network by setting the value of this property to the name of a network on an available reservation. For example, If you give properties for <i>N</i>= 0 and 1, you get 2 NICs and their assigned value, provided the network is selected in the associated reservation.</p> <p><code>VirtualMachine.NetworkN</code> custom properties are designed to be specific to blueprints and machines. When a machine is requested, network and IP address allocation is performed before the machine is assigned to a reservation. Because blueprints are not guaranteed to be allocated to a specific reservation, do not use this property on a reservation.</p> <p>You can add this property to a vCloud Air or vCloud Director machine component in a blueprint.</p> <p>For related information, see Custom Properties for Networking.</p>
VirtualMachine.NetworkN.AddressType	<p>Specifies how IP address allocation is supplied to the network provider, where <i>NetworkN</i> is the network number, starting with 0. The following value are available:</p> <ul style="list-style-type: none"> ■ DHCP ■ Static ■ MANUAL (available for vCloud Air and vCloud Director only) <p>This property is available for configuring vCloud Air, vCloud Director, and vSphere machine components in the blueprint. Also see <code>VirtualMachine.NetworkN.Name</code>.</p>
VirtualMachine.Reconfigure.DisableHotCpu	<p>Set to true to specify that the reconfigure machine action restarts the specified machine. By default, the reconfigure machine action does not restart the machine.</p> <p>Performing a hot add of CPU, memory, or storage causes the reconfigure machine action to fail and to not restart the machine unless the <code>Hot Add</code> setting is enabled in vSphere for the machine or template. You can add <code>VirtualMachine.Reconfigure.DisableHotCpu=true</code> to a machine component in a vRealize Automation blueprint to disable the <code>Hot Add</code> setting and force the machine to restart regardless of the vSphere <code>Hot Add</code> setting. The custom property is only available for machine types that support hardware reconfiguration, which are vSphere, vCloud Air, and vCloud Director.</p>

Table 2-14. Custom Properties for vCloud Air and vCloud Director Machine Components in the Blueprint Canvas (Continued)

Custom Property	Description
VCloud.Lease.Sync.TimeBufferMins	Specifies a threshold integer value for a compute resource such that lease synchronization between vCloud Director and vRealize Automation only occur for vCloud Director or vCloud Air-provisioned machines that are set to expire in vCloud Director or vCloud Air in that time period. If a conflict is found, the lease value is synchronized to match the lease length defined in vRealize Automation. The default VCloud.Lease.Sync.TimeBufferMins value is 720 minutes, which is 12 hours. If VCloud.Lease.Sync.TimeBufferMins is not present, the default value is used. For example, if the default values are used, vRealize Automation runs the lease synchronization check workflow every 45 minutes, which is the workflow default, and only the leases of machines that are set to expire within 12 hours are changed to match the lease length defined in vRealize Automation.
VCloud.Owner.UseEndpointAccount	Set to true to assign the endpoint account as the vCloud Air or vCloud Director machine owner for provisioning and import operations. For change owner operations, the owner is not changed on the endpoint. If not specified or set to false, the vRealize Automation owner is the machine owner.
VCloud.Template.MakeIdenticalCopy	Set to true to clone an identical copy of the vCloud Air or vCloud Director template for machine provisioning. The machine is provisioned as an identical copy of the template. Settings specified in the template, including storage path, supercede settings specified in the blueprint. The only changes from the template are the names of the cloned machines, which are generated from the machine prefix specified in the blueprint. vCloud Air or vCloud Director machines that are provisioned as identical copies can use networks and storage profiles that are not available in the vRealize Automation reservation. To avoid having unaccounted reservation allocations, verify that the storage profile or network specified in the template is available in the reservation.

Table 2-14. Custom Properties for vCloud Air and vCloud Director Machine Components in the Blueprint Canvas (Continued)

Custom Property	Description
<code>VMware.SCSI.Sharing</code>	<p>Specifies the sharing mode of the machine's VMware SCSI bus. Possible values are based on the <code>VirtualSCSISharing</code> ENUM value and include <code>noSharing</code>, <code>physicalSharing</code>, and <code>virtualSharing</code>.</p> <p>The <code>VMware.SCSI.Sharing</code> property is not available for use with the <code>CloneWorkflow</code> provisioning workflow. If you specify the <code>CloneWorkflow</code> provisioning workflow when configuring your machine component in the blueprint design canvas, you cannot use the <code>VMware.SCSI.Sharing</code> property.</p>
<code>VMware.SCSI.Type</code>	<p>For vCloud Air, vCloud Director, or vSphere machine components in blueprints, specifies the SCSI machine type using one of the following case-sensitive values:</p> <ul style="list-style-type: none"> ■ <code>buslogic</code> Use BusLogic emulation for the virtual disk. ■ <code>lsilogic</code> Use LSILogic emulation for the virtual disk (default). ■ <code>lsilogicsas</code> Use LSILogic SAS 1068 emulation for the virtual disk. ■ <code>pvscsi</code> Use para-virtualization emulation for the virtual disk. ■ <code>none</code> Use if a SCSI controller does not exist for this machine. <p>The <code>VMware.SCSI.Type</code> property is not available for use with the <code>CloneWorkflow</code> provisioning workflow. If you specify the <code>CloneWorkflow</code> provisioning workflow when configuring your machine component in the blueprint design canvas, you cannot use the <code>VMware.SCSI.Type</code> property.</p>

Custom Properties for vRealize Automation Guest Agent

If you have installed the vRealize Automation guest agent in your templates for cloning or in your WinPE, you can use custom properties to run custom scripts within the guest operating system of a provisioned machine after the machine is fully deployed.

Table 2-15. Custom Properties for Customizing Provisioned Machines with a Guest Agent

Custom Property	Description
<code>VirtualMachine.Admin.AddOwnerToAdmins</code>	Set to True (default) to add the machine's owner, as specified by the <code>VirtualMachine.Admin.Owner</code> property, to the local administrators group on the machine.
<code>VirtualMachine.Admin.AllowLogin</code>	Set to True (default) to add the machine owner to the local remote desktop users group, as specified by the <code>VirtualMachine.Admin.Owner</code> property.

Table 2-15. Custom Properties for Customizing Provisioned Machines with a Guest Agent (Continued)

Custom Property	Description
<code>VirtualMachine.Admin.UseGuestAgent</code>	If the guest agent is installed as a service on a template for cloning, set to True on the machine blueprint to enable the guest agent service on machines cloned from that template. When the machine is started, the guest agent service is started. Set to False to disable the guest agent. If set to False, the enhanced clone workflow will not use the guest agent for guest operating system tasks, reducing its functionality to <code>VMwareCloneWorkflow</code> . If not specified or set to anything other than False, the enhanced clone workflow will send work items to the guest agent.
<code>VirtualMachine.DiskN.Active</code>	Set to True (default) to specify that the machine's disk <i>N</i> is active. Set to False to specify that the machine's disk <i>N</i> is not active.
<code>VirtualMachine.DiskN.Size</code>	Defines the size in GB of disk <i>N</i> . For example, to give a size of 150 GB to a disk G, define the custom property <code>VirtualMachine.Disk0.Size</code> and enter a value of 150. Disk numbering must be sequential. By default a machine has one disk referred to by <code>VirtualMachine.Disk0.Size</code> , where size is specified by the storage value on the blueprint from which the machine is provisioned. The storage value on the blueprint user interface overwrites the value in the <code>VirtualMachine.Disk0.Size</code> property. The <code>VirtualMachine.Disk0.Size</code> property is not available as a custom property because of its relationship with the storage option on the blueprint. More disks can be added by specifying <code>VirtualMachine.Disk1.Size</code> , <code>VirtualMachine.Disk2.Size</code> and so on. <code>VirtualMachine.Admin.TotalDiskUsage</code> always represents the total of the <code>.DiskN.Size</code> properties plus the <code>VMware.Memory.Reservation</code> size allocation.
<code>VirtualMachine.DiskN.Label</code>	Specifies the label for a machine's disk <i>N</i> . The disk label maximum is 32 characters. Disk numbering must be sequential. When used in conjunction with a guest agent, specifies the label of a machine's disk <i>N</i> inside the guest operating system.
<code>VirtualMachine.DiskN.Letter</code>	Specifies the drive letter or mount point of a machine's disk <i>N</i> . The default is C. For example, to specify the letter D for Disk 1, define the custom property as <code>VirtualMachine.Disk1.Letter</code> and enter the value D. Disk numbering must be sequential. When used in conjunction with a guest agent, this value specifies the drive letter or mount point under which an additional disk <i>N</i> is mounted by the guest agent in the guest operating system.
<code>VirtualMachine.Admin.CustomizeGuestOSDelay</code>	Specifies the time to wait after customization is complete and before starting the guest operating system customization. The value must be in HH:MM:SS format. If the value is not set, the default value is one minute (00:01:00). If you choose not to include this custom property, provisioning can fail if the virtual machine reboots before guest agent work items are completed, causing provisioning to fail.

Table 2-15. Custom Properties for Customizing Provisioned Machines with a Guest Agent (Continued)

Custom Property	Description
<code>VirtualMachine.Customize.WaitComplete</code>	Set to True to prevent the provisioning workflow from sending work items to the guest agent until all customizations have been completed.
<code>VirtualMachine.SoftwareN.Name</code>	Specifies the descriptive name of a software application <i>N</i> or script to install or run during provisioning. This is an optional and information-only property. It serves no real function for the enhanced clone workflow or the guest agent but it is useful for a custom software selection in a user interface or for software usage reporting.
<code>VirtualMachine.SoftwareN.ScriptPath</code>	Specifies the full path to an application's install script. The path must be a valid absolute path as seen by the guest operating system and must include the name of the script file name. You can pass custom property values as parameters to the script by inserting <code>{CustomPropertyName}</code> in the path string. For example, if you have a custom property named <code>ActivationKey</code> whose value is 1234, the script path is <code>D:\InstallApp.bat -key {ActivationKey}</code> . The guest agent runs the command <code>D:\InstallApp.bat -key 1234</code> . Your script file can then be programmed to accept and use this value.
<code>VirtualMachine.SoftwareN.ISOName</code>	Specifies the path and file name of the ISO file relative to the data store root. The format is <code>/folder_name/subfolder_name/file_name.iso</code> . If a value is not specified, the ISO is not mounted.
<code>VirtualMachine.SoftwareN.ISOLocation</code>	Specifies the storage path that contains the ISO image file to be used by the application or script. Format the path as it appears on the host reservation, for example <code>netapp-1:it_nfs_1</code> . If a value is not specified, the ISO is not mounted.

Custom Properties for Naming and Analyzing Deployments

If provisioning fails, vRealize Automation rolls back all resources included in the catalog item. For deployments that contain multiple components, you can use a custom property to override that default and receive information to debug the failure. These properties are best used when applied to the overall blueprint.

Table 2-16. Custom Properties for Analyzing Deployments

Custom Property	Description
<code>_debug_deployment</code>	<p>By default, all resources that are created by a provisioning process are rolled back if provisioning fails. You can override the default behavior by setting the <code>_debug_deployment</code> custom property value to <code>true</code>. If provisioning fails, the debugging custom property stops the resources from being rolled back so you can identify which of the components failed to provision successfully. None of the components in the failed catalog item are accessible to the user, so this custom property is best used during development and testing of new application blueprints.</p> <p>To apply the custom property to an application blueprint, add <code>_debug_deployment</code> to the Blueprint Properties page using the Properties tab when you create or edit an application blueprint.</p> <p>This property is for blueprints that contain multiple components, such as composite blueprints, and is ignored if applied to standalone blueprints.</p>
<code>_deploymentName</code>	<p>Displays or hides the deployment name field from a published, composite blueprint in the provisioning request details form. To apply the custom property and display the name of the deployment in the request details form, add <code>_deploymentName=true</code> to the Blueprint Properties page using the Properties tab when you create or edit a blueprint. By default, the property is set to <code>false</code>, which suppresses the deployment name.</p>

Custom Properties for Networking

The vRealize Automation custom properties for networking specify configuration for a specific network device on a machine.

Network assignments are performed during machine allocation. vRealize Automation retrieves network information from the blueprint. If you want to assign more than one network, use the `VirtualMachine.NetworkN.Name` custom property on your machine blueprint. If you do not provide custom properties, allocation only assigns one network which is picked using a round robin method in conjunction with the selected reservation.

For machine components that do not have a **Network** or **Security** tab, you can add network and security custom properties, such as `VirtualMachine.Network0.Name`, to their **Properties** tab in the blueprint canvas. However, NSX load balancer properties are only applicable to vSphere machines.

Note This information does not apply to Amazon Web Services.

By default, a machine has one network device configured with the `VirtualMachine.Network0.Name` property. You can configure additional network devices by using the `VirtualMachine.NetworkN.Name` custom property, where *N* is the network number.

The numbering of network properties must be sequential, starting with 0. For example, if you specify custom properties for only `VirtualMachine.Network0` and `VirtualMachine.Network2`, the properties for `VirtualMachine.Network2` are ignored, because the preceding network, `VirtualMachine.Network1`, was not specified.

Table 2-17. Custom Properties for Networking Configuration

Custom Property	Description
<code>VirtualMachine.NetworkN.Address</code>	<p>Specifies the IP address of network device <i>N</i> in a machine provisioned with a static IP address.</p> <p>For Amazon, see <code>Amazon.elasticIpAddress.ipAddress</code>.</p>
<code>VirtualMachine.NetworkN.MacAddressType</code>	<p>Indicates whether the MAC address of network device <i>N</i> is generated or user-defined (static). This property is available for cloning.</p> <p>The default value is generated. If the value is static, you must also use <code>VirtualMachine.NetworkN.MacAddress</code> to specify the MAC address.</p> <p><code>VirtualMachine.NetworkN</code> custom properties are designed to be specific to individual blueprints and machines. When a machine is requested, network and IP address allocation is performed before the machine is assigned to a reservation. Because blueprints are not guaranteed to be allocated to a specific reservation, do not use this property on a reservation.</p>
<code>VirtualMachine.NetworkN.MacAddress</code>	<p>Specifies the MAC address of a network device <i>N</i>. This property is available for cloning.</p> <p>If the value of <code>VirtualMachine.NetworkN.MacAddressType</code> is generated, this property contains the generated address.</p> <p>If the value of <code>VirtualMachine.NetworkN.MacAddressType</code> is static, this property specifies the MAC address. For virtual machines provisioned on ESX server hosts, the address must be in the range specified by VMware. For details, see vSphere documentation.</p> <p><code>VirtualMachine.NetworkN</code> custom properties are designed to be specific to individual blueprints and machines. When a machine is requested, network and IP address allocation is performed before the machine is assigned to a reservation. Because blueprints are not guaranteed to be allocated to a specific reservation, do not use this property on a reservation.</p>

Table 2-17. Custom Properties for Networking Configuration (Continued)

Custom Property	Description
VirtualMachine.NetworkN.Name	<p>Specifies the name of the network to connect to, for example the network device <i>N</i> to which a machine is attached. This is equivalent to a network interface card (NIC).</p> <p>By default, a network is assigned from the network paths available on the reservation on which the machine is provisioned. Also see <code>VirtualMachine.NetworkN.AddressType</code>.</p> <p>You can ensure that a network device is connected to a specific network by setting the value of this property to the name of a network on an available reservation. For example, If you give properties for <i>N</i>= 0 and 1, you get 2 NICs and their assigned value, provided the network is selected in the associated reservation.</p> <p><code>VirtualMachine.NetworkN</code> custom properties are designed to be specific to blueprints and machines. When a machine is requested, network and IP address allocation is performed before the machine is assigned to a reservation. Because blueprints are not guaranteed to be allocated to a specific reservation, do not use this property on a reservation.</p> <p>You can add this property to a vCloud Air or vCloud Director machine component in a blueprint.</p>
VirtualMachine.NetworkN.PortID	<p>Specifies the port ID to use for network device <i>N</i> when using a dvPort group with a vSphere distributed switch.</p> <p><code>VirtualMachine.NetworkN</code> custom properties are designed to be specific to individual blueprints and machines. When a machine is requested, network and IP address allocation is performed before the machine is assigned to a reservation. Because blueprints are not guaranteed to be allocated to a specific reservation, do not use this property on a reservation.</p>

Table 2-17. Custom Properties for Networking Configuration (Continued)

Custom Property	Description
VirtualMachine.NetworkN.ProfileName	<p>Specifies the name of a network profile from which to assign a static IP address to network device <i>N</i> or from which to obtain the range of static IP addresses that can be assigned to network device <i>N</i> of a cloned machine, where <i>N</i>=0 for the first device, 1 for the second, and so on.</p> <p>If a network profile is specified in the network path in the reservation on which the machine is provisioned, a static IP address is assigned from that network profile. You can ensure that a static IP address is assigned from a specific profile by setting the value of this property to the name of a network profile.</p> <p>Note that changing this property value after the network is assigned has no effect on the expected IP address values for the designated machines.</p> <p>With WIM-based provisioning for virtual machines, you can use this property to specify a network profile and network interface or you can use the Network section of the Virtual Reservation page. You can also assign the network interface to a virtual network using the <code>VirtualMachine.NetworkN.Name</code> custom property.</p> <p>The following attributes of the network profile are available to enable static IP assignment in a cloning blueprint:</p> <ul style="list-style-type: none"> ■ <code>VirtualMachine.NetworkN.SubnetMask</code> ■ <code>VirtualMachine.NetworkN.Gateway</code> ■ <code>VirtualMachine.NetworkN.PrimaryDns</code> ■ <code>VirtualMachine.NetworkN.SecondaryDns</code> ■ <code>VirtualMachine.NetworkN.PrimaryWins</code> ■ <code>VirtualMachine.NetworkN.SecondaryWins</code> ■ <code>VirtualMachine.NetworkN.DnsSuffix</code> ■ <code>VirtualMachine.NetworkN.DnsSearchSuffixes</code> <p><code>VirtualMachine.NetworkN</code> custom properties are designed to be specific to individual blueprints and machines. When a machine is requested, network and IP address allocation is performed before the machine is assigned to a reservation. Because blueprints are not guaranteed to be allocated to a specific reservation, do not use this property on a reservation.</p> <p>You cannot use this custom property to define an on-demand NAT or on-demand routed network profile name. Because on-demand network profile names are generated at allocation time (during provisioning), their names are unknown when creating or editing the blueprint. To specify NSX on-demand network information, use the applicable network component in the blueprint design canvas for your vSphere machine components.</p>

Table 2-17. Custom Properties for Networking Configuration (Continued)

Custom Property	Description
<ul style="list-style-type: none"> ■ VirtualMachine.NetworkN.SubnetMask ■ VirtualMachine.NetworkN.Gateway ■ VirtualMachine.NetworkN.PrimaryDns ■ VirtualMachine.NetworkN.SecondaryDns ■ VirtualMachine.NetworkN.PrimaryWins ■ VirtualMachine.NetworkN.SecondaryWins ■ VirtualMachine.NetworkN.DnsSuffix ■ VirtualMachine.NetworkN.DnsSearchSuffixes 	<p>Configures attributes of the network profile specified in <code>VirtualMachine.NetworkN.ProfileName</code>.</p> <p><code>VirtualMachine.NetworkN</code> custom properties are designed to be specific to individual blueprints and machines. When a machine is requested, network and IP address allocation is performed before the machine is assigned to a reservation. Because blueprints are not guaranteed to be allocated to a specific reservation, do not use this property on a reservation.</p>
<p><code>VCNS.LoadBalancerEdgePool.Names.name</code></p>	<p>Specifies the vCloud Networking and Security load balancing pools to which the virtual machine is assigned during provisioning. The virtual machine is assigned to all service ports of all specified pools. The value is an <i>edge/pool</i> name or a list of <i>edge/pool</i> names separated by commas. Names are case-sensitive.</p> <p>Note You can add a machine IP address to an existing load balancer by using the <code>VCNS.LoadBalancerEdgePool.Names</code> custom property. vRealize Automation and NSX use the first member of the specified edge load balancer pool to determine the new member port and monitor port settings. However, NSX 6.2 does not require that the member port setting be specified. To avoid provisioning failure when using <code>VCNS.LoadBalancerEdgePool.Names</code> with NSX 6.2 to add a machine to an existing pool, you must specify a port value for the first member of the load balancer pool in NSX.</p> <p>Appending a name allows you to create multiple versions of a custom property. For example, the following properties might list load balancing pools set up for general use and machines with high, moderate, and low performance requirements:</p> <ul style="list-style-type: none"> ■ <code>VCNS.LoadBalancerEdgePool.Names</code> ■ <code>VCNS.LoadBalancerEdgePool.Names.moderate</code> ■ <code>VCNS.LoadBalancerEdgePool.Names.high</code> ■ <code>VCNS.LoadBalancerEdgePool.Names.low</code>

Table 2-17. Custom Properties for Networking Configuration (Continued)

Custom Property	Description
<code>VCNS.SecurityGroup.Names.name</code>	<p>Specifies the vCloud Networking and Security security group or groups to which the virtual machine is assigned during provisioning. The value is a security group name or a list of names separated by commas. Names are case-sensitive.</p> <p>Appending a name allows you to create multiple versions of the property, which can be used separately or in combination. For example, the following properties can list security groups intended for general use, for the sales force, and for support:</p> <ul style="list-style-type: none"> ■ <code>VCNS.SecurityGroup.Names</code> ■ <code>VCNS.SecurityGroup.Names.sales</code> ■ <code>VCNS.SecurityGroup.Names.support</code>
<code>VCNS.SecurityTag.Names.name</code>	<p>Specifies the vCloud Networking and Security security tag or tags to which the virtual machine is associated during provisioning. The value is a security tag name or a list of names separated by commas. Names are case-sensitive.</p> <p>Appending a name allows you to create multiple versions of the property, which can be used separately or in combination. For example, the following properties can list security tags intended for general use, for the sales force, and for support:</p> <ul style="list-style-type: none"> ■ <code>VCNS.SecurityTag.Names</code> ■ <code>VCNS.SecurityTag.Names.sales</code> ■ <code>VCNS.SecurityTag.Names.support</code>

Custom Properties for PXE Provisioning

PXE is the only provisioning method supported for Cisco UCS Manager. You can use the network bootstrap program with vRealize Automation custom properties to initiate WIM, SCCM, or Linux Kickstart provisioning. You can also use custom properties to call your own PowerShell scripts. Linux Kickstart provisioning does not require custom properties.

Custom Properties for Provisioning With PowerShell Scripts

You can use these properties for calling PowerShell scripts.

Table 2-18. Custom Properties for Calling PowerShell Scripts

Custom Property	Description
<code>Pxe.Setup.ScriptName</code>	<p>Specifies a custom EPI PowerShell script to run on the machine before it is started by using the PXE network boot program. The value is the name assigned to the script when it is uploaded to the model manager, for example <code>setup.ps1</code>.</p>
<code>Pxe.Clean.ScriptName</code>	<p>Specifies the name of an EPI PowerShell script installed in the vRealize Automation Model Manager, to run on the machine after it is provisioned. The value is the name assigned to the script when it is uploaded to the Model Manager, for example <code>clean.ps1</code>.</p>

Custom Properties For PXE and SCCM Provisioning

You can use these properties for PXE and SCCM provisioning.

Table 2-19. Custom Properties for PXE and SCCM Provisioning

Custom Property	Description
SCCM.Collection.Name	Specifies the name of the SCCM collection that contains the operating system deployment task sequence.
SCCM.Server.Name	Specifies the fully qualified domain name of the SCCM server on which the collection resides, for example lab-sccm.lab.local.
SCCM.Server.SiteCode	Specifies the site code of the SCCM server.
SCCM.Server.UserName	Specifies a user name with administrator-level access to the SCCM server.
SCCM.Server.Password	Specifies the password associated with the SCCM.Server.UserName property.
SCCM.CustomVariable.	Specifies the value of a custom variable, where <i>Name</i> is the name of any custom variable to be made available to the SCCM task sequence after the provisioned machine is registered with the SCCM collection. The value is determined by your choice of custom variable. If your integration requires it, you can use SCCM.RemoveCustomVariablePrefix to remove the SCCM.CustomVariable. prefix from your custom variable.

Custom Properties For PXE and WIM Provisioning

You can use these properties for PXE and WIM provisioning.

Table 2-20. Custom Properties for PXE and WIM Provisioning

Custom Property	Description
Image.Network.Letter	Specifies the drive letter to which the WIM image path is mapped on the provisioned machine. The default value is K.
Image.WIM.Path	Specifies the UNC path to the WIM file from which an image is extracted during WIM-based provisioning. The path format is <code>\\server\share\$</code> format, for example <code>\\lab-ad\dfs\$</code> .
Image.WIM.Name	Specifies the name of the WIM file, for example win2k8.wim, as located by the Image.WIM.Path property.
Image.WIM.Index	Specifies the index used to extract the correct image from the WIM file.
Image.Network.User	Specifies the user name with which to map the WIM image path (Image.WIM.Path) to a network drive on the provisioned machine. This is typically a domain account with access to the network share.
Image.Network.Password	Specifies the password associated with the Image.Network.User property.

Table 2-20. Custom Properties for PXE and WIM Provisioning (Continued)

Custom Property	Description
SysPrep. <i>Section.Key</i> <ul style="list-style-type: none"> ■ SysPrep.GuiUnattended.AdminPassword ■ SysPrep.GuiUnattended.EncryptedAdminPassword ■ SysPrep.GuiUnattended.TimeZone 	<p>Specifies information to be added to the SysPrep answer file on machines during the WinPE stage of provisioning. Information that already exists in the SysPrep answer file is overwritten by these custom properties. <i>Section</i> represents the name of the section of the SysPrep answer file, for example GuiUnattended or UserData. <i>Key</i> represents a key name in the section. For example, to set the time zone of a provisioned machine to West Pacific Standard Time, define the custom property GuiUnattended.UserData.TimeZone and set the value to 275. For a full list of sections, keys, and accepted values, see the System Preparation Utility for Windows documentation. The following <i>Section.Key</i> combinations can be specified for WIM-based provisioning:</p> <ul style="list-style-type: none"> ■ GuiUnattended <ul style="list-style-type: none"> ■ AdminPassword ■ EncryptedAdminPassword ■ TimeZone ■ UserData <ul style="list-style-type: none"> ■ ProductKey ■ FullName ■ ComputerName ■ OrgName ■ Identification <ul style="list-style-type: none"> ■ DomainAdmin ■ DomainAdminPassword ■ JoinDomain ■ JoinWorkgroup
Sysprep.Identification.DomainAdmin	Specifies a user name with administrator-level access to the target domain in Active Directory. Do not include the user domain in the credentials that you send to vCloud Director or vCloud Air.
Sysprep.Identification.DomainAdminPassword	Specifies the password to associate with the Sysprep.Identification.DomainAdmin property.
Sysprep.Identification.JoinDomain	Specifies the name of the domain to join in Active Directory.
Sysprep.Identification.JoinWorkgroup	Specifies the name of the workgroup to join if not using a domain.
SysPrep.UserData.ComputerName	Specifies a machine name, for example lab-client005.
SysPrep.UserData.FullName	Specifies the full name of a user.
SysPrep.UserData.OrgName	Specifies the organization name of the user.
SysPrep.UserData.ProductKey	Specifies the Windows product key.

Custom Properties for BMC BladeLogic Configuration Manager Integration

vRealize Automation includes custom properties that you can use to provide additional controls for BMC BladeLogic Configuration Manager integration.

Table 2-21. Custom Properties Required for BMC BladeLogic Configuration Manager Integrations

Custom Property	Description
<code>VirtualMachine.EPI.Type</code>	Specifies the type of external provisioning infrastructure.
<code>VirtualMachine.Admin.Owner</code>	Specifies the user name of the machine owner.
<code>BMC.Software.Install</code>	Set to True to enable BMC BladeLogic Configuration Manager integration.
<code>EPI.Server.Name</code>	Specifies the name of the external provisioning infrastructure server, for example, the name of the server hosting BMC BladeLogic. If at least one general BMC EPI agent was installed without specifying a BMC BladeLogic Configuration Manager host, this value directs the request to the desired server. If only dedicated BMC EPI agents for specific BMC BladeLogic Configuration Manager hosts were installed, this value must exactly match the server name configured for one of these agents.
<code>BMC.Service.Profile</code>	Specifies the name of the default authentication profile on the BMC BladeLogic server.
<code>BMC.Software.BatchLocation</code>	Specifies the location in BMC BladeLogic configuration where software jobs are deployed. This value must match the appropriate value of <code>Vrm.Software.IdNNNN</code> . For example, a valid value could be <code>/Application Deployment</code> .
<code>VMware.VirtualCenter.OperatingSystem</code>	Specifies the vCenter Server guest operating system version (<code>VirtualMachineGuestOsIdentifier</code>) with which vCenter Server creates the machine. This operating system version must match the operating system version to be installed on the provisioned machine. Administrators can create property groups using one of several property sets, for example, <code>VMware[OS_Version]Properties</code> , that are predefined to include the correct <code>VMware.VirtualCenter.OperatingSystem</code> values. This property is for virtual provisioning. For related information, see the enumeration type <code>VirtualMachineGuestOsIdentifier</code> in vSphere API/SDK Documentation. For a list of currently accepted values, see the vCenter Server documentation.

Custom Properties To Make BMC BladeLogic Configuration Manager Software Jobs Available

Configure BMC BladeLogic Configuration Manager jobs for vRealize Automation integrations. Make all software jobs available to machine requesters to select from, or specify a software job to apply to all machines provisioned from the blueprint.

Table 2-22. Custom Properties to Make Software Jobs Available

Custom Property	Description
LoadSoftware	Set to True to enable software install options.
Vrm.Software.IdNNNN	Specifies a software job or policy to be applied to all machines provisioned from the blueprint. Set the value to <code>job_type=job_path</code> , where <code>job_type</code> is the numeral that represents the BMC BladeLogic job type and <code>job_path</code> is the location of the job in BMC BladeLogic, for example <code>4=/Utility/putty</code> . <code>NNNN</code> is a number from 1000 to 1999. The first property must start with 1000 and increment in numerical order for each additional property.

- 1 – AuditJob
- 2 – BatchJob
- 3 – ComplianceJob
- 4 – DeployJob
- 5 – FileDeployJob
- 6 – NSHScriptJob
- 7 – PatchAnalysisJob
- 8 – SnapshotJob

Optional Custom Properties for BMC BladeLogic Configuration Manager Integrations

You can also use optional custom properties that are commonly used with BMC BladeLogic Configuration Manager blueprints.

Table 2-23. Optional Custom Properties for BMC BladeLogic Configuration Manager Integrations

Property	Definition
BMC.AddServer.Delay	Specifies the number of seconds to wait before adding the machine to BMC BladeLogic Configuration Manager. The default is 30.
BMC.AddServer.Retry	Specifies the number of seconds to wait before retrying if the first attempt to add the machine to BMC BladeLogic Configuration Manager is unsuccessful. The default is 100.

Custom Properties for HP Server Automation Integration

vRealize Automation includes custom properties that you can use to provide additional controls for HP Server Automation integration. Some custom properties are required for HP Server Automation integration. Other custom properties are optional.

Required Custom Properties for HP Server Automation Integration

Certain custom properties are required for a blueprint to work with HP Server Automation.

Table 2-24. Required Custom Properties for HP Server Automation Integration

Property	Definition
<code>VMware.VirtualCenter.OperatingSystem</code>	Specifies the vCenter Server guest operating system version (<code>VirtualMachineGuestOsIdentifier</code>) with which vCenter Server creates the machine. This operating system version must match the operating system version to be installed on the provisioned machine. Administrators can create property groups using one of several property sets, for example, <code>VMware[OS_Version]Properties</code> , that are predefined to include the correct <code>VMware.VirtualCenter.OperatingSystem</code> values. This property is for virtual provisioning.
<code>VirtualMachine.EPI.Type</code>	Specifies the type of external provisioning infrastructure.
<code>EPI.Server.Name</code>	Specifies the name of the external provisioning infrastructure server, for example, the name of the server hosting BMC BladeLogic. If at least one general BMC EPI agent was installed without specifying a BMC BladeLogic Configuration Manager host, this value directs the request to the desired server.
<code>Opware.Software.Install</code>	Set to True to allow HP Server Automation to install software.
<code>Opware.Server.Name</code>	Specifies the fully qualified name of the HP Server Automation server.
<code>Opware.Server.Username</code>	Specifies the user name provided when a password file in the agent directory was created, for example <code>opswreadmin</code> . This user name requires administrative access to the HP Server Automation instance.
<code>Opware.BootImage.Name</code>	Specifies the boot image value as defined in HP Server Automation for the 32-bit WinPE image, for example <code>winpe32</code> . The property is not required when provisioning by cloning.
<code>Opware.Customer.Name</code>	Specifies a customer name value as defined in HP Server Automation, for example <code>MyCompanyName</code> .
<code>Opware.Facility.Name</code>	Specifies a facility name value as defined in HP Server Automation, for example <code>Cambridge</code> .
<code>Opware.Machine.Password</code>	Specifies the default local administrator password for an operating system sequence WIM image such as <code>Opware.OSSequence.Name</code> as defined in HP Server Automation, for example <code>P@ssword1</code> .

Table 2-24. Required Custom Properties for HP Server Automation Integration (Continued)

Property	Definition
Opware.OSSequence.Name	Specifies the operating system sequence name value as defined in HP Server Automation, for example Windows 2008 WIM.
Opware.Realm.Name	Specifies the realm name value as defined in HP Server Automation, for example Production.
Opware.Register.Timeout	Specifies the time, in seconds, to wait for creation of a provisioning job to complete.
VirtualMachine.CDRom.Attach	Set to False to provision the machine without a CD-ROM device. The default is True.
Linux.ExternalScript.Name	Specifies the name of an optional customization script, for example config.sh, that the Linux guest agent runs after the operating system is installed. This property is available for Linux machines cloned from templates on which the Linux agent is installed.
Linux.ExternalScript.LocationType	Specifies the location type of the customization script named in the Linux.ExternalScript.Name property. This can be either local or nfs.
Linux.ExternalScript.Path	Specifies the local path to the Linux customization script or the export path to the Linux customization on the NFS server. The value must begin with a forward slash and not include the file name, for example /scripts/linux/config.sh.

Optional Custom Properties for HP Server Automation Integration

Certain custom properties are optional for a blueprint to work with HP Server Automation.

Table 2-25. Optional Custom Properties for HP Server Automation Integration

Property	Definition
Opware.ProvFail.Notify	(Optional) Specifies the notification email address for HP Server Automation to use in the event of provisioning failure, for example provisionfail@lab.local.
Opware.ProvFail.Owner	(Optional) Specifies the HP Server Automation user to whom ownership is assigned if provisioning fails.
Opware.ProvSuccess.Notify	(Optional) Specifies the notification email address for HP Server Automation to use if provisioning is successful.
Opware.ProvSuccess.Owner	(Optional) Specifies the HP Server Automation user to whom ownership is assigned if provisioning is successful.

Custom Properties That Make HP Server Automation Software Jobs Available

Depending on how your fabric administrator configures HP Server Automation jobs for vRealize Automation integration, you might have a choice between making all software jobs available to machine requesters to select, or you can specify jobs to apply to all machines provisioned from your blueprint.

Table 2-26. Custom Properties to Make Software Jobs Available

Property	Definition
LoadSoftware	Set to True to enable software install options.
Vrm.Software.Id	(Optional) Specifies an HP Server Automation policy to be applied to all machines provisioned from the blueprint. <i>NNNN</i> is a number from 1000 to 1999. The first property must start with 1000 and increment in numerical order for each additional property.

Custom Properties Grouped by Name

3

You can use custom properties to provide additional vRealize Automation controls.

Custom properties have been grouped here by name. To explore custom properties grouped by function, see [Chapter 2 Custom Properties Grouped by Function](#).

This chapter includes the following topics:

- [Custom Properties A Table](#)
- [Custom Properties B Table](#)
- [Custom Properties C Table](#)
- [Custom Properties E Table](#)
- [Custom Properties H Table](#)
- [Custom Properties I Table](#)
- [Custom Properties L Table](#)
- [Custom Properties M Table](#)
- [Custom Properties O Table](#)
- [Custom Properties P Table](#)
- [Custom Properties R Table](#)
- [Custom Properties S Table](#)
- [Custom Properties V Table](#)
- [Custom Properties X Table](#)

Custom Properties A Table

This section lists vRealize Automation custom properties that begin with the letter A.

Table 3-1. Custom Properties A Table

Property	Description
<code>AD.Lookup.Department</code>	Specifies the cost center value that is included in a notification email sent to approvers. This property value must be specified in the blueprint.
<code>amazon.AmazonEC2Config.ServiceURL</code>	Specifies the Amazon configuration service URL for Amazon GovCloud, for example <code>amazon.AmazonEC2Config.ServiceURL=https://ec2.us-gov-west-1.amazonaws.com</code> .
<code>amazon.ElasticLoadBalancingConfig.ServiceURL</code>	Specifies the Amazon load balancer configuration service URL for Amazon GovCloud, for example <code>amazon.ElasticLoadBalancingConfig.ServiceURL=https://elasticloadbalancing.us-gov-west-1.amazonaws.com</code> .
<code>Amazon.ElasticLoadBalancer.Names</code>	Assigns machines that are provisioned by a blueprint to the elastic load balancers that match the specified values. This property is valid for vSphere, Amazon, and Hyper-V configurations.
<code>Amazon.Instance.Id</code>	Specifies the Amazon instance ID of a machine provisioned on an Amazon EC2 endpoint. This property is valid for vSphere and Amazon configurations.
<code>Amazon.elasticIpAddress.ipAddress</code>	Specifies the Amazon IP address where <code>ipAddress</code> is the specific IP address to assign to the instance.

Custom Properties B Table

This section lists vRealize Automation custom properties that begin with the letter B.

Table 3-2. Custom Properties B Table

Property	Definition
<code>BMC.AddServer.Delay</code>	Specifies the number of seconds to wait before adding the machine to BMC BladeLogic Configuration Manager. The default is 30.
<code>BMC.AddServer.Retry</code>	Specifies the number of seconds to wait before retrying if the first attempt to add the machine to BMC BladeLogic Configuration Manager is unsuccessful. The default is 100.
<code>BMC.Service.Profile</code>	Specifies the name of the default authentication profile on the BMC BladeLogic server.
<code>BMC.Software.BatchLocation</code>	Specifies the location in BMC BladeLogic configuration where software jobs are deployed. This value must match the appropriate value of <code>Vrm.Software.IdNNNN</code> . For example, a valid value could be <code>/Application Deployment</code> .
<code>BMC.Software.Install</code>	Set to True to enable BMC BladeLogic Configuration Manager integration.

Custom Properties C Table

This section lists vRealize Automation custom properties that begin with the letter C.

Table 3-3. Custom Properties C Table

Property	Definition
Cisco.Organization.Dn	Specifies the distinguished name of the Cisco UCS Manager organization in which Cisco UCS machines provisioned by the business group are placed, for example org-root/org-Engineering. If the specified organization does not exist in the Cisco UCS Manager instance that is managing the machine, provisioning fails. This property is available for business groups only.
CloneFrom	Specifies the name of an existing machine or virtualization platform object to clone from, for example a template in vCenter Server such as Win2k8tmpl.
CloneSpec	Specifies the name of a customization specification on a cloned machine, for example a predefined SysPrep object in vCenter Server such as Win2k Customization Spec. The default value is specified on the blueprint.
Command.DiskPart.Options	When you use WIM-based virtual provisioning on ESX server hosts, set to Align=64 to use the recommended alignment parameters when you format and partition the machine's disk. This property is not available for physical provisioning.
Command.FormatDisk.Options	When you use WIM-based virtual provisioning on ESX server hosts, set to /A:32K to use the recommended alignment parameters when you format and partition the machine's disk. This property is not available for physical provisioning.

Custom Properties E Table

This section lists vRealize Automation custom properties that begin with the letter E.

Table 3-4. Custom Properties E Table

Property	Definition
EPI.Server.Collection	Specifies the name of the Citrix provisioning collection to which the machine is to be registered.
EPI.Server.Name	<p>Specifies the name of the external provisioning infrastructure server, for example, the name of the server hosting BMC BladeLogic. If at least one general BMC EPI agent was installed without specifying a BMC BladeLogic Configuration Manager host, this value directs the request to the desired server.</p> <p>If only dedicated BMC EPI agents for specific BMC BladeLogic Configuration Manager hosts were installed, this value must exactly match the server name configured for one of these agents.</p> <p>Specifies the name of the server hosting HP Server Automation. If at least one general Opsware EPI agent was installed without specifying a server automation server, this value directs the request to the desired server.</p> <p>If only dedicated EPI agents for specific HP server automation servers were installed, this value must exactly match the server name configured for one of these agents.</p> <p>If at least one general EPI agent of the appropriate type (VirtualMachine.EPI.Type) was installed without specifying a server, this value directs the request to the desired server. If only dedicated EPI agents for specific servers of the appropriate type were installed, this value must exactly match the server name configured for one of these agents.</p>
EPI.Server.Port	Specifies the port on which to contact the provisioning server. If you are using a Citrix provisioning server, omit to specify the default port value of 54321.
EPI.Server.Site	Specifies the name of the Citrix provisioning site that contains the collection and store identified by the EPI.Server.Collection and EPI.Server.Store properties, for example site1.
EPI.Server.Store	Specifies the name of the Citrix provisioning store that contains the vDisk identified by the EPI.Server.VDiskName property, for example store1.
EPI.Server.VDiskName	Specifies the name of the Citrix provisioning vDisk from which to provision, for example disk1.

Custom Properties H Table

This section lists vRealize Automation custom properties that begin with the letter H.

Table 3-5. Custom Properties H Table

Property	Definition
Hostname	Specifies the host machine name, overriding the generated machine name contained in the VirtualMachine.Admin.Name property. If Hostname is not used, the VirtualMachine.Admin.Name value is used as the machine name.
Hyperv.Network.Type	Specifies the network adapter type of the virtual machine. This property is valid for use with Hyper-V only. The default value is Synthetic. The Legacy value is not compatible with WinXP or Server 2003 x64 guest operating systems.

Custom Properties I Table

This section lists vRealize Automation custom properties that begin with the letter I.

Table 3-6. Custom Properties I Table

Property	Definition
<code>Image.ISO.Location</code>	<p>Values for this property are case sensitive. Specifies the location of the ISO image from which to boot, for example <code>http://192.168.2.100/site2/winpe.iso</code>. The format of this value depends on your platform. For details, see documentation provided for your platform. This property is required for WIM-based provisioning, Linux Kickstart and autoYaST provisioning, and SCCM-based provisioning.</p> <p>For virtual provisioning with vCenter Server, this specifies the name of a datastore in the instance that will be accessible to the provisioning compute resource. For virtual provisioning with XenServer, this specifies the name of a storage repository.</p> <p>For physical provisioning, this specifies the HTTP URL of the web-accessible location of the image.</p>
<code>Image.ISO.Name</code>	<p>Values for this property are case sensitive. Specifies the name of the ISO image from which to boot, for example <code>/ISO/Microsoft/WinPE.iso</code>. The format of this value depends on your platform. For details, see documentation provided for your platform. This property is required for WIM-based provisioning, Linux Kickstart and autoYaST provisioning, and SCCM-based provisioning.</p> <p>For virtual provisioning with vCenter Server, this value specifies the path to the image in the datastore specified by <code>Image.ISO.Location</code>, for example <code>/MyISOs/Microsoft/MSDN/win2003.iso</code>. The value must use forward slashes and begin with a forward slash. For virtual provisioning with XenServer, this value specifies the name of the image in the storage repository specified by <code>Image.ISO.Location</code>. In virtual provisioning with Hyper-V, this value specifies the full local path to the image.</p> <p>For physical provisioning, this value specifies the file name of the image.</p>
<code>Image.ISO.UserName</code>	<p>Specifies the user name to access the CIFS share in the format <code>username@domain</code>. For Dell iDRAC integrations where the image is located on a CIFS share that requires authentication to access.</p>
<code>Image.ISO.Password</code>	<p>Specifies the password associated with the <code>Image.ISO.UserName</code> property. For Dell iDRAC integrations where the image is located on a CIFS share that requires authentication to access.</p>
<code>Image.WIM.Path</code>	<p>Specifies the UNC path to the WIM file from which an image is extracted during WIM-based provisioning. The path format is <code>\\server\share\$</code> format, for example <code>\\lab-ad\dfs\$</code>.</p>
<code>Image.WIM.Name</code>	<p>Specifies the name of the WIM file, for example <code>win2k8.wim</code>, as located by the <code>Image.WIM.Path</code> property.</p>
<code>Image.WIM.Index</code>	<p>Specifies the index used to extract the correct image from the WIM file.</p>
<code>Image.Network.User</code>	<p>Specifies the user name with which to map the WIM image path (<code>Image.WIM.Path</code>) to a network drive on the provisioned machine. This is typically a domain account with access to the network share.</p>
<code>Image.Network.Password</code>	<p>Specifies the password associated with the <code>Image.Network.User</code> property.</p>
<code>Image.Network.Letter</code>	<p>Specifies the drive letter to which the WIM image path is mapped on the provisioned machine. The default value is K.</p>

Table 3-6. Custom Properties I Table (Continued)

Property	Definition
Infrastructure.Admin.MachineObjectOU	Specifies the organizational unit (OU) of the machine. When machines are placed in the required OU by the business group OU setting, this property is not required.
Infrastructure.Admin.ADUser	Specifies the domain administrator user ID. This identifier is used to query Active Directory users and groups when an anonymous bind cannot be used.
Infrastructure.Admin.ADPassWord	Specifies the password associated with the Infrastructure.Admin.ADUser domain administrator user ID.
Infrastructure.Admin.DefaultDomain	Specifies the default domain on the machine.
Infrastructure.ResourcePool.Name	Specifies the resource pool to which the machine belongs, if any. The default is the value specified in the reservation from which the machine was provisioned.

Custom Properties L Table

This section lists vRealize Automation custom properties that begin with the letter L.

Table 3-7. Custom Properties L Table

Property	Description
Linux.ExternalScript.LocationType	Specifies the location type of the customization script named in the Linux.ExternalScript.Name property. This can be either local or nfs. You must also specify the script location using the Linux.ExternalScript.Path property. If the location type is nfs, also use the Linux.ExternalScript.Server property.
Linux.ExternalScript.Name	Specifies the name of an optional customization script, for example config.sh, that the Linux guest agent runs after the operating system is installed. This property is available for Linux machines cloned from templates on which the Linux agent is installed. If you specify an external script, you must also define its location by using the Linux.ExternalScript.LocationType and Linux.ExternalScript.Path properties.
Linux.ExternalScript.Path	Specifies the local path to the Linux customization script or the export path to the Linux customization on the NFS server. The value must begin with a forward slash and not include the file name, for example /scripts/linux/config.sh.
Linux.ExternalScript.Server	Specifies the name of the NFS server, for example lab-ad.lab.local, on which the Linux external customization script named in Linux.ExternalScript.Name is located.
LoadSoftware	Set to True to enable software install options.

Custom Properties M Table

This section lists vRealize Automation custom properties that begin with the letter M.

Table 3-8. Custom Properties M Table

Property	Description
MaximumProvisionedMachines	Specifies the maximum number of linked clones for one machine snapshot. The default is unlimited.
Machine.SSH	Set to True to enable the Connect Using SSH option, on the vRealize Automation Items page, for Linux machines provisioned from this blueprint. If set to True and the Connect using RDP or SSH machine operation is enabled in the blueprint, all Linux machines that are provisioned from the blueprint display the Connect Using SSH option to entitled users.

Custom Properties O Table

This section lists vRealize Automation custom properties that begin with the letter O.

Table 3-9. Custom Properties O Table

Property	Description
Opware.BootImage.Name	Specifies the boot image value as defined in HP Server Automation for the 32-bit WinPE image, for example winpe32. The property is not required when provisioning by cloning.
Opware.Customer.Name	Specifies a customer name value as defined in HP Server Automation, for example MyCompanyName.
Opware.Facility.Name	Specifies a facility name value as defined in HP Server Automation, for example Cambridge.
Opware.Machine.Password	Specifies the default local administrator password for an operating system sequence WIM image such as Opware.OSSequence.Name as defined in HP Server Automation, for example P@ssword1.
Opware.OSSequence.Name	Specifies the operating system sequence name value as defined in HP Server Automation, for example Windows 2008 WIM.
Opware.ProvFail.Notify	(Optional) Specifies the notification email address for HP Server Automation to use in the event of provisioning failure, for example provisionfail@lab.local.
Opware.ProvFail.Owner	(Optional) Specifies the HP Server Automation user to whom ownership is assigned if provisioning fails.
Opware.ProvSuccess.Notify	(Optional) Specifies the notification email address for HP Server Automation to use if provisioning is successful.
Opware.ProvSuccess.Owner	(Optional) Specifies the HP Server Automation user to whom ownership is assigned if provisioning is successful.
Opware.Realm.Name	Specifies the realm name value as defined in HP Server Automation, for example Production.
Opware.Register.Timeout	Specifies the time, in seconds, to wait for creation of a provisioning job to complete.
Opware.Server.Name	Specifies the fully qualified name of the HP Server Automation server.

Table 3-9. Custom Properties O Table (Continued)

Property	Description
Opware.Server.Username	Specifies the user name provided when a password file in the agent directory was created, for example opswareadmin. This user name requires administrative access to the HP Server Automation instance.
Opware.Software.Install	Set to True to allow HP Server Automation to install software.

Custom Properties P Table

This section lists vRealize Automation custom properties that begin with the letter P.

Table 3-10. Custom Properties P Table

Property	Description
Plugin.AdMachineCleanup.Delete	Set to True to delete the accounts of destroyed machines, instead of disabling them.
Plugin.AdMachineCleanup.Execute	Set to True to enable the Active Directory cleanup plug-in. By default, each machine's account is disabled when it is destroyed.
Plugin.AdMachineCleanup.MoveToOu	Moves the account of destroyed machines to a new Active Directory organizational unit. The value is the organization unit to which you are moving the account. This value must be in <i>ou=OU, dc=dc</i> format, for example <i>ou=trash,cn=computers,dc=lab,dc=local</i> .
Plugin.AdMachineCleanup.UserName	Specifies an Active Directory account user name with sufficient privileges to perform Active Directory actions such as delete, disable, rename, or move Active Directory accounts. The value must be in <i>domain\username</i> format, for example <i>lab\administrator</i> . This property is required if the vRealize Automation manager service does not have these rights in a domain, which can occur when you provision machines in more than one domain.
Plugin.AdMachineCleanup.Password	Specifies the password associated to the <code>Plugin.AdMachineCleanup.UserName</code> property.
Plugin.AdMachineCleanup.Domain	Specifies the Active Directory domain name that contains the machine account to be destroyed.
Plugin.AdMachineCleanup.RenamePrefix	Renames the accounts of destroyed machines by adding a prefix. The value is the prefix string to prepend, for example <code>destroyed_</code> .
Pxe.Clean.ScriptName	Specifies the name of an EPI PowerShell script installed in the vRealize Automation Model Manager, to run on the machine after it is provisioned. The value is the name assigned to the script when it is uploaded to the Model Manager, for example <code>clean.ps1</code> .
Pxe.Setup.ScriptName	Specifies a custom EPI PowerShell script to run on the machine before it is started by using the PXE network boot program. The value is the name assigned to the script when it is uploaded to the model manager, for example <code>setup.ps1</code> .

Custom Properties R Table

This section lists vRealize Automation custom properties that begin with the letter R.

Table 3-11. Custom Properties R Table

Property	Description
RDP.File.Name	Specifies an RDP file from which to obtain settings, for example <code>My_RDP_Settings.rdp</code> . The file must reside in the <code>Website\Rdp</code> subdirectory of the vRealize Automation installation directory.

Custom Properties S Table

This section lists vRealize Automation custom properties that begin with the letter S.

Table 3-12. Custom Properties S Table

Property	Description
SysPrep. <i>Section.Key</i> <ul style="list-style-type: none"> ■ SysPrep.GuiUnattended.AdminPassword ■ SysPrep.GuiUnattended.EncryptedAdminPassword ■ SysPrep.GuiUnattended.TimeZone 	<p>Specifies information to be added to the SysPrep answer file on machines during the WinPE stage of provisioning. Information that already exists in the SysPrep answer file is overwritten by these custom properties. <i>Section</i> represents the name of the section of the SysPrep answer file, for example <code>GuiUnattended</code> or <code>UserData</code>. <i>Key</i> represents a key name in the section. For example, to set the time zone of a provisioned machine to West Pacific Standard Time, define the custom property <code>GuiUnattended.UserData.TimeZone</code> and set the value to 275.</p> <p>For a full list of sections, keys, and accepted values, see the System Preparation Utility for Windows documentation.</p> <p>The following <i>Section.Key</i> combinations can be specified for WIM-based provisioning:</p> <ul style="list-style-type: none"> ■ GuiUnattended <ul style="list-style-type: none"> ■ AdminPassword ■ EncryptedAdminPassword ■ TimeZone ■ UserData <ul style="list-style-type: none"> ■ ProductKey ■ FullName ■ ComputerName ■ OrgName ■ Identification <ul style="list-style-type: none"> ■ DomainAdmin ■ DomainAdminPassword ■ JoinDomain ■ JoinWorkgroup
Sysprep.Identification.DomainAdmin	Specifies a user name with administrator-level access to the target domain in Active Directory. Do not include the user domain in the credentials that you send to vCloud Director or vCloud Air.
Sysprep.Identification.DomainAdminPassword	Specifies the password to associate with the <code>Sysprep.Identification.DomainAdmin</code> property.

Table 3-12. Custom Properties S Table (Continued)

Property	Description
<code>Sysprep.Identification.JoinDomain</code>	Specifies the name of the domain to join in Active Directory.
<code>Sysprep.Identification.JoinWorkgroup</code>	Specifies the name of the workgroup to join if not using a domain.
<code>SysPrep.UserData.ComputerName</code>	Specifies a machine name, for example lab-client005.
<code>SysPrep.UserData.FullName</code>	Specifies the full name of a user.
<code>SysPrep.UserData.OrgName</code>	Specifies the organization name of the user.
<code>SysPrep.UserData.ProductKey</code>	Specifies the Windows product key.
<code>SCCM.Collection.Name</code>	Specifies the name of the SCCM collection that contains the operating system deployment task sequence.
<code>SCCM.CustomVariable.Name</code>	Specifies the value of a custom variable, where <i>Name</i> is the name of any custom variable to be made available to the SCCM task sequence after the provisioned machine is registered with the SCCM collection. The value is determined by your choice of custom variable. If your integration requires it, you can use <code>SCCM.RemoveCustomVariablePrefix</code> to remove the <code>SCCM.CustomVariable.</code> prefix from your custom variable.
<code>SCCM.Server.Name</code>	Specifies the fully qualified domain name of the SCCM server on which the collection resides, for example lab-sccm.lab.local.
<code>SCCM.Server.SiteCode</code>	Specifies the site code of the SCCM server.
<code>SCCM.Server.UserName</code>	Specifies a user name with administrator-level access to the SCCM server.
<code>SCCM.Server.Password</code>	Specifies the password associated with the <code>SCCM.Server.UserName</code> property.
<code>SCCM.RemoveCustomVariablePrefix</code>	Set to <i>true</i> to remove the prefix <code>SCCM.CustomVariable.</code> from SCCM custom variables you created by using the custom property <code>SCCM.CustomVariable.Name</code> .
<code>Snapshot.Policy.AgeLimit</code>	<p>Sets the age limit, in days, for snapshots that can be applied to machines. This property applies to vSphere provisioning.</p> <p>When a snapshot exceeds the age limit, the Apply option is no longer available.</p> <p>When the snapshot age limit is reached, the snapshot remains but you can no longer revert to it. You can delete the snapshot using the vSphere client.</p>

Table 3-12. Custom Properties S Table (Continued)

Property	Description
Snapshot.Policy.Limit	<p>Sets the number of snapshots allowed per machine. The default setting is one snapshot per machine. This property applies to vSphere provisioning. When set to 0, the blueprint option to create a snapshot is hidden for all users except for support and manager roles.</p> <p>Snapshots are shown in a hierarchical structure.</p> <ul style="list-style-type: none"> ■ Depth – Maximum is 31. ■ Width – There is no limit.
Snapshot.Policy.Disable	<p>When set to true, the ability to create a snapshot is disabled for all vRealize Automation user roles and the snapshot option is hidden from the Items tab.</p>

Custom Properties V Table

This section lists vRealize Automation custom properties that begin with the letter V.

Table 3-13. Custom Properties V Table

Property	Description
VbScript.PreProvisioning.Name	<p>Specifies the full path of a Visual Basic script to be run before a machine is provisioned. For example, %System-Drive%\Program Files(x86)\VMware\VCAC Agents\EPI_Agent\Scripts\SendEmail.vbs. The script file must reside on the system on which the Visual Basic script EPI agent is installed.</p>
VbScript.PostProvisioning.Name	<p>Specifies the full path of a Visual Basic script to be run after a machine is provisioned. For example, %System-Drive%\Program Files(x86)\VMware\VCAC Agents\EPI_Agent\Scripts\SendEmail.vbs. The script file must reside on the system on which the Visual Basic script EPI agent is installed.</p>
VbScript.UnProvisioning.Name	<p>Specifies the full path of a Visual Basic script to be run when a machine is destroyed. For example, %System-Drive%\Program Files(x86)\VMware\VCAC Agents\EPI_Agent\Scripts\SendEmail.vb. The script file must reside on the system on which the Visual Basic script EPI agent is installed.</p>

Table 3-13. Custom Properties V Table (Continued)

Property	Description
VCloud.Lease.Sync.TimeBufferMins	<p>Specifies a threshold integer value for a compute resource such that lease synchronization between vCloud Director and vRealize Automation only occur for vCloud Director or vCloud Air-provisioned machines that are set to expire in vCloud Director or vCloud Air in that time period. If a conflict is found, the lease value is synchronized to match the lease length defined in vRealize Automation. The default VCloud.Lease.Sync.TimeBufferMins value is 720 minutes, which is 12 hours. If VCloud.Lease.Sync.TimeBufferMins is not present, the default value is used. For example, if the default values are used, vRealize Automation runs the lease synchronization check workflow every 45 minutes, which is the workflow default, and only the leases of machines that are set to expire within 12 hours are changed to match the lease length defined in vRealize Automation.</p>
VCloud.Owner.UseEndpointAccount	<p>Set to true to assign the endpoint account as the vCloud Air or vCloud Director machine owner for provisioning and import operations. For change owner operations, the owner is not changed on the endpoint. If not specified or set to false, the vRealize Automation owner is the machine owner.</p>
VCloud.Template.MakeIdenticalCopy	<p>Set to true to clone an identical copy of the vCloud Air or vCloud Director template for machine provisioning. The machine is provisioned as an identical copy of the template. Settings specified in the template, including storage path, supercede settings specified in the blueprint. The only changes from the template are the names of the cloned machines, which are generated from the machine prefix specified in the blueprint.</p> <p>vCloud Air or vCloud Director machines that are provisioned as identical copies can use networks and storage profiles that are not available in the vRealize Automation reservation. To avoid having unaccounted reservation allocations, verify that the storage profile or network specified in the template is available in the reservation.</p>

Table 3-13. Custom Properties V Table (Continued)

Property	Description
VCNS.LoadBalancerEdgePool.Names.name	<p>Specifies the vCloud Networking and Security load balancing pools to which the virtual machine is assigned during provisioning. The virtual machine is assigned to all service ports of all specified pools. The value is an <i>edge/pool</i> name or a list of <i>edge/pool</i> names separated by commas. Names are case-sensitive.</p> <hr/> <p>Note You can add a machine IP address to an existing load balancer by using the VCNS.LoadBalancerEdgePool.Names custom property. vRealize Automation and NSX use the first member of the specified edge load balancer pool to determine the new member port and monitor port settings. However, NSX 6.2 does not require that the member port setting be specified. To avoid provisioning failure when using VCNS.LoadBalancerEdgePool.Names with NSX 6.2 to add a machine to an existing pool, you must specify a port value for the first member of the load balancer pool in NSX.</p> <hr/> <p>Appending a name allows you to create multiple versions of a custom property. For example, the following properties might list load balancing pools set up for general use and machines with high, moderate, and low performance requirements:</p> <ul style="list-style-type: none"> ■ VCNS.LoadBalancerEdgePool.Names ■ VCNS.LoadBalancerEdgePool.Names.mode rate ■ VCNS.LoadBalancerEdgePool.Names.high ■ VCNS.LoadBalancerEdgePool.Names.low
VCNS.SecurityGroup.Names.name	<p>Specifies the vCloud Networking and Security security group or groups to which the virtual machine is assigned during provisioning. The value is a security group name or a list of names separated by commas. Names are case-sensitive.</p> <p>Appending a name allows you to create multiple versions of the property, which can be used separately or in combination. For example, the following properties can list security groups intended for general use, for the sales force, and for support:</p> <ul style="list-style-type: none"> ■ VCNS.SecurityGroup.Names ■ VCNS.SecurityGroup.Names.sales ■ VCNS.SecurityGroup.Names.support

Table 3-13. Custom Properties V Table (Continued)

Property	Description
VCNS.SecurityGroup.Names. <i>blueprint_name</i>	When using vCloud Networking and Security, specifies the Edge Pool with which to associate the blueprint.
VCNS.SecurityTag.Names. <i>name</i>	<p>Specifies the vCloud Networking and Security security tag or tags to which the virtual machine is associated during provisioning. The value is a security tag name or a list of names separated by commas. Names are case-sensitive.</p> <p>Appending a name allows you to create multiple versions of the property, which can be used separately or in combination. For example, the following properties can list security tags intended for general use, for the sales force, and for support:</p> <ul style="list-style-type: none"> ■ VCNS.SecurityTag.Names ■ VCNS.SecurityTag.Names.sales ■ VCNS.SecurityTag.Names.support
VirtualMachine.Admin.UseGuestAgent	If the guest agent is installed as a service on a template for cloning, set to True on the machine blueprint to enable the guest agent service on machines cloned from that template. When the machine is started, the guest agent service is started. Set to False to disable the guest agent. If set to False, the enhanced clone workflow will not use the guest agent for guest operating system tasks, reducing its functionality to VMwareCloneWorkflow. If not specified or set to anything other than False, the enhanced clone workflow will send work items to the guest agent.
VirtualMachine.Admin.NameCompletion	Specifies the domain name to include in the fully qualified domain name of the machine that the RDP or SSH files generate for the user interface options Connect Using RDP or Connect Using SSH option. For example, set the value to myCompany.com to generate the fully qualified domain name <i>my-machine-name.myCompany.com</i> in the RDP or SSH file.
VirtualMachine.Admin.ConnectAddress	Specifies the RDP connection address of the machine to which an RDP file is downloaded when the user interface option Connect Using RDP is used or attached to automatic emails. Do not use in a blueprint or property group unless you require the user to be prompted and you have not supplied a default value.

Table 3-13. Custom Properties V Table (Continued)

Property	Description
VirtualMachine.Admin.ThinProvision	Determines whether thin provisioning is used on ESX compute resources using local or iSCSI storage. Set to True to use thin provisioning. Set to False to use standard provisioning. This property is for virtual provisioning.
VirtualMachine.Admin.CustomizeGuestOSDelay	Specifies the time to wait after customization is complete and before starting the guest operating system customization. The value must be in HH:MM:SS format. If the value is not set, the default value is one minute (00:01:00). If you choose not to include this custom property, provisioning can fail if the virtual machine reboots before guest agent work items are completed, causing provisioning to fail.
VirtualMachine.Admin.NetworkInterfaceType	Indicates the network adapter type that is supported and emulated by the guest operating system. Use to create a new VM and assign a specific adapter type to it that can be used by a template cloning operation. Use to modify the network settings of a newly provisioned virtual machine. The following options are available: <ul style="list-style-type: none"> ■ E1000 (default) ■ VirtIO ■ RTL8139 ■ RTL8139 VirtIO
VirtualMachine.Admin.Name	Specifies the generated machine name for vSphere, for example CodyVM01. When creating custom workflows or plug-ins for customizing a virtual machine name, set this property to match the name of the virtual machine. This is an internal input property for the agent to name the virtual machine. <p>Note This property is for vSphere only.</p> <p>The value specified in the blueprint has no effect on this property. This property is not intended to be used to prompt the user. Use the HostName property to prompt the user. If the property is set at runtime, the container name that is created in the hypervisor might not match the item record name.</p>
VirtualMachine.Admin.UUID	Specifies the UUID of the machine. The value is recorded by the guest agent when the machine is created, then it becomes read-only. The value in the blueprint or property group has no effect on this property.

Table 3-13. Custom Properties V Table (Continued)

Property	Description
VirtualMachine.Admin.AgentID	Specifies the UUID of the guest agent. The value is recorded by the guest agent when the machine is created, then it becomes read-only. The value in the blueprint or property group has no effect on this property.
VirtualMachine.Admin.Owner	Specifies the user name of the machine owner.
VirtualMachine.Admin.Approver	Specifies the user name of the group manager who approved the machine request.
VirtualMachine.Admin.Description	Specifies the description of the machine as entered or modified by its owner or an administrator.
VirtualMachine.Admin.EncryptPasswords	If set to True, specifies that the administrator passwords are encrypted.
VirtualMachine.Admin.AdministratorEmail	Specifies the manager email addresses or Active Directory accounts for the business group of the provisioning blueprint. Multiple email addresses are separated by a comma, for example <code>JoeAdmin@VMware.com,WeiLeeMgr@VMware.com</code> .
VirtualMachine.Admin.TotalDiskUsage	Specifies the total disk space that the machine uses, including all disks as specified by the <code>VirtualMachine.DiskN.Size</code> properties and the swap file as specified by the <code>VMware.Memory.Reservation</code> property.
VirtualMachine.Admin.Hostname	<p>Informs the administrator which host is used for provisioning the machine on the endpoint. The specified value is implemented on the machine and is populated during data collection. For example, if the compute resource of a machine is changed, a proxy agent updates the value of the machine's <code>VirtualMachine.Admin.Hostname</code> property.</p> <p>Note This is an internal output property from the agent that is populated during the data collection process and identifies the host on which a machine resides.</p>
VirtualMachine.Admin.ClusterName	<p>Informs the administrator which cluster contains the compute resource for the machine to use.</p> <p>Note This is an internal output property from the agent that is populated during the data collection process and identifies the cluster in which a machine resides.</p>
VirtualMachine.Admin.ApplicationID	List the application IDs that can be assigned to a machine.

Table 3-13. Custom Properties V Table (Continued)

Property	Description
VirtualMachine.Admin.AddOwnerToAdmins	Set to True (default) to add the machine's owner, as specified by the VirtualMachine.Admin.Owner property, to the local administrators group on the machine. This property is not available for provisioning by cloning.
VirtualMachine.Admin.AllowLogin	Set to True (default) to add the machine owner to the local remote desktop users group, as specified by the VirtualMachine.Admin.Owner property.
VirtualMachine.Admin.DiskInterfaceType	Indicates the type of disk drivers. The following disk drivers are supported: <ul style="list-style-type: none"> ■ IDE (default) ■ VirtIO This property is for virtual provisioning.
VirtualMachine.Admin.ForceHost	Specifies the name of the ESX host. The property is only honored if VirtualMachine.Admin.HostSelectionPolicy is set to EXACT_MATCH. Note This property is for vSphere only. When provisioning against a vSphere cluster, you can use the VirtualMachine.Admin.ForceHost property to specify the host on which a machine is to be provisioned. This property is used only if DRS is not set to automatic for the cluster. If the cluster has DRS enabled and is set to Automatic, vSphere relocates the provisioned machine when the machine is restarted.
VirtualMachine.Admin.HostSelectionPolicy	Optionally set to EXACT_MATCH to require the machine to be placed on the host specified by the VirtualMachine.Admin.ForceHost property. If the host is unavailable, the request results in a failure. If a host is not specified, the next best available host is selected. If set to EXACT_MATCH, an error occurs if the specified host does not have enough memory or is in maintenance mode. Note This property applies to vSphere only.
VirtualMachine.Agent.CopyToDisk	Set to True (default) to copy the guest agent executable file to %System-Drive %\VRM\Build\Bin on the machine's disk.
VirtualMachine.Agent.GuiRunOnce	Set to True to include guest agent execution in the SysPrep.inf run once section. Set to False for the Linux agent to stop the provisioning workflow.

Table 3-13. Custom Properties V Table (Continued)

Property	Description
VirtualMachine.Agent.Reboot	Set to True (default) to specify that the guest agent restarts the machine following installation of the guest operating system.
VirtualMachine.CDRom.Attach	Set to False to provision the machine without a CD-ROM device. The default is True.
VirtualMachine.CPU.Count	<p>Specifies the number of CPUs, for example 2, allocated to a machine. The default is the value specified by the CPU setting on the blueprint.</p> <p>Note This custom property value is overridden by the CPU value on the blueprint when the machine is first provisioned.</p>
VirtualMachine.Customize.WaitComplete	Set to True to prevent the provisioning workflow from sending work items to the guest agent until all customizations have been completed.
VirtualMachine.DiskN.Letter	<p>Specifies the drive letter or mount point of a machine's disk N. The default is C. For example, to specify the letter D for Disk 1, define the custom property as</p> <p>VirtualMachine.Disk1.Letter and enter the value D. Disk numbering must be sequential. When used in conjunction with a guest agent, this value specifies the drive letter or mount point under which an additional disk N is mounted by the guest agent in the guest operating system.</p>
VirtualMachine.DiskN.Size	<p>Defines the size in GB of disk N. For example, to give a size of 150 GB to a disk G, define the custom property VirtualMachine.Disk0.Size and enter a value of 150. Disk numbering must be sequential. By default a machine has one disk referred to by VirtualMachine.Disk0.Size, where size is specified by the storage value on the blueprint from which the machine is provisioned. The storage value on the blueprint user interface overwrites the value in the VirtualMachine.Disk0.Size property. The VirtualMachine.Disk0.Size property is not available as a custom property because of its relationship with the storage option on the blueprint. More disks can be added by specifying VirtualMachine.Disk1.Size, VirtualMachine.Disk2.Size and so on. VirtualMachine.Admin.TotalDiskUsage always represents the total of the .DiskN.Size properties plus the VMware.Memory.Reservation size allocation.</p>

Table 3-13. Custom Properties V Table (Continued)

Property	Description
VirtualMachine.DiskN.IsFixed	<p>Disables the editing of a specific disk when reconfiguring a machine. Set to True to disable display of the edit capacity option for a specific volume. The True value is case-sensitive. The <i>N</i> value is the 0-based index of the disk.</p> <p>Alternatively, you can set the <code>VirtualMachine.DiskN.IsFixed</code> custom property to True in the <code>VirtualMachineProperties</code> table in the database or use the Repository API to specify a URI value such as <code>.../Repository/Data/ManagementModelEntities.svc/VirtualMachines(guid'60D93A8A-F541-4CE0-A6C6-78973AC0F1D2')/VirtualMachineProperties</code>.</p>
VirtualMachine.DiskN.Label	<p>Specifies the label for a machine's disk <i>N</i>. The disk label maximum is 32 characters. Disk numbering must be sequential. When used in conjunction with a guest agent, specifies the label of a machine's disk <i>N</i> inside the guest operating system.</p>
VirtualMachine.DiskN.Active	<p>Set to True (default) to specify that the machine's disk <i>N</i> is active. Set to False to specify that the machine's disk <i>N</i> is not active.</p>
VirtualMachine.DiskN.FS	<p>Specifies the file system of the machine's disk <i>N</i>. The options are NTFS (default), FAT and FAT32.</p>
VirtualMachine.DiskN.Percent	<p>Specifies the percentage of the disk <i>N</i> to be formatted by a guest agent for the machine's use. That machine cannot use the remaining portion of the disk.</p>

Table 3-13. Custom Properties V Table (Continued)

Property	Description
VirtualMachine.DiskN.StorageReservationPolicy	<p>Specifies the storage reservation policy to use to find storage for disk <i>N</i>. Also assigns the named storage reservation policy to a volume. To use this property, substitute the volume number for <i>N</i> in the property name and specify a storage reservation policy name as the value. This property is equivalent to the storage reservation policy name specified on the blueprint. Disk numbering must be sequential. This property is valid for all Virtual and vCloud reservations. This property is not valid for Physical, Amazon, or OpenStack reservations.</p> <p>You can use <code>VirtualMachine.DiskN.StorageReservationPolicyMode</code> to prevent provisioning from failing in the case of insufficient space on the datastores in a storage reservation policy. Use this custom property to allow vRealize Automation to choose a datastore outside the specified storage reservation policy in cases where there is not sufficient space remaining on the datastores in the policy.</p>
VirtualMachine.DiskN.StorageReservationPolicyMode	<p>Allocates disk <i>N</i> to the best available storage reservation policy.</p>
VirtualMachine.DiskN.Storage	<p>Specifies the datastore on which to place the machine disk <i>N</i>, for example DATASTORE01. This property is also used to add a single datastore to a linked clone blueprint. <i>N</i> is the index (starting at 0) of the volume to assign. Enter the name of the datastore to assign to the volume. This is the datastore name as it appears in the Storage Path on the Edit Compute Resource page. Disk numbering must be sequential.</p>

Table 3-13. Custom Properties V Table (Continued)

Property	Description
VirtualMachine.DiskN.VMwareType	<p>Specifies the VMware disk mode of the machine's diskN. The following options are available:</p> <ul style="list-style-type: none"> ■ persistent ■ independent_persistent ■ independent_nonpersistent <p>If you set this custom property to independent_persistent or independent_nonpersistent, users must power off their machine before using vRealize Automation to take a snapshot.</p> <p>Note This property applies to vSphere only.</p> <p>For details, see VirtualDeviceDeviceBackingOption data object help in <i>VMware vSphere Web Services SDK Documentation</i>.</p>
VirtualMachine.EPI.Type	<p>Specifies the type of external provisioning infrastructure.</p> <p>Set to BMC for BMC BladeLogic integration.</p> <p>Set to CitrixProvisioning for Citrix provisioning server integration.</p>
VirtualMachine.EULA.AcceptAll	<p>Set to true to specify that all the EULAs for the VM templates of the vCloud Air or vCloud Director endpoints are accepted during provisioning.</p>
VirtualMachine.Host.TpmEnabled	<p>Limits virtual machine placement to hosts that have a Trust Protection Module (TPM) device installed and recognized by ESX and vSphere. The default value is False.</p> <p>All hosts in a cluster must have a Trust Protection Module device installed. If no acceptable hosts or clusters are found, the machine cannot be provisioned until this property is removed.</p>
VirtualMachine.Memory.Size	<p>Specifies the size of the machine's memory in MB, such as 1024. The default is the value specified by the memory setting on the blueprint.</p> <p>Note This custom property setting is overridden by the memory setting on the blueprint when the machine is first provisioned.</p>

Table 3-13. Custom Properties V Table (Continued)

Property	Description
<code>VirtualMachine.NetworkN.Address</code>	<p>Specifies the IP address of network device <i>N</i> in a machine provisioned with a static IP address.</p> <p><code>VirtualMachine.NetworkN</code> custom properties are designed to be specific to individual blueprints and machines. When a machine is requested, network and IP address allocation is performed before the machine is assigned to a reservation. Because blueprints are not guaranteed to be allocated to a specific reservation, do not use this property on a reservation.</p>
<code>VirtualMachine.NetworkN.AddressType</code>	<p>Specifies how IP address allocation is supplied to the network provider, where <code>NetworkN</code> is the network number, starting with 0. The following values are available:</p> <ul style="list-style-type: none"> ■ DHCP ■ Static ■ MANUAL (available for vCloud Air and vCloud Director only) <p>The MANUAL value also requires that you specify an IP address.</p> <p>This property is available for configuring vCloud Air, vCloud Director, and vSphere machine components in the blueprint. Also see <code>VirtualMachine.NetworkN.Name</code>.</p>
<code>VirtualMachine.NetworkN.MacAddressType</code>	<p>Indicates whether the MAC address of network device <i>N</i> is generated or user-defined (static). This property is available for cloning.</p> <p>The default value is generated. If the value is static, you must also use <code>VirtualMachine.NetworkN.MacAddress</code> to specify the MAC address.</p> <p><code>VirtualMachine.NetworkN</code> custom properties are designed to be specific to individual blueprints and machines. When a machine is requested, network and IP address allocation is performed before the machine is assigned to a reservation. Because blueprints are not guaranteed to be allocated to a specific reservation, do not use this property on a reservation.</p>

Table 3-13. Custom Properties V Table (Continued)

Property	Description
VirtualMachine.NetworkN.MacAddress	<p>Specifies the MAC address of a network device <i>N</i>. This property is available for cloning.</p> <p>If the value of <code>VirtualMachine.NetworkN.MacAddressType</code> is generated, this property contains the generated address.</p> <p>If the value of <code>VirtualMachine.NetworkN.MacAddressType</code> is static, this property specifies the MAC address. For virtual machines provisioned on ESX server hosts, the address must be in the range specified by VMware. For details, see vSphere documentation.</p> <p><code>VirtualMachine.NetworkN</code> custom properties are designed to be specific to individual blueprints and machines. When a machine is requested, network and IP address allocation is performed before the machine is assigned to a reservation. Because blueprints are not guaranteed to be allocated to a specific reservation, do not use this property on a reservation.</p>
VirtualMachine.NetworkN.Name	<p>Specifies the name of the network to connect to, for example the network device <i>N</i> to which a machine is attached. This is equivalent to a network interface card (NIC).</p> <p>By default, a network is assigned from the network paths available on the reservation on which the machine is provisioned. Also see <code>VirtualMachine.NetworkN.AddressType</code>.</p> <p>You can ensure that a network device is connected to a specific network by setting the value of this property to the name of a network on an available reservation. For example, If you give properties for <code>N= 0</code> and <code>1</code>, you get 2 NICs and their assigned value, provided the network is selected in the associated reservation.</p> <p><code>VirtualMachine.NetworkN</code> custom properties are designed to be specific to blueprints and machines. When a machine is requested, network and IP address allocation is performed before the machine is assigned to a reservation. Because blueprints are not guaranteed to be allocated to a specific reservation, do not use this property on a reservation.</p> <p>You can add this property to a vCloud Air or vCloud Director machine component in a blueprint.</p>

Table 3-13. Custom Properties V Table (Continued)

Property	Description
VirtualMachine.NetworkN.PortID	<p data-bbox="954 264 1417 352">Specifies the port ID to use for network device <i>N</i> when using a dvPort group with a vSphere distributed switch.</p> <p data-bbox="954 369 1417 657">VirtualMachine.Network<i>N</i> custom properties are designed to be specific to individual blueprints and machines. When a machine is requested, network and IP address allocation is performed before the machine is assigned to a reservation. Because blueprints are not guaranteed to be allocated to a specific reservation, do not use this property on a reservation.</p>

Table 3-13. Custom Properties V Table (Continued)

Property	Description
VirtualMachine.NetworkN.ProfileName	<p>Specifies the name of a network profile from which to assign a static IP address to network device <i>N</i> or from which to obtain the range of static IP addresses that can be assigned to network device <i>N</i> of a cloned machine, where <i>N</i>=0 for the first device, 1 for the second, and so on.</p> <p>If a network profile is specified in the network path in the reservation on which the machine is provisioned, a static IP address is assigned from that network profile. You can ensure that a static IP address is assigned from a specific profile by setting the value of this property to the name of a network profile.</p> <p>Note that changing this property value after the network is assigned has no effect on the expected IP address values for the designated machines.</p> <p>With WIM-based provisioning for virtual machines, you can use this property to specify a network profile and network interface or you can use the Network section of the Virtual Reservation page. You can also assign the network interface to a virtual network using the VirtualMachine.NetworkN.Name custom property.</p> <p>The following attributes of the network profile are available to enable static IP assignment in a cloning blueprint:</p> <ul style="list-style-type: none"> ■ VirtualMachine.NetworkN.SubnetMask ■ VirtualMachine.NetworkN.Gateway ■ VirtualMachine.NetworkN.PrimaryDns ■ VirtualMachine.NetworkN.SecondaryDns ■ VirtualMachine.NetworkN.PrimaryWins ■ VirtualMachine.NetworkN.SecondaryWins ■ VirtualMachine.NetworkN.DnsSuffix ■ VirtualMachine.NetworkN.DnsSearchSuffixes <p>VirtualMachine.Network<i>N</i> custom properties are designed to be specific to individual blueprints and machines. When a machine is requested, network and IP address allocation is performed before the machine is assigned to a reservation. Because blueprints are not guaranteed to be allocated to a specific reservation, do not use this property on a reservation.</p>

Table 3-13. Custom Properties V Table (Continued)

Property	Description
	<p>You cannot use this custom property to define an on-demand NAT or on-demand routed network profile name. Because on-demand network profile names are generated at allocation time (during provisioning), their names are unknown when creating or editing the blueprint. To specify NSX on-demand network information, use the applicable network component in the blueprint design canvas for your vSphere machine components.</p>
<ul style="list-style-type: none"> ■ VirtualMachine.NetworkN.SubnetMask ■ VirtualMachine.NetworkN.Gateway ■ VirtualMachine.NetworkN.PrimaryDns ■ VirtualMachine.NetworkN.SecondaryDns ■ VirtualMachine.NetworkN.PrimaryWins ■ VirtualMachine.NetworkN.SecondaryWins ■ VirtualMachine.NetworkN.DnsSuffix ■ VirtualMachine.NetworkN.DnsSearchSuffixes 	<p>Configures attributes of the network profile specified in <code>VirtualMachine.NetworkN.ProfileName</code>.</p> <p><code>VirtualMachine.NetworkN</code> custom properties are designed to be specific to individual blueprints and machines. When a machine is requested, network and IP address allocation is performed before the machine is assigned to a reservation. Because blueprints are not guaranteed to be allocated to a specific reservation, do not use this property on a reservation.</p> <p>When specifying values for multiple DNS search suffixes using <code>VirtualMachine.NetworkN.DnsSearchSuffixes</code>, you can use commas to separate values for a Windows deployment.</p>
<p><code>VirtualMachine.Rdp.File</code></p>	<p>Specifies the RDP file that contains settings to be used when opening an RDP link to the machine. Can be used together with, or as an alternative to, <code>VirtualMachine.Rdp.SettingN</code>. The file must be located in the vRealize Automation server installation directory, for example <code>%SystemDrive%\Program Files x86\VMware\VCAC\Server\Rdp\console.rdp</code>. You must create the Rdp directory.</p>
<p><code>VirtualMachine.Rdp.SettingN</code></p>	<p>Configures specific RDP settings. <i>N</i> is a unique number used to distinguish one RDP setting from another. For example, to specify the Authentication Level so that no authentication requirement is specified, define the custom property <code>VirtualMachine.Rdp.Setting1</code> and set the value to <code>authentication level:i:3</code>. Use to open an RDP link to specify settings.</p> <p>For a list of available settings and correct syntax, see the Microsoft Windows RDP documentation.</p>

Table 3-13. Custom Properties V Table (Continued)

Property	Description
<code>VirtualMachine.Reconfigure.DisableHotCpu</code>	<p>Set to true to specify that the reconfigure machine action restarts the specified machine. By default, the reconfigure machine action does not restart the machine.</p> <p>Performing a hot add of CPU, memory, or storage causes the reconfigure machine action to fail and to not restart the machine unless the Hot Add setting is enabled in vSphere for the machine or template. You can add <code>VirtualMachine.Reconfigure.DisableHotCpu=true</code> to a machine component in a vRealize Automation blueprint to disable the Hot Add setting and force the machine to restart regardless of the vSphere Hot Add setting. The custom property is only available for machine types that support hardware reconfiguration, which are vSphere, vCloud Air, and vCloud Director.</p>
<code>VirtualMachine.Request.Layout</code>	<p>Specifies the property layout to be used in the virtual machine request page. The value must match the name of the layout to be used.</p>
<code>VirtualMachine.SoftwareN.Name</code>	<p>Specifies the descriptive name of a software application <i>N</i> or script to install or run during provisioning. This is an optional and information-only property. It serves no real function for the enhanced clone workflow or the guest agent but it is useful for a custom software selection in a user interface or for software usage reporting.</p>
<code>VirtualMachine.SoftwareN.ScriptPath</code>	<p>Specifies the full path to an application's install script. The path must be a valid absolute path as seen by the guest operating system and must include the name of the script file name.</p> <p>You can pass custom property values as parameters to the script by inserting <code>{CustomPropertyName}</code> in the path string. For example, if you have a custom property named <code>ActivationKey</code> whose value is 1234, the script path is <code>D:\InstallApp.bat -key {ActivationKey}</code>. The guest agent runs the command <code>D:\InstallApp.bat -key 1234</code>. Your script file can then be programmed to accept and use this value.</p> <p>Insert <code>{Owner}</code> to pass the machine owner name to the script.</p>
<code>VirtualMachine.SoftwareN.ISOName</code>	<p>Specifies the path and file name of the ISO file relative to the data store root. The format is <code>/folder_name/subfolder_name/file_name.iso</code>. If a value is not specified, the ISO is not mounted.</p>

Table 3-13. Custom Properties V Table (Continued)

Property	Description
VirtualMachine.SoftwareN.ISOLocation	Specifies the storage path that contains the ISO image file to be used by the application or script. Format the path as it appears on the host reservation, for example netapp-1:it_nfs_1. If a value is not specified, the ISO is not mounted.
VirtualMachine.Storage.Name	Identifies the storage path on which the machine resides. The default is the value specified in the reservation that was used to provision the machine.
VirtualMachine.Storage.AllocationType	Stores collected groups to a single datastore. A distributed environment stores disks round-robin style.
VirtualMachine.Storage.Cluster.Automation.Enabled	If set to True, the storage cluster automation on the machine is enabled. If set to False, then storage cluster automation is disabled on the machine. The storage cluster automation type is determined by the VirtualMachine.Storage.Cluster.Automation.Behavior custom property.
VirtualMachine.Storage.Cluster.Automation.Behavior	Specifies an SDRS behavior type when VirtualMachine.Storage.Cluster.Automation.Enabled is set to True. The available behavior type values are automated or manual. The VirtualMachine.Storage.Cluster.Automation.Enabled and VirtualMachine.Storage.Cluster.Automation.Behavior properties are set after the machine is provisioned and after inventory data collection is finished. If automation is disabled, VirtualMachine.Storage.Cluster.Automation.Behavior is not present on the machine.
VirtualMachine.Storage.ReserveMemory	Set to True to manage vSwap storage allocation to ensure availability and set allocation in the reservation. vSwap allocation is considered when you create or reconfigure a virtual machine. vSwap allocation checking is only available for vSphere endpoints.
	<p>Note If you do not specify the VirtualMachine.Storage.ReserveMemory custom property when you create or provision the machine from vRealize Automation, swap space availability is not ensured. If you add the property for an already provisioned machine, and the allocated reservation is full, the storage allocated in the reservation might exceed the actual allocated storage.</p>

Table 3-13. Custom Properties V Table (Continued)

Property	Description
VirtualMachine.VDI.Type	<p>Specifies the type of virtual desktop infrastructure.</p> <p>For XenDesktop provisioning, set to XenDesktop.</p>
VMware.AttributeN.Name	<p>Specifies the name of an attribute in vRealize Orchestrator. For example, it specifies the value of the attribute used in the VMware.AttributeN.Name property. Replace the letter <i>N</i> with a number, starting with 0 and increasing for each attribute to set.</p>
VMware.AttributeN.Value	<p>Specifies the value of the attribute used in the VMware.AttributeN.Name property. Replace the letter <i>N</i> with a number, starting with 0 and increasing for each attribute to set.</p>
VMware.Endpoint.Openstack.Release	<p>Specifies the OpenStack release, for example Havana or Icehouse, when creating an OpenStack endpoint. Required for OpenStack 6.2 and later IaaS provisioning.</p>
VMware.Hardware.Version	<p>Specifies the VM hardware version to be used for vSphere settings. Supported values are currently vmx-04, vmx-07, vmx-08, vmx-09 and vmx-10. This property is applicable for VM Create and VM Update workflows and is available only for basic workflow blueprints.</p>
VMware.VirtualCenter.OperatingSystem	<p>Specifies the vCenter Server guest operating system version (VirtualMachineGuestOsIdentifier) with which vCenter Server creates the machine. This operating system version must match the operating system version to be installed on the provisioned machine. Administrators can create property groups using one of several property sets, for example, VMware[OS_Version]Properties, that are predefined to include the correct VMware.VirtualCenter.OperatingSystem values. This property is for virtual provisioning. When this property has a non-Windows value, the Connect Using RDP user interface option is disabled. The property can be used in a virtual, cloud or physical blueprint. For related information, see the enumeration type VirtualMachineGuestOsIdentifier in vSphere API/SDK Documentation. For a list of currently accepted values, see the vCenter Server documentation.</p>

Table 3-13. Custom Properties V Table (Continued)

Property	Description
VMware.SCSI.Type	<p>For vCloud Air, vCloud Director, or vSphere machine components in blueprints, specifies the SCSI machine type using one of the following case-sensitive values:</p> <ul style="list-style-type: none"> ■ buslogic Use BusLogic emulation for the virtual disk. ■ lsilogic Use LSILogic emulation for the virtual disk (default). ■ lsilogicsas Use LSILogic SAS 1068 emulation for the virtual disk. ■ pvscsi Use para-virtualization emulation for the virtual disk. ■ none Use if a SCSI controller does not exist for this machine. <p>The VMware.SCSI.Type property is not available for use with the CloneWorkflow provisioning workflow. If you specify the CloneWorkflow provisioning workflow when configuring your machine component in the blueprint design canvas, you cannot use the VMware.SCSI.Type property.</p>
VMware.SCSI.Sharing	<p>Specifies the sharing mode of the machine's VMware SCSI bus. Possible values are based on the VirtualSCSISharing ENUM value and include noSharing, physicalSharing, and virtualSharing.</p> <p>If you specify the CloneWorkflow provisioning workflow when configuring your machine component in the blueprint design canvas, the VMware.SCSI.Sharing property is not available.</p> <p>The VMware.SCSI.Sharing property is not available for use with the CloneWorkflow provisioning workflow. If you specify the CloneWorkflow provisioning workflow when configuring your machine component in the blueprint design canvas, you cannot use the VMware.SCSI.Sharing property.</p>
VMware.Memory.Reservation	<p>Specifies the size of the machine's swap file, for example 1024.</p>

Table 3-13. Custom Properties V Table (Continued)

Property	Description
VMware.Network.Type	<p>Specifies the network to connect the VM as specified in the reservation. The network adapter on the machine must be connected to a unique network.</p> <p>The following adapter type values are available:</p> <ul style="list-style-type: none"> ■ Flexible (default) ■ VirtualPCNet32 (not compatible with vSphere). ■ E1000 or VirtualE1000 ■ VMXNET or VirtualVMXNET ■ VMXNET2 ■ VMXNET3 <p>Set to E1000 when provisioning Windows 32-bit virtual machines on ESX server hosts to ensure that machines are created with the correct network adapter. This property is not used for physical provisioning.</p>
VMware.VCenterOrchestrator.EndpointName	<p>Overrides a specified endpoint setting or specifies that a particular endpoint be used during the vRealize Automation IaaS provisioning process. The value of this property can be set to an applicable vRealize Orchestrator endpoint, such as external VRO, available in the environment.</p>
VMware.VirtualCenter.Folder	<p>Specifies the name of the inventory folder in the datacenter in which to put the virtual machine. The default is VRM, which is also the vSphere folder in which vRealize Automation places provisioned machines if the property is not used. This value can be a path with multiple folders, for example production\email servers. A proxy agent creates the specified folder in vSphere if the folder does not exist. Folder names are case sensitive. This property is available for virtual provisioning.</p>

Table 3-13. Custom Properties V Table (Continued)

Property	Description
VDI.Server.Website	<p data-bbox="954 264 1423 611">Specifies the server name of the Citrix Web interface site to use in connecting to the machine. If the value of VDI.Server.Name is a XenDesktop farm, this property must have an appropriate value or the machine owner cannot connect to the machine using XenDesktop. If this property is not specified, the VDI.Server.Name property determines the desktop delivery controller to connect to, which must be the name of a server that hosts a desktop delivery controller.</p> <hr data-bbox="954 632 1423 636"/> <p data-bbox="954 636 1423 856">Note If the Citrix Web Interface (WI) has been replaced with StoreFront (SF), you can use this property instead of VDI.Server.Name to connect to the XenDesktop server. An example value is VDI.Server.Website=sqa-xddc-7.sqa.local/Citrix/StoreWeb. See VDI.Server.Name for more information.</p>

Table 3-13. Custom Properties V Table (Continued)

Property	Description
VDI.Server.Name	<p>Specifies the server name, which hosts the desktop delivery controller, to register with, or the name of a XenDesktop farm that contains desktop delivery controllers with which to register.</p> <p>If the value is a XenDesktop farm name, the VDI.Server.Website property value must be the URL of an appropriate Citrix web interface site to use in connecting to the machine.</p> <p>If the value is a server name, and at least one general XenDesktop VDI agent was installed without specifying a desktop delivery controller server, this value directs the request to the desired server. If the value is a server name, and only dedicated XenDesktop VDI agents for specific DDC servers were installed, this value must exactly match the server name configured for a dedicated agent.</p> <hr/> <p>Note For more information about how to make StoreFront the default page in IIS, see Citrix documentation. See also VDI.Server.Website.</p> <hr/> <p>Note Changes in the Citrix web interface protocol have impacted how the VDI.Server.Name default value is recognized. The value of the VDI.Server.Name property is used as the default connection string to open the Citrix web interface when users connect to a virtual desktop. It is always the DNS/IP of the XD server. If that value does not connect to the Citrix interface, you are unable to access your VMs. However, you can use the VDI.Server.Website custom property when the Citrix web interface is hosted on a server other than the XenDesktop server. When this property is present on the VM, it is used instead of VDI.Server.Name.</p>
VDI.Server.Group	<p>For XenDesktop 5, specifies the name of the XenDesktop group to add machines to and the name of the catalog to which the group belongs, in the <i>group_name;catalog_name</i> format.</p> <p>For XenDesktop 4, specifies the name of the XenDesktop group to which machines are to be added. XenDesktop 4 preassigned groups are supported.</p>
VDI.ActiveDirectory.Interval	<p>Specifies an optional interval value in time span format for virtual desktop infrastructure machine Active Directory registration check. The default value is 00:00:15 (15 seconds).</p>

Table 3-13. Custom Properties V Table (Continued)

Property	Description
VDI.ActiveDirectory.Timeout	Specifies an optional timeout value to wait before retrying Active Directory registration. The default value is 00:00:15 (30 minutes).
VDI.ActiveDirectory.Delay	Specifies an optional delay time value in time span format between successfully adding a machine to Active Directory and initiation of XenDesktop registration. The default value is 00:00:05 (5 seconds).
Vrm.DataCenter.Policy	<p>Specifies whether provisioning must use a compute resource associated with a particular location, or if any location is suitable. To enable this feature you must add data center to a location file. Associate each compute resource with a location.</p> <p>Set to Exact (default) to provision a requested machine on a compute resource associated with the location specified on the blueprint. The request fails if no reservations match the requested location. If the property is not present, the Exact default is used.</p> <p>Set to NonExact to provision a requested machine on a compute resource with sufficient capacity and associated with the location specified on the blueprint. If that compute resource is not available, then use the next available compute resource with sufficient capacity without regard to location.</p>

Table 3-13. Custom Properties V Table (Continued)

Property	Description
<p>Vrm.Software.IdNNNN</p> <p>This row is specific to BMC BladeLogic.</p>	<p>Specifies a software job or policy to be applied to all machines provisioned from the blueprint. Set the value to job_type=job_path, where job_type is the numeral that represents the BMC BladeLogic job type and job_path is the location of the job in BMC BladeLogic, for example 4=/Utility/putty. NNNN is a number from 1000 to 1999. The first property must start with 1000 and increment in numerical order for each additional property.</p> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <ul style="list-style-type: none"> 1 – AuditJob 2 – BatchJob 3 – ComplianceJob 4 – DeployJob 5 – FileDeployJob 6 – NSHScriptJob 7 – PatchAnalysisJob 8 – SnapshotJob </div>
<p>Vrm.Software.IdNNNN</p> <p>This row is specific to HP Server Automation.</p>	<p>(Optional) Specifies an HP Server Automation policy to be applied to all machines provisioned from the blueprint. NNNN is a number from 1000 to 1999. The first property must start with 1000 and increment in numerical order for each additional property.</p>

Custom Properties X Table

This section lists vRealize Automation custom properties that begin with the letter X.

Table 3-14. Custom Properties X Table

Property	Description
<p>Xen.Platform.Viridian</p>	<p>For virtual provisioning, set to False when you provision Windows virtual machines on a XenServer host or pool. The default is True. This property is not used in physical provisioning.</p>

Using the Property Dictionary

You can use the property dictionary to define new custom property definitions and property groups.

You define a property to support a specific data type and a display control style within that data type. You can also create reusable property groups to simplify adding multiple properties.

This chapter includes the following topics:

- [Using Property Definitions](#)
- [Using Property Groups](#)

Using Property Definitions

Many custom properties are supplied with vRealize Automation. You can also define new properties to create unique custom properties and provide greater control for provisioning machines.

When you add a property to a blueprint or reservation, you can determine if a user must be prompted for a property value and if the property value must be encrypted.

You can specify how a property is rendered, for example if should display as a checkbox or as a drop-down menu with values obtained from a custom vRealize Orchestrator workflow.

You can also use properties to control how your custom workflows function. For information about using vRealize Automation Designer to define and work with custom workflows, see *Life Cycle Extensibility*.

Note To avoid naming conflicts with supplied vRealize Automation custom properties, use a standard and meaningful prefix for all property names that you create. Use a prefix such as a company or feature name followed by a dot for all new property names. VMware reserves all property names that do not contain a dot (.). Property names that do not follow this recommendation may conflict with vRealize Automation custom properties. In that event, the vRealize Automation custom property takes precedence over property definitions that you create.

The following steps describe the general procedure for creating and using new property definitions:

- 1 Create a new property definition and associate it with a data type that allows for a specific type of content, such as boolean or integer content. Use a standard naming convention for the new property name such as *my_grouping_prefix.my_property_name*.
- 2 Associate a property definition with a display type, such as a check box or drop-down menu. Available display types are derived from the selected data type.

- 3 Add the property to a blueprint either individually or as part of a property group.
 - Add the property to a blueprint and specify if the property value must be encrypted.
 - Add the property to a blueprint and specify if the user should be prompted to specify a property value.
- 4 As a machine requestor, specify any required value if prompted.

You can also populate the property value in a drop-down menu by using vRealize Orchestrator script actions. Using vRealize Orchestrator script actions also enables you to populate a drop-down menu value based on the values specified for another property.

Create a Property Definition

You can create property definitions to allow for additional levels of vRealize Automation customization. When you create a property definition, you specify a data type for the property, for example String, and a display type, for example Email.

To avoid potential conflict with supplied vRealize Automation custom properties, use a naming format of *my_prefix.my_property_name1*. For example, use a standard and meaningful prefix such as company or feature name, followed by a dot (.), followed by a brief but descriptive name. Properties that you create that do not follow this recommendation may conflict with vRealize Automation-supplied custom properties. In that event, the vRealize Automation custom properties take precedence over properties that you create.

Prerequisites

Log in to the vRealize Automation console as a **tenant administrator** or **fabric administrator**.

Procedure

- 1 Select **Administration > Property Dictionary > Property Definitions**.

- 2 Click **New** (+).

- 3 Enter the new property definition name in the **Name** text box.

Use a standard naming convention for the new property name such as *my_grouping_prefix.my_property_name*.

The **Name** value is stored internally as the property identifier (ID).

- 4 Accept the generated value in the **Label** text box.

The **Label** value is automatically populated with the value that you entered in the **Name** text box. If you enter a **Label** value first, the **Name** text box is populated with the same value.

The **Label** value is displayed in the user interface when requesting properties, for example when adding a property to a blueprint, as the property name.

The **Label** value can contain a wider range of characters than the **Name** value.

- 5 In the **Visibility** section, select **All tenants** or **This tenant** to determine where the property is to be available.

If you are logged in with only tenant administrator privileges, then only **This tenant** is available. If you are logged in with only fabric administrator privileges, then only **All tenants** is available.

You cannot change the **All tenants** or **This tenant** setting after you create the item.

- 6 (Optional) Enter a property description in the **Description** text box.

Describe the intent of the property definition and any other helpful information about the property.

- 7 (Optional) Enter a value in the **Order Index** text box.

The number that you enter controls how the property name appears on the request form. The following ordering rules apply:

- The order index applies only to properties that are configured with **Prompt User** or **Show in Request Form** settings.
- All properties with an order index appear before properties with no order index.
- Properties with an order index are sorted from lowest to highest order index value. Negative numbers are allowed.
- All properties are ordered alphabetically, with all ordered index properties appearing before non-order-indexed properties.
- If two properties have the same order index value, then they are sorted alphabetically.

- 8 Select a property definition data type from the **Data type** drop-down menu.

Table 4-1. Property Definition Data Types

Data type	Description
Boolean	Allows for a boolean value. The display advice options are Checkbox and Yes/No .
Datetime	Allows for a value entered in a date and time format. The display advice option is Date Time Picker .
Decimal	Allows for an integer or decimal value. The display advice options are Dropdown , Slider , and Textbox .
Integer	Allows for an integer value. The display advice options are Dropdown , Slider , and Textbox .
Secure String	Allows for secure or encrypted content such as a password. The display advice option is Textbox .
String	Allows for a string value. The display advice options are Dropdown , Email , Hyperlink , Textarea , and Textbox .

- 9 If the **Required** option is available, select **Yes** or **No** from the drop-down menu to specify if a value must be supplied for this property.

- 10 If the **Minimum value** option is available, specify a minimum value.
- 11 Select a display control type for this property in the **Display advice** drop-down menu. Available options are derived from your **Data type** selection.

Table 4-2. Property Definition Display Advice Options

Display Advice Option	Description
CheckBox	Provides a single check box control.
Date Time Picker	Provides a date and time control that adheres to a YYYY-MM-DD or MM/DD/YYYY format and a time in HH:MM format, 24-hour clock or followed by AM or PM.
Dropdown	Provides a drop-down menu control.
Email	Provides an email control.
Hyperlink	Displays a link with the property display name as the link text and the property value as the URL.
Slider	Provides a slider control for a range of values.
Testarea	Provides a text area in which to enter or display information.
Textbox	Provides a text box in which to enter a value.
Yes/No	Specifies a Yes or No value.

- 12 Click the **Pre-defines values** option in the Values area.
Click **New** in the **Pre-defines values** area and add a property name and value.
- 13 (Optional) Optionally select the **Enable custom values** check box to allow the user to specify custom values in addition to pre-defined values.
- 14 Click **OK**.

The property is created and available on the Property Definitions page.

Use a vRealize Orchestrator Script Action to Populate a Property Value

You can populate a property value in a drop-down menu by using vRealize Orchestrator script actions.

You can define a relationship between two property definitions if you populate the values of the dependent property by using a vRealize Orchestrator script action.

You can bind a property definition to a vRealize Orchestrator script action, but not to a vRealize Orchestrator workflow.

Prerequisites

- Create a vRealize Orchestrator script action. For information about developing workflows and creating and using vRealize Orchestrator script actions, see *Developing with VMware vCenter Orchestrator*.
- Create a new property definition or edit an existing one. See [Create a Property Definition](#).

The following task sequence differs from the [Create a Property Definition](#) task sequence only in how you specify the **Display Advice** value.

Procedure

1 Create a new property definition or edit an existing property definition.

- a Verify that the **Name** text box contains a value.
- b Verify that the **Label** text box contains a value.
- c Verify that the **Data type** text box contains either **Decimal**, **Integer**, or **String**.

2 Click in the **Display Advice** text box and select **Dropdown** from the drop-down menu.

3 Click the **External values** option in the Values area.

A page opens displaying supplied and user-created vRealize Orchestrator script actions.

4 Select a vRealize Orchestrator script action and click **OK**.

Select a user-generated vRealize Orchestrator script action that is appropriate for your property. The supplied vRealize Orchestrator script actions typically require or generate complex values that are not supported by vRealize Automation property definitions.

The Input parameters grid displays all the parameters that are available for the script action and that can be used to assign a value. One of the columns is labeled as Bind. When Bind is not checked, the action uses the literal value to pass as the value of that parameter. When Bind is checked, the value becomes the name of the field whose value is used as the value for that parameter.

A drop-down menu displays available property definitions to make it easier to bind to a known field. You can select an available value or enter a different custom property.

5 Click **OK**.

Using Property Groups

You can create property groups to collect properties into a single unit.

Property groups are logical and reusable groups of properties, that can include property definitions that you create or custom properties that are supplied, that are designed to simplify the process of adding properties to blueprints or other vRealize Automation elements for which they are available. They provide a means by which logical groupings of properties can be added more efficiently than by adding the properties individually.

A property group typically contains properties that are commonly used together. For example, you can create a property group named `WimImagingProperties` that contains properties commonly used for WIM-based provisioning:

- `Image.ISO.Location`
- `Image.ISO.Name`
- `Image.Network.Password`

- `Image.Network.User`
- `Image.WIM.Index`
- `Image.WIM.Name`
- `Image.WIM.Path`

You can also create a property group for vCloud Air or vCloud Director machine provisioning that contains the following properties:

- `VirtualMachine.Network0.Name`
- `VCloud.Template.MakeIdenticalCopy`
- `VMware.SCSI.Type`
- `Sysprep.Identification.DomainAdmin`
- `Sysprep.Identification.DomainAdminPassword`
- `Sysprep.Identification.JoinDomain`

Create a Property Group

You can organize specific custom properties into property groups to more easily add multiple custom properties to blueprints.

Prerequisites

Log in to the vRealize Automation console as a **tenant administrator** or **fabric administrator**.

Procedure

1 Select **Administration > Property Dictionary > Property Groups**.

2 Click **New** (+).

3 Enter the new property group name and ID.

If you enter the **Name** value first, the **ID** text box is populated with the same value.

4 In the **Visibility** section, select **All tenants** or **This tenant** to determine where the property is to be available.

If you are logged in with only tenant administrator privileges, then only **This tenant** is available. If you are logged in with only fabric administrator privileges, then only **All tenants** is available.

You cannot change the **All tenants** or **This tenant** setting after you create the item.

5 (Optional) Enter a description of the property group, for example **My_CloningProperties_vSphere**.

6 Add a property to the group by using the **Properties** box.

a Click **New** (+).

b Enter a property name.

For example, enter **VirtualMachine.Storage.ReserveMemory**.

c (Optional) Enter a property value.

For example, enter **True**.

d (Optional) Select the **Encrypted** check box to specify that the property value must be encrypted.

For example, if the value is to be a password or other secure entry, using the encrypted option hides the value characters.

e (Optional) Select the **Overridable** check box to specify that the property value can be overridden by the next or subsequent person who uses the property. The next person could be an administrator, architect, or other user.

f (Optional) Select the **Show in Request** check box to display the property on the request form when requesting machine provisioning.

g Click **OK** to add the property to the group.

7 Add additional properties to the group.

8 Click **Save**.