

# Vizioncore vControl®

Version 1.7

## Release Notes

August 2009

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## Welcome to vControl

vControl includes the following features:

### **Self-Service Provisioning**

vControl provides a system for consumers to build and deploy VMs for themselves through customizable VM templates. This allows VM consumers to select a standard VM package via the Web, and, if necessary, customize it for their specific needs. For VM administrators, vControl's workflow capability builds and deploys the VMs, saving administration time and effort, while a VM approval process enables IT to approve, reject or make changes in the requested VM configuration.

### **Multi-VM Control**

vControl offers a browser-based interface that enables control of multiple platforms, including VMware, MS Hyper-V, Xen and Solaris Zones. Easy-to-trigger workflows provide task-based administration of VMs simultaneously. Further, vControl is browser-based for global access.

### **Task Automation**

vControl provides a system that provides out-of-the-box workflows and actions. Additionally, VM administrators can use a visual workflow editor to build new workflows, combine actions and incorporate homegrown scripts. vControl also offers a Web services interface and SDK that can be used to accept requests from incident management solutions, for example.

### **Task-Based High Availability (HA)**

vControl offers a simple solution for VM high availability (HA) failover that enables primary and secondary failover, mixed infrastructure failover and rapid VM recovery. This helps organizations reduce costs to support high availability (HA) with unlimited HA support for all VMs.

### **Virtual Infrastructure Discovery**

vControl assists administrators to discover hosts and virtual machines that exist within and specified IP range, thus helping to quickly identify required resources and include them to the existing infrastructure. This can help reduce VM configuration and setup times while preventing oversights.

For a complete description of the product's capabilities, please see [www.vizioncore.com](http://www.vizioncore.com), or contact [sales@vizioncore.com](mailto:sales@vizioncore.com).

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## What's new in this release

1. Internal workflows are hidden from user (VMware ESX(i), VMware vCenter, Microsoft Hyper-V, and Xen).
2. Sample workflows created (VMware ESX(i), VMware vCenter, Microsoft Hyper-V, and Xen): 1) warm move; 2) Snapshot without error handling; 3) Snapshot with error handling.
3. Action that uses vMotion/Storage vMotion is provided for VMware vCenter. If vMotion isn't available i.e. not allowed by license or improperly configured, a virtual machine is suspended, moved and then started.
4. For VMware ESX(i) and vCenter, possibility to move virtual machine files - with Move operation - without moving VM to another host has been added.
5. vControl users are provided with an ability to specify port(s) used to manage hosts in 1) scan dialog; 2) via host context menu (VMware ESX(i), VMware vCenter).
6. Snapshot supports golden virtual machine with guest OS having dynamically assigned IP address (VMware ESX(i), VMware vCenter, and Xen).
7. ActionPacks now carry their UI related code with them. Earlier it was brought by platform. With respect to UI, ActionPacks are now separated from the platform.

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## System Requirements

You can install the software on a physical or virtual machine. If you install vControl on a physical machine, make sure that it is running a supported OS.

### **vControl servers**

- **Processor:** at least 2 GHz or higher
- **RAM:** at least 2 GB of RAM
- **Free disk drive space:** 1 GB

**Important** The installation wizard does not check for available disk space.

- **Operating system:** MS Windows 2003 Server SP2.

**Important** It is strongly recommended to install vControl on a dedicated virtual or physical machine.

- vControl must be installed on the dedicated physical or virtual machine. The term “dedicated machine”, in our case, means the machine where only the vControl components or component (UI Server, Master Server, Workflow Server) are installed.
- If you have Apache v2.2, OpenDS v1.0, or MySQL v5.0 Enterprise Edition already installed, make sure that the following ports are available:

Port #	Description
9000	Provides access for Web Services to Master Server
1099	Provides access for JMX to Master Server
3306	Provides access from Master Server, Workflow Server, and User Interface Server to MySQL
1389	Provides access from Master Server and Workflow Server to OpenDS

### **vControl clients**

- **Processor:** at least 1.5 GHz or higher
- **RAM:** at least 512 MB of RAM
- **Display:** 1280 x 1024 or higher resolution
- **Web browser:** Internet Explorer v6-7, Mozilla Firefox v2 or later

**Important** Cookies, Java script, and images should be enabled in the web browser.

## ActionPacks

### vControl support matrix

ActionPack for	ActionPack version	vControl version	Supported Target Systems
VMware ESX and ESXi	v2.5.4.8065	v1.7	ESX v3.0.1
			ESX v3.0.2
			ESX v3.0.2 update 1
			ESX v3.5
			ESX v3.5 update 1
			ESX v3.5 update 2
			ESX v3.5 update 3
			ESX v4.0 (vSphere)
			ESXi v3.5**
			ESXi v3.5 update 1**
			ESXi v3.5 update 2**
ESXi v3.5 update 3**			
ESXi v4.0 (vSphere)**			
VMware vCenter	v2.5.7.8065	v1.7	VirtualCenter v2.5 update 1
			VirtualCenter v2.5 update 2
			VirtualCenter v2.5 update 3
			vCenter Server v2.5 update 4
			vCenter Server v4.0 (vSphere)
MS Hyper-V	v0.8.60.8065	v1.7	Windows Server 2008 SP2 Hyper-V
Xen Enterprise	v1.4.7.8065	v1.7	Xen Enterprise v5.0

\*\* Only the licensed version of ESXi is supported.

### General

- To enable Move and Failover actions, virtual machines should be located on a shared storage.

### VMware ESX(i)

- To manage ESX(i) hosts, account username must be “root”
- SSH access must be enabled for ESX and ESXi hosts

**Tip** Refer to the *Configuring Target servers* section to learn how to enable SSH on ESXi servers.

- To be able to shut down guest operating systems, the *VMware tools* must be installed. You can download *VMware Tools* from [here](#).
- The name and path to the shared storage should be the same for all hosts connected to the shared storage.

### VMware vCenter

- To be able to shut down guest operating systems, the *VMware tools* must be installed. You can download *VMware Tools* from [here](#).

### Microsoft Hyper-V server

- Windows Server 2008 Hyper-V Standard or Enterprise Edition (full) Service Pack 2, with the “KB950050” update installed.
- Hyper-V server and storage server must be members of the domain.

- Windows 2003 storage server for Hyper-V is set up.
- “Windows Powershell” feature must be enabled.
- Script execution policy must be set to “unrestricted”.
- “Remote management of the server” must be enabled.

**Tip** Refer to the *Configuring target servers* section to learn how to configure Hyper-V servers.

### ActionPack for Scripting

Virtual machines, on which you want to execute a script should meet the following requirements:

- Must have Windows 2003 Server, Windows XP, or Windows 2008 Server operating system installed.
- Both server and client machines should be members of the same domain.
- VMware virtual machines must have *VMware tools* installed. You can download *VMware Tools* from [here](#).
- Virtual machine must be running.
- Must be accessible from the machine, on which vControl is installed.

**Tip** You can check this simply by pinging the machine. To do this, go to **Start > Run**, type cmd and click **OK**. Then, in command line, type "ping <virtual\_machine\_IP>" and press **Enter**. If the ping request times out, this means you cannot access the machine.

- Both server and client virtual machine must have the Distributed Component Object Model (DCOM) properly configured and operating.
- A virtual machine must have the Remote Procedure Call (RpcSs) service running
- No firewall should prevent access from server to client machine.

**Important!** If you change any service settings after vControl has been installed, then before using the Remote Scripting ActionPack, you need to re-synchronize the server on which the virtual machine is located.

## Features

### Self-service

- The *System Preparation tool for Windows Server 2003 Service Pack 2 Deployment* must be installed into the *C:\SysPrep* folder on every vControl Workflow Server. You can download the System Preparation tool from [here](#).
- Golden VMs should have Windows 2000, XP, or 2003 Server operating system installed.
- Golden VMware VMs should have the *VMware Tools* installed. You can download *VMware Tools* from [here](#).
- It's strongly recommended to use UPN format while specifying credentials for Microsoft Active Directory integration, especially while using Microsoft Active Directory on Windows 2008.

### Cloning VMs with OS settings customization

- The *System Preparation tool for Windows Server 2003 Service Pack 2 Deployment* must be installed into the *C:\SysPrep* folder on every vControl Workflow Server. You can download the System Preparation tool from [here](#).
- VMs should have Windows 2000, XP, or 2003 server operating system installed.
- VMware VMs should have the *VMware Tools* installed. You can download *VMware Tools* from [here](#).

## Console

**Note.** Only VMware virtual machines support this feature.

- Windows Internet Explorer or Mozilla Firefox should be configured.

## Configuring Internet Explorer

To make necessary configuration of Internet Explorer, do the following.

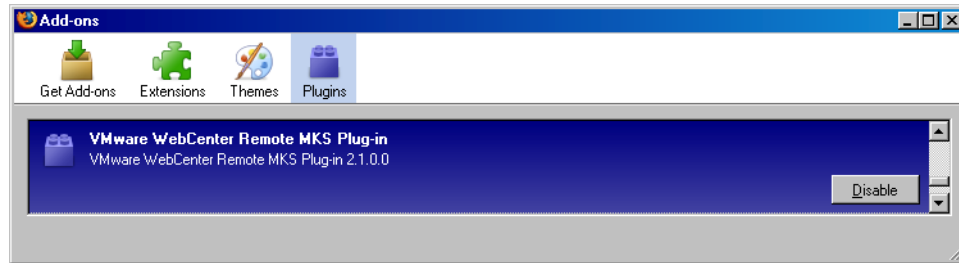
1. Open Internet Explorer window.
2. In the **Address** field, enter “`http://<ESX host>/ui/`” (ESX host is IP address of the ESX host server where the necessary virtual machines are running).
3. Login to the ESX host server.
4. On the left pane of the **VMware Web Access** window that appears, select any running virtual machine.
5. On the right pane of the window, click the **Console** tab.
6. Install the required plug-in by following the suggested link.

## Configuring Mozilla Firefox

To make necessary configuration of Mozilla Firefox, do the following.

1. Close Mozilla Firefox if it is running.
2. Download plug-in from ESX host and save to local file, for example using the `wget` command line tool. For example, `wget https://<ESX host>/ui/plugin/mozilla/win32/vmware-mks.xpi --no-check-certificate` Unzip the plugin (ESX host is IP address of the ESX host server where the necessary virtual machines are running). Alternatively, you download the plug-in using any browser other than Mozilla Firefox.
3. Copy the following files to the Mozilla Firefox installation folder (typically it is *C:\Program Files\Mozilla Firefox*).
  - `libeay32.dll`
  - `msvcr71.dll`
  - `ssleay32.dll`
4. Copy the following files to the Mozilla Firefox plug-ins folder (typically it is *C:\Program Files\Mozilla Firefox\plugins*).
  - `libeay32.dll`
  - `npmks.dll`
  - `ssleay32.dll`

- vmware-remotemks.exe
- 5. Copy the following file to the Mozilla Firefox components folder (typically it is *C:\Program Files\Mozilla Firefox\components*).
- xpcomIVMControl.xpt
- 6. Start Mozilla Firefox.
- 7. In the Mozilla Firefox window, choose **Add-ons** from the **Tools** menu.
- 8. In the **Add-ons** window that appears, make sure that the necessary plug-ins are installed.



## Special Notes on Features

- vControl updates information about virtual machines only when scanning the network, Continuous Discovery or manual synchronization of the already discovered resources. Changes made outside of vControl, for example directly on an ESX server, will not appear in vControl unless either Continuous Discovery or manual synchronization is performed.

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## Known Issues

- For ESX(i) server data storage configuration, it may happen that the name of the storage itself is different from the name on ESX(i) host at /vmfs/volumes. If this happens, synchronization results may be incomplete.
- For ESX(i) server data storage configuration, it may happen that the name of the storage itself is different from the name on ESX(i) host at /vmfs/volumes. If this happens, “Clone”, “Move” and “Failover” actions for virtual machines located on that data storage, will fail.
- If, when synchronizing ESX(i) hosts vControl loses connection with the target ESX(i) host, synchronization results will be incomplete.
- When performing a “Hot Move” or “Clone” operations, vControl does not check if the virtual machine will remain operational on the destination ESX(i) host. This may cause that the cloned or moved virtual machine will become non-operational, when destination hosts' hardware configuration (for example, CPU Architecture, number of CPUs, FDD and/or CD-ROM mount points) is different from the source ESX(i) host.
- OpenDS LDAP storage provide limitations as to what characters can be used in resource names (VM names, data storages names, virtual disks names, etc.) according to RFC-4515 standards for “(LDAP): String Representation of Distinguished Names”. According to these limitations, the resource name should not contain the following characters:
  - a space (' ' U+0020) or number sign ('#' U+0023) occurring at the beginning of the string;
  - a space (' ' U+0020) character occurring at the end of the string;
  - one of the characters '"', '+', ',', ';', '<', '>', or '\ (U+0022, U+002B, U+002C, U+003B, U+003C, U+003E, or U+005C, respectively);
  - the null (U+0000) character.

You can read more about this standard at:

<https://opends.dev.java.net/public/standards/rfc4514.txt>

- OpenDS version currently used does not allow characters not in IA5 (ASCII) character set inside of attribute values. Thus, errors may occur during resources scan if non-English localization is set.
- In rare situations, an ActionPack may not be installed. The only way to fix this issue is to install the latest version of vControl.
- If you open Public Self-Service from vControl, work there, and then switch back to vControl, you will be forced to login to vControl again.
- In some situations, for the ActionPack for VMware ESX, you may find that the environment already discovered (synchronized), cannot be re-discovered (re-synchronized) after the ActionPack has been reinstalled.
- HA tasks for the same hosts and VMs should be assigned to a single Workflow Server, otherwise race conditions could appear on failover triggers and task will fail.

- Host HA task does not include VMs added after task initiation.

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## Fixes made in the current release

VFI-3328	Adaptor version format is wrong
VFI-3325	Cannot select protocol in automatic discovery dialog
VFI-3212	Column header disappears when panel minimized
VFI-3327	Create task fails - cannot get path to virtual machine configuration file
VFI-3348	Delete and Restore VM action fails with error - InvocationFailedException: java.lang.NullPointerException
VFI-3209	ESX AP: Workflow SS not started
VFI-3195	Flow Control AP is not available
VFI-3355	Having "Show this template in the public Self-Service interface" unmarked for the template get it shown
VFI-3395	Impossible to move the VM
VFI-3329	No default IP range in automatic discovery dialog
VFI-3324	No default values in ports fields
VFI-3332	Resource console operations (Sync, Delete, Edit, Clone, etc) fail with InvocationFailedException: java.lang.NullPointerException
VFI-3296	Resources discovery failed
VFI-3243	SS: Custom field scemas do not allow to make SS without custom parameters
VFI-3203	SS: Custom field scemas do not store added fields
VFI-3235	SS: Custom field scemas shows empty list of variables for WF params binding
VFI-3250	SS: Unable to create SS request in public SS part
VFI-3418	Scan task failes with java.lang.NullPointerException
VFI-3350	Scan task succeeded with wrong https web services port specified
VFI-3334	Started VM reported stopped
VFI-3201	UI: Discovery configuration section shows two VMware VC choices and no ESX choice
VFI-3419	VC: Scan fails with InvocationFailedException: java.lang.NullPointerException
VFI-3353	Web Services: Job launch. Consistent job launch failed
VFI-3317	[sfRenderException] error occured while an attempt to switch to the "Configuration" pane

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## For More Information

### Contacting Vizioncore Software

Email: [info@Vizioncore.com](mailto:info@Vizioncore.com)

Mail:

Vizioncore, Inc.  
975 Weiland Ave  
Buffalo Grove, IL 60089

Web site: [www.vizioncore.com](http://www.vizioncore.com)

Refer to our Web site for regional and international office information.

### Contacting Vizioncore Support

Vizioncore Support is available to customers who have a trial version of a Vizioncore product or who have purchased a commercial version and have a valid maintenance contract.

Vizioncore Support is easily accessed in the following ways:

- **Email support directly at [support@vizioncore.com](mailto:support@vizioncore.com)** for automatic case creation.
- Contact Vizioncore support directly via our global and local telephone numbers.
- Log and create/update your case, and check its status via the Vizioncore Support Case Management portal.

View the Vizioncore Support Guide for a detailed explanation of support programs, online services, contact information, and policy and procedures. The guide is available at:

[http://www.vizioncore.com/SupportDocs/Vizioncore\\_SupportGuide1\\_SFS.pdf](http://www.vizioncore.com/SupportDocs/Vizioncore_SupportGuide1_SFS.pdf).

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If you have any questions regarding your potential use of this material, contact:

Vizioncore, Inc  
975 Weiland Ave

Buffalo Grove, IL 60089  
[www.vizioncore.com](http://www.vizioncore.com)  
email: [info@vizioncore.com](mailto:info@vizioncore.com)

Refer to our Web site for regional and international office information.

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