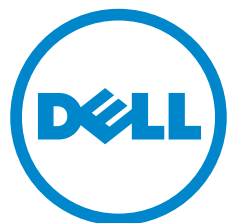


# Dell Advanced Infrastructure Manager and Dell VIS Self-Service Creator Integration Overview

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By Tom Maher and Anton Hamman



## Dell Advanced Infrastructure Manager and Dell VIS Self-Service Creator Integration Overview

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## Background

At the Dell Solution Center (DSC) in Limerick, Ireland, there is a significant environment dedicated to the Dell™ Advanced Infrastructure Manager (AIM) component of the Dell Virtual Integrated System (VIS) architecture, which is used to provide detailed interactive briefings, workshops, and sessions for customers. This environment has proven to be a major success in allowing Dell to show all the functionality of the solution using different server and storage options.

An opportunity has arisen to provide a similar level of detail for the Dell VIS Self-Service Creator; however, the DSC did not have the hardware available to deliver it. A decision was made to build a solution in the AIM environment that could be provisioned on demand for VIS Self-Service Creator workshops. This approach allowed the DSC to provide a solution including VMware® ESX and Microsoft® Hyper-V™ hypervisors, a Microsoft Exchange Server e-mail server, a Microsoft Active Directory® directory service domain, VMware VirtualCenter Server, VIS Self-Service Creator Virtual Resource Manager (VRM), and several clients for the enterprise administrator, managers, and end users. Additionally, an agent was installed that allows the provisioning of servers in the Amazon Elastic Compute Cloud (EC2) over an Internet connection.

This environment contains templates for the Microsoft Windows Server® 2003, Windows Server 2008, and Microsoft Windows® XP operating systems and several versions of the Linux® OS. All machines provisioned by VIS Self-Service Creator appeared as blank virtual machines (VMs) in the hypervisors managed by AIM. This environment allowed the DSC to investigate whether value could be added to these VMs using AIM.

A Microsoft Windows PowerShell™ agent was installed on the VIS Self-Service Creator VRM, which allowed the execution of scripts at different points during the life cycle of a VM. The added scripts



were to be executed at the post-provisioning and un-provisioning stages. The post-provisioning script accessed custom parameters added to the build profiles within VIS Self-Service Creator to allow the creation of a persona within AIM. The un-provisioning script was used to delete the persona from AIM when the VM was destroyed using VIS Self-Service Creator.

Once a VM had a persona within AIM, the DSC team was then able to use the virtual networking abilities within AIM to add additional networking to the VM and to use AIM to start and stop the persona. Even though AIM cannot retarget these personas, VMware High Availability (HA) can move VMs to another cluster node if an ESX hypervisor fails. AIM then retargets the hypervisor to another server and restores the cluster. VMware Distributed Resource Scheduler (DRS) may then move VMs back to the recovered node depending on load.

### Setting up Dell Advanced Infrastructure Manager

Within AIM, personas, VMRacks, and vSwitches were created for the various elements of the solution (see Figure 1). The virtual view of the VIS Self-Service Creator environment shows how the components are connected from a logical perspective (see Figure 2). Additionally, vSwitches were created to represent the IT, human resources (HR), finance, and development virtual LANs (VLANs) of an organization. When VIS Self-Service Creator provisions a VM, the persona is connected to the departmental network of the end user requesting the VM. The department is determined from Active Directory, extracted in the post-provisioning script, and then passed into AIM to make the connection. The vSwitches within AIM automatically assign an IP address to the new persona. Once the persona is created, additional virtual network interface cards (vNICs) can be added and connections made to additional networks from the virtual view of AIM.



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Name	Type	Runs on	Function
SSC-VRM	Persona	Physical	Management server
SSC-AD-1	Persona	Physical	Microsoft Active Directory
SSC-Exchange	Persona	Physical	Microsoft Exchange Server
SSC-VC	Persona	Physical	VMware VirtualCenter
SSC-Client-Admin	Persona	Virtual	Enterprise administrator
SSC-HR-User	Persona	Virtual	HR provisioning user
SSC-HR-Manager	Persona	Virtual	HR authorizing manager
SSC-Finance-User	Persona	Virtual	Finance provisioning user
SSC-Finance-Manager	Persona	Virtual	Finance authorizing manager
SSC-ESX-01	VMRack	Physical	VMware ESX cluster member (production)
SSC-ESX-02	VMRack	Physical	VMware ESX cluster member (production)
SSC-ESX-03	VMRack	Physical	VMware ESX stand-alone (development)
SSC-Hyper-V-1	VMRack	Physical	Microsoft Hyper-V stand-alone (XP)
VS.SSC-Mgmt	vSwitch		Management-client interconnect
VS.SSC-Virtual	vSwitch		Hypervisor interconnect
VS.SSC-IT	vSwitch		VLAN for IT users
VS.SSC-HR	vSwitch		VLAN for HR users
VS.SSC-Finance	vSwitch		VLAN for finance users
VS.SSC-Dev	vSwitch		VLAN for development VMs

Figure 1. Personas, VMRacks, and vSwitches created within AIM



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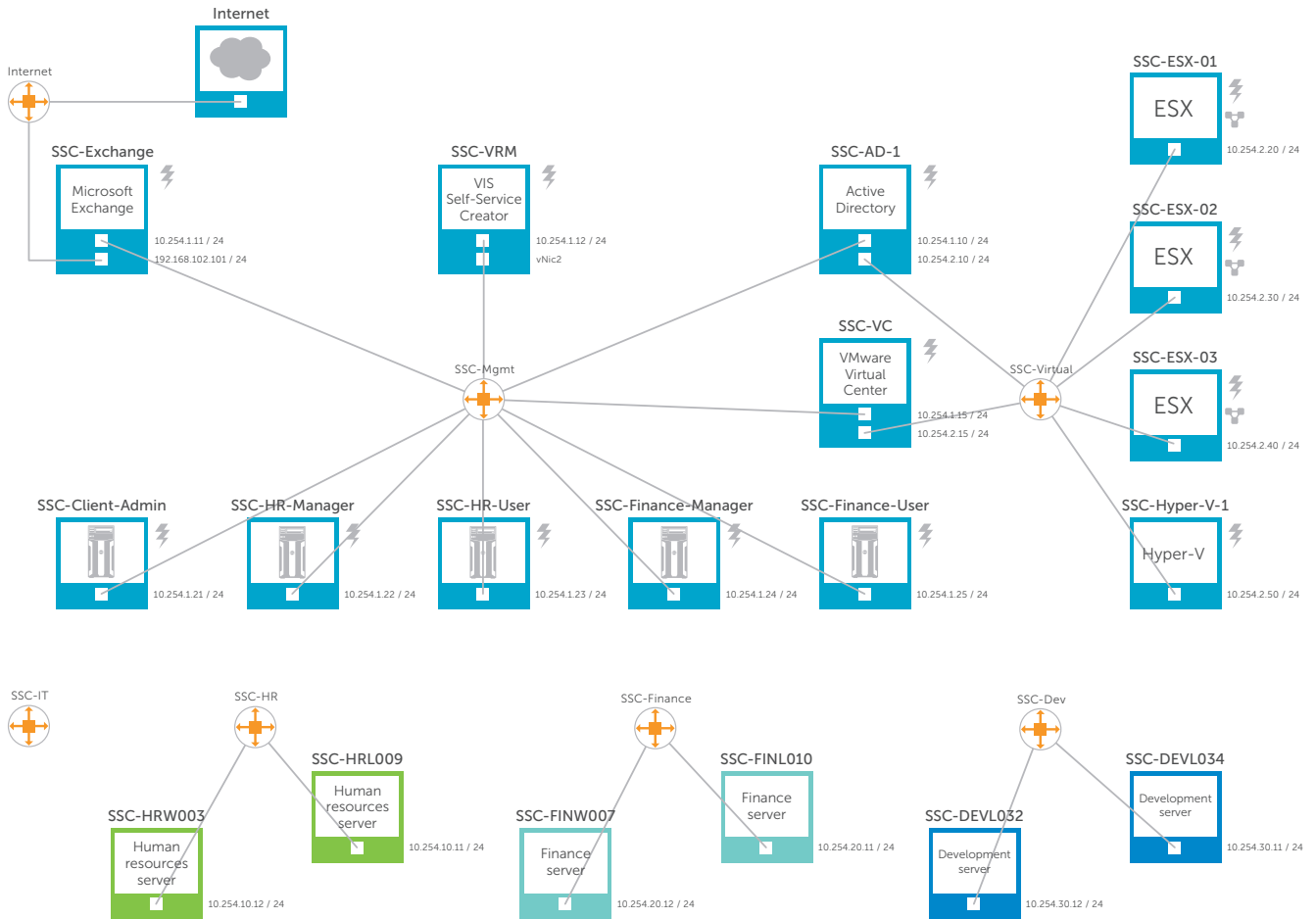


Figure 2. Virtual view of the VIS Self-Service Creator environment within AIM

## Advanced Infrastructure Manager scripts

The VIS Self-Service Creator environment can be built, started, stopped, and destroyed using scripts executed through the AIM command-line interface (CLI). The destroy script `SSC-Remove-VMs.ps1` uses PowerShell to find all the personas created by VIS Self-Service Creator and issues commands to VIS Self-Service Creator to un-provision them. This process in turn deletes the associated personas. When all the VMs have been removed, the infrastructure is stopped and removed from AIM using the `DSC-Remove-SSC.txt` script. An additional script, `cleanup_orphaned_personas.sh`, which is created on the controller, searches for orphaned personas—disk-booted personas whose server has been deleted—and removes them. This process can happen if the VM is removed from VirtualCenter and not destroyed in VIS Self-Service Creator. Figure 3 lists the scripts and their functions.



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Script	Function
DSC-Build-SSC.txt	An AIM CLI script for creating the management infrastructure for VIS Self-Service Creator and all the department vSwitches
DSC-Start-SSC.txt	An AIM CLI script that starts the VIS Self-Service Creator environment in a controlled manner: first the Active Directory server; then the Exchange Server, VirtualCenter, and clients; then the hypervisors; and finally VRM
DSC-Stop-SSC.txt	An AIM CLI script that shuts down the VIS Self-Service Creator environment in a controlled manner: first the hypervisors, clients, and Exchange Server; then VirtualCenter and VRM; and finally the Active Directory server
Destroy-SSC.bat	A DOS batch script that calls SSC-Remove-VMs.ps1, then DSC-Stop-SSC.txt, and finally DSC-Remove-SSC.txt
SSC-Remove-VMs.ps1	A PowerShell script that finds all the VMs created by VIS Self-Service Creator and calls VIS Self-Service Creator to un-provision them; VIS Self-Service Creator deletes the VM and calls its un-provisioning script to remove the persona from AIM
DSC-Remove-SSC.txt	An AIM CLI script that removes all VIS Self-Service Creator management, client infrastructure, and department vSwitches from AIM

Note: Full code for the scripts listed in Figure 3 can be found in the appendix.

Figure 3. Scripts used to build, start, stop, and destroy the VIS Self-Service Creator environment

## Setting up Dell VIS Self-Service Creator

Refer to the “VIS Self-Service Creator Installation Guide” for the EPI Agent Installation and EPI Agent for Visual Basic Scripting Installation requirements before installing a VIS Self-Service Creator agent. After installation, the scripts folder is in the programs folder, where the agent is installed.

VIS Self-Service Creator allows administrators to specify scripts to be executed at various stages during the life cycle of a machine. Existing scripts for post-provisioning and un-provisioning were modified to enable the VMs provisioned in VIS Self-Service Creator to be spun into AIM as personas.





## Custom properties

The scripts are specified in the machine blueprints and build profiles. Associated with those scripts are custom properties with which a VM can be provisioned. These custom properties—which include the type of system being deployed, the vLAN to attach it to, and so on—are variables with associated values (see Figure 4).

Parameter	Function
VirtualMachine.Admin.Name	Name of the VM being provisioned—system parameter
VirtualMachine.Admin.Owner	Active Directory user name of the machine requestor—system parameter
Create.Persona.Value	Creation of a persona—true or false
AIM.Controller.Value	IP address of controller
DNS.Search.Value	Domain Name System (DNS) search string
DNS.Server.Value	IP address of the DNS server
Gateway.Value	IP address of the default gateway—used if not using a default vSwitch
Icon.Application.Value	Application icon name—if using a default vSwitch, this value is determined by the requestor's department
Icon.System.Value	OS icon name
osArch.Value	Architecture type—x86_32 or x86_64
osFamily.Value	OS family—Linux or Windows
VbScript.PostProvisioning.Name	Post-provisioning script path
VbScript.UnProvisioning.Name	Un-provisioning script path
VMWare.VirtualCenter.OperatingSystem	VMware guest OS type
vSwitch.Value	AIM vSwitch(es) to connect to—the default uses the Active Directory department value; otherwise, it uses a comma-separated list of vSwitches

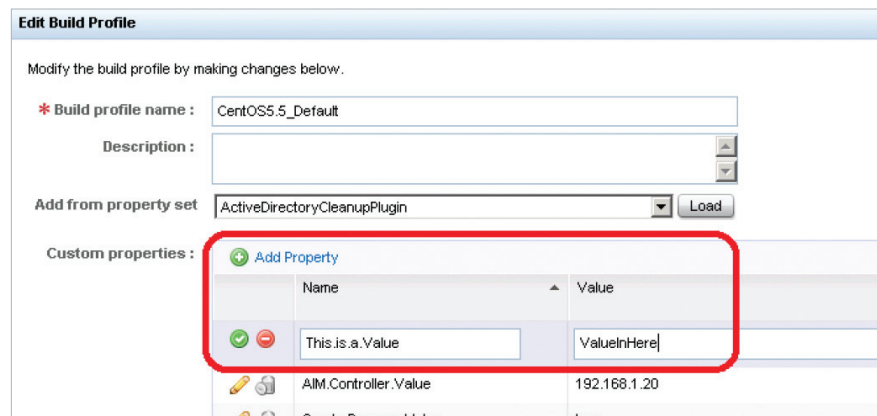
Figure 4. Parameter names and functions of custom properties



During the life cycle of the machine, if a script is associated with a particular stage—for example, post-provisioning—the script will be executed and all the custom properties will be passed to the script as arguments. From these arguments the script makes decisions on actions to perform. For all this to work, build profiles and blueprints need to be created.

### Blueprints and build profiles

From the Enterprise Administrator > Build Profiles menu, select the required build profile. In the “Custom properties” section of the Edit Build Profile window, click Add Property and enter the property’s name and an associated value (see Figure 5). The properties are used to provide the information required to successfully create a persona within AIM. For example, the `AIM.Controller.Value` property is used by the scripts to identify the AIM controller.



The screenshot shows the 'Edit Build Profile' window with the following details:

- Build profile name:** CentOS5.5\_Default
- Description:** (empty text area)
- Add from property set:** ActiveDirectoryCleanupPlugin
- Custom properties:** A table with columns 'Name' and 'Value'. A red box highlights the 'Add Property' button and a new row with 'This.is.a.Value' and 'ValueInHere|'. Below it, existing properties are visible: 'AIM.Controller.Value' with value '192.168.1.20' and 'Create Persona Value' with value 'true'.

Name	Value
This.is.a.Value	ValueInHere
AIM.Controller.Value	192.168.1.20
Create Persona Value	true

Figure 5. Custom properties for modifying a build profile



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Figure 6 shows an example of a build profile. All the parameters are locked at design time but could be set to allow the user to change them when requesting a machine—for example, by allowing an IT user to change the vSwitch value when provisioning a test machine.

Name	Value	Encrypted	Prompt User
AIM.Controller.Value	192.168.1.20	No	No
Create.Persona.Value	true	No	No
DNS.Search.Value	aim.sic	No	No
DNS.Server.Value	192.168.1.10	No	No
Gateway.Value	10.254.30.1	No	No
Icon.Application.Value	Dev-Server	No	No
Icon.System.Value	CentOS	No	No
osArch.Value	x86_32	No	No
osFamily.Value	linux	No	No
VbScript.PostProvisioning.Name	C:\Program Files\Dell VIS\Self-Service Creator Agent\powershell\Scripts\PostProvisioning\VbOperation.ps1	No	No
VbScript.UnProvisioning.Name	C:\Program Files\Dell VIS\Self-Service Creator Agent\powershell\Scripts\UnProvisioning\VbOperation.ps1	No	No
VMWare.VirtualCenter.OperatingSystem	rhel5Guest	No	No
vSwitch.Value	SSC-Dev	No	No

Figure 6. Details of a build profile



After the build profile is completed, add it to the blueprint (see Figure 7). Optionally, custom properties also can be added directly within the blueprint.

**Edit Blueprint**

Modify the blueprint by making changes below. Note: Only a change in the number of Archive days affects existing machines; all other changes are applied to future machines only.

**Blueprint Information** | **Build Information** | Security

\* Blueprint type:  Server  Workstation

\* Action:  Create  Clone

**Build profile:** Linux\_Development

\* Provisioning workflow: VMWareCloneWorkflow

\* Minimum: Maximum: Approval required at:

# CPUs: 4

Memory (MB): 2048

Storage (GB): 10

Lease (days): 5

(Leave blank for no expiration date)

Maximum values are optional. If you specify a maximum, the user is prompted to choose from a range of values between the minimum and maximum. Otherwise the user is not prompted.

Approval thresholds are optional. They apply only to blueprints for which an approval policy is selected on the Blueprint Information tab. When the user chooses a value at or above the specified threshold, approval will be required before the machine can be provisioned.

\* Clone from: CentOS\_5.5 Template

Customization Spec:

**Optional** Cost (daily): 1.000 (added to daily host cost to calculate daily machine cost)

Custom properties:

[Add Property](#)

Name	Value	Encrypted	Prompt User
There is no data to display.			

OK Cancel

Figure 7. A build profile added to a blueprint

Now that the agent is installed and the custom properties are associated with the build profiles and blueprints, the scripts that make use of these properties can be created. For the purposes of AIM management, two scripts are used. A post-provisioning script is used to add the persona to AIM when the VM is ready to be powered on. An un-provisioning script is used to remove the persona when VIS Self-Service Creator destroys the VM. A detailed breakdown of these scripts follows.



## Post-provisioning script

The first section of the post-provisioning script is a common code piece from DynamicOps. It sets up the environment and reads the parameters passed to the script. Also, it initializes the random number generator.

```
# Usage string
$usage = "Script to create AIM Personas during VIS Creator machine provisioning."

# has to be in top script to be able to exit
trap {
    # if we get exception from usage message exception simply exit
    if ($_.Exception.Message -eq "Usage") {
        exit
    }
    throw $_
}

# include common functions
. (Join-Path (Split-Path $script:MyInvocation.MyCommand.Path)
Functions\VrmFunctions.ps1) $true $args $args[0] $args[1]
write "Invoked $parentScript with [$args]"

$rand = New-Object System.Random
```

Next, loop through all the parameters and extract the values of those in which AIM is interested. If a parameter does not have a value, it is set to notset.

```
Foreach ($arg in $args)
{
    $Parameter = $arg.split("(=*)")
    $cpValue = "notset"
    if ( $Parameter[1] -ne $null )
    {
        if ($Parameter[1].StartsWith("="))
        {
            $cpValue = $Parameter[1].Remove(0,1)
        }
        $cpValue = $Parameter[1]
    }

    switch ($Parameter[0])
    {
        VirtualMachine.Admin.Name { $System = $cpValue }
        VirtualMachine.Admin.UUID { $uuid = $cpValue }
        AIM.Controller.Value { $AIMController = $cpValue }
        Create.Persona.Value { $Persona = $cpValue.ToLower() }
        Gateway.Value { $DefaultGateway = $cpValue }
        vSwitch.Value { $vSwitches = $cpValue }
        Icon.Application.Value { $ApplicationIcon = $cpValue }
    }
}
```



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```
        Icon.System.Value           { $SystemIcon = $cpValue }
        osFamily.Value              { $osFamily = $cpValue }
        osArch.Value                { $osArch = $cpValue }
        DNS.Server.Value            { $DNSServer = $cpValue }
        DNS.Search.Value            { $DNSSearch = $cpValue }
        VirtualMachine.Admin.Owner { $ADUserName = $cpValue }
    }
}
```

Extract the requestor's department from Active Directory because it may be used later.

```
$ADUserName = $ADUserName.Split("\")
$ADUserName = $ADUserName[1]

$objUser = [ADSI]"LDAP://CN=$ADUserName,CN=Users,DC=mgmt,DC=ssc,DC=dell,DC=local"
$Department = $objUser.Department.toString()
if ( $Department -eq $null )
{
    $Department = "notset"
}
```

If creating a persona, write out all the parameter values of AIM interest.

```
write "System           : $system"
write "Create a Persona : $Persona"

If ( $Persona -eq "true" )
{
    write "vSwitches           : $vSwitches"
    write "O/S Family         : $osFamily"
    write "O/S Architecture   : $osArch"
    write "Default g/w        : $DefaultGateway"
    write "DNS Server         : $DNSServer"
    write "DNS Search String  : $DNSSearch"
    write "System Icon       : $SystemIcon"
    write "Application Icon   : $ApplicationIcon"
    write "AD Username       : $ADUserName"
    write "Controller IP     : $AIMController"
}
```

Change to the directory containing the AIM software development kit (SDK) binaries.

```
$PathDir="C:\dell\SDK\bin"
cd $PathDir
```



If using the default value for vSwitches, make sure the requestor's department was found in Active Directory. If it was not found, then skip this step. Otherwise, build a script to find the department vSwitch details in AIM. This script will determine the default gateway. The vSwitch and application icon are also determined from the department value.

```
if ( $vSwitches.ToLower() -eq "default" )
{
    $vSwitches = "notset"
    $DefaultGateway = "notset"
    $ApplicationIcon = "notset"

    if ( $Department -eq "notset" )
    {
        write "WARNING: Unable to determine requestor's department.
        No Networking added to AIM Persona!"
    }
    else
    {
        write "Department          : $Department"

        $vSwitches = "SSC-" + $Department
        $ApplicationIcon = $Department + "-Server"

        $ListFilename = $System + "-VS-iframe-" +
[DateTime]::Now.ToString("yyyMMdd-HHmssfff") + ".txt"
        $OutFilename = $System + "-VS-ofile-" +
[DateTime]::Now.ToString("yyyMMdd-HHmssfff") + ".txt"

        New-Item $ListFilename -type file
        Add-Content $ListFilename "login host=$AIMController"
        Add-Content $ListFilename "`nopen"
        Add-Content $ListFilename "`nlist vswitches id=VS.$vSwitches"
        Add-Content $ListFilename "`nexit"
```

Execute the script and convert the output to DOS format.

```
.\voeCli.bat ifile=$ListFilename ofile=$OutFilename
.\unix2dos.exe $OutFilename
```



Extract the line containing the IP address from the output file and delete the file. Parse the line to work out the default gateway from the IP address and netmask. In the workshop environment, the gateway will always be the first IP address of the network (x.x.x.1). Display the gateway, switch, and application icon values.

```
$IPAddressLine = (Get-Content $OutFilename -totalcount 6)[-1]

Remove-Item $ListFilename -ea SilentlyContinue
Remove-Item $OutFilename -ea SilentlyContinue

if ( $IPAddressLine -ne "NO VSWITCHES" )
{
    $IPAddressLine = $IPAddressLine.Split(' ')
    $i = 0
    foreach ( $Octet in $IPAddressLine[11].Split(".") )
    {
        if ( $Octet -eq "255" ) { $i++ }
    }
    $j = 0
    $Network = $IPAddressLine[9].Split(".")
    $DefaultGateway = ""
    For ( $j=0 ; $j -lt 4 ; $j++ )
    {
        if ( $j -lt $i )
        {
            $DefaultGateway = $DefaultGateway + $Network[$j] + "."
        }
        else
        {
            $DefaultGateway = $DefaultGateway + "1."
        }
    }
    $DefaultGateway = $DefaultGateway.trimEnd('.')
}

write "Default Gateway    : $DefaultGateway"
write "vSwitches          : $vSwitches"
write "Application Icon    : $ApplicationIcon"
}
```

Find the universally unique identifier (UUID) of the new VM in AIM by creating a script to list the VMs in AIM with a name matching the system being created from VIS Self-Service Creator. Loop a maximum of 20 times, waiting 10 seconds between loops to ensure the VM is visible within AIM. This wait period is required to tie the persona to the newly created VM.





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```
$ListFilename = $System + "-VM-iframe-" +  
[DateTime]::Now.ToString("yyyyMMdd-HHmssfff") + ".txt"  
$OutFilename = $System + "-VM-oframe-" +  
[DateTime]::Now.ToString("yyyyMMdd-HHmssfff") + ".txt"  
  
New-Item $ListFilename -type file  
Add-Content $ListFilename "login host=$AIMController"  
Add-Content $ListFilename "`nopen"  
Add-Content $ListFilename "`nlist vms name=$System"  
Add-Content $ListFilename "`nexit"  
  
$count=0  
$VmwareValue="NO VMS"  
while( $VmwareValue -eq "NO VMS" -and $count -lt 20 )  
{  
    Start-Sleep -s 10  
    .\voeCli.bat ifile=$ListFilename ofile=$OutFilename  
    .\unix2dos.exe $OutFilename  
  
    $VmwareValue = (Get-Content $OutFilename -totalcount 6)[-1]  
    $count++  
}
```

If the UUID of the VM was not found in AIM, then abort the script. AIM cannot create a disk-booted persona without locking it to a particular machine.

```
if ( $count -eq 20 )  
{  
    write "ERROR: Unable to determine VM UUID in AIM. No Persona created!"  
    exit  
}
```

Extract the new VM's UUID and display its value.

```
$VmwareIDString = $VmwareValue.Substring(1,54)  
write "AIM VM ID      : $VmwareIDString"
```

Next, start building a new script to create the persona. The first few lines perform the login to the controller, add the new persona, and set the OS family, architecture, and DNS details of the persona. The persona's system control network (SCN) addresses are determined automatically.



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```
$AddFilename = $System + "-AddPersona-" +  
[DateTime]::Now.ToString("yyyyMMdd-HHmssfff") + ".txt"  
  
New-Item $AddFilename -type file  
Add-Content $AddFilename "login host=$AIMController"  
Add-Content $AddFilename "`nopen"  
Add-Content $AddFilename "`nadd persona newId=SSC.$System  
newImageId=IN.$System-Disk bootType=disk agentExists=true  
networkingEnabled=true networkMode=trunk dnsSearchDomain=$DNSSearch osFamily=$osFamily  
osArch=$osArch"  
Add-Content $AddFilename "`nsave"  
Add-Content $AddFilename "`nupdate persona scn id=SSC.$System set assignmentType=Pool"  
Add-Content $AddFilename "`nassign dns address=$DNSServer to persona id=SSC.$system"
```

Add the default gateway, if it has been specified.

```
if ( $DefaultGateway -ne "notset" )  
{  
    Add-Content $AddFilename "`nassign default gateway  
address=$DefaultGateway to persona id=SSC.$system"  
}  
Add-Content $AddFilename "`nsave"
```

Lock the persona to the new VM using the extracted UUID.

```
Add-Content $AddFilename "`nassign persona id=SSC.$System to host  
id=""$VmwareIDString"" "  
Add-Content $AddFilename "`nsave"
```

Add application and system icons, if specified. Lay out the persona using the same y value and pick a random x value so that the personas initially will be placed close to the VIS Self-Service Creator department vSwitches. These personas can be moved later for clarity in AIM.



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```
if ( $ApplicationIcon -eq "notset" )
{
    $ApplicationIcon = "blank"
}

$systemIconString = " "
if ( $systemIcon -ne "notset" )
{
    $systemIconString = "osIcon=_scalenticonid_os_$SystemIcon"
}

$xVirtual = $rand.next(1,11) * 180
$yVirtual = 2250

Add-Content $AddFilename "`nlayout persona id=SSC.$System set hidden=false
icon=_scalenticonid_$ApplicationIcon $systemIconString xVirtual=$xVirtual
yVirtual=$yVirtual"
Add-Content $AddFilename "`nsave"
Add-Content $AddFilename "`nsave layout"
```

Loop through the list of vSwitches and create new vNICs for each one. The vNIC is set up to obtain its address from the controller-assigned IP address of the vSwitch range. Cable the vNIC to the switch. Use a random delay, between 5 and 30 seconds, in case multiple VMs are created at once; otherwise, AIM can report that the resource is in use and prevent the changes from being saved.

```
if ( $vSwitches -ne "notset" )
{
    $WaitSeconds = $rand.next(5,31)
    $i = 1
    $vSwitches = $vSwitches.Split(",,: ")

    Foreach ( $vSwitch in $vSwitches )
    {
        Add-Content $AddFilename "`nadd vnic newId=VN.$System.$i to persona
id=SSC.$System name=VN.$System.$i type=VoeAssigned dnsRegistration=enabled
netBiosOverTCP=Default"
        Add-Content $AddFilename "`nsave"

        Add-Content $AddFilename "`nsleep time=$WaitSeconds"
        Add-Content $AddFilename "`nopen"

        Add-Content $AddFilename "`ncable newId=VC.$System.$i vnic
id=VN.$System.$i persona id=SSC.$System to vswitch id=VS.$vSwitch"
        Add-Content $AddFilename "`nsave"
        $i++
    }
}
```



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Execute the script and then remove all the temporary files used during the setup.

```
.\voeCli.bat ifile=$AddFilename

Remove-Item $ListFilename -ea SilentlyContinue
Remove-Item $AddFilename -ea SilentlyContinue
Remove-Item $OutFilename -ea SilentlyContinue
}
```

If the OS is Windows and the requestor's department has been found, move the new server into the Department container of the VMServers organizational unit (OU). Loop through the attempt to move the server 20 times, waiting 10 seconds between attempts, to allow time for the server object to appear in Active Directory.

```
If ( $osFamily.ToLower() -eq "windows" )
{
    if ( $Department -eq "notset" )
    {
        write "WARNING: Unable to determine requestor's department.
        Server in default AD OU Container!"
    }
    else
    {
        $ADSystem = $System.ToUpper()

        $StrFilter = "(&(objectCategory=Computer)(Name=$ADSystem))"

        $objDomain = New-Object System.DirectoryServices.DirectoryEntry
        $objSearcher = New-Object System.DirectoryServices.DirectorySearcher
        $objSearcher.SearchRoot = $objDomain
        $objSearcher.PageSize = 1000
        $objSearcher.Filter = $StrFilter
        $objSearcher.SearchScope = "Subtree"
        $colProplist = "name"

        Foreach ( $i in $colProplist ) { $objSearcher.PropertiesToLoad.Add($i) }

        $strResult = "NOT FOUND"
        $count = 0
        while( $strResult -eq "NOT FOUND" -and $count -lt 20 )
        {
            Start-Sleep -s 10
        }
    }
}
```



## Dell Advanced Infrastructure Manager and Dell VIS Self-Service Creator Integration Overview

```
$colResults = $objSearcher.FindAll()
foreach( $objResult in $colResults )
{
    $objItem = $objResult.Properties
    If ( $ADSystem -eq $objItem.name )
    {
        $ADObjectPath = $objItem.adspath
        $objectComputer = [ADSI]"$ADObjectPath"

$objectComputer.PSBase.MoveTo("LDAP://OU=$Department, OU=VMservers,DC=mgmt,DC=ssc,
DC=dell,DC=local")
        $strResult = "Server moved to container OU: $Department"
    }
}

$count++
}

if ( $count -eq 20 )
{
    $strResult = "ERROR: Unable to find $System in AD. Server container
OU not changed!"
}

write $strResult
}
}
```

Finally, write the script completion message and exit.

```
write "Completed PostProvisioning script: [$parentScript]"
```

**Note:** All the output from the post-provisioning script is written to the VrmAgent.log file in the PowerShell subdirectory of the VIS Self-Service Creator's Program Files directory (see Figure 8).



## Dell Advanced Infrastructure Manager and Dell VIS Self-Service Creator Integration Overview

```
[10/03/2011 10:08:58] [Debug] PowerShell output:
Invoked postprovisioningvboperation.ps1 with [FINL016 VirtualMachine.Admin.ID=90a8a603-ba8c-4fc1-9087-28083169324c VirtualMachine.Admin.Name=FINL016 VirtualMachine.Admin.Owner=SSC\Finance_User VirtualMachine.Admin.Approver= VirtualMachine.Admin.UUID=B2D01B42-3796-23BD-A471-DD5220F69C6B VirtualMachine.Admin.DnsName=FINL016 VirtualMachine.Admin.Hostname=SSC-Cluster-1 VirtualMachine.Admin.ProxyAgentID=VMWareAgent VirtualMachine.Admin.ClusterName=SSC-Cluster-1 VirtualMachine.ManagementEndpoint.Name=SSC-Cluster-1 VirtualMachine.ManagementEndpoint.Identity= clonefrom=CentOS_5.5 Template Notes= request_reason= storage.archival.name=Images Infrastructure.ResourcePool.Name= Infrastructure.Admin.MachineObjectOU=ou=Finance,ou=VMservers,dc=mgmt,dc=ssc,dc=dell,dc=local VirtualMachine.Storage.Name=Virtual Machines VirtualMachine.Network0.Name=SCN Network 2 AIM.Controller.Value=192.168.1.20 Create.Persona.Value=true DNS.Search.Value=mgmt.ssc.dell.local DNS.Server.Value=10.254.1.10 Icon.System.Value=CentOS osArch.Value=x86_32 osFamily.Value=linux VbScript.PostProvisioning.Name=C:\Program Files\Dell VIS\Self-Service Creator Agent\powershell\Scripts\PostProvisioningVbOperation.ps1 VbScript.UnProvisioning.Name=C:\Program Files\Dell VIS\Self-Service Creator Agent\powershell\Scripts\UnProvisioningVbOperation.ps1 VirtualMachine.Admin.AgentID=B2D01B42-3796-23BD-A471-DD5220F69C6B VirtualMachine.Admin.ApplicationID= VirtualMachine.Admin.TotalDiskUsage=10240 VirtualMachine.CPU.Count=4 VirtualMachine.Disk0.Size=10 VirtualMachine.LeaseDays=5 VirtualMachine.Memory.Size=2048 VirtualMachine.Network0.MacAddress=00:50:56:9b:7f:38 VirtualMachine.Network1.MacAddress=00:50:56:9b:42:9a VMWare.VirtualCenter. OperatingSystem=rhel5Guest Vrm.DataCenter.Location= vSwitch.Value=Default VirtualMachine.Admin.AdministratorEmail=FinanceManager@ssc.dell.local VirtualMachine.Admin.Description= VirtualMachine.ManagementEndpoint.Endpoint0=ssc-esx-01.target.ssc.dell.local VirtualMachine.ManagementEndpoint.Endpoint1=ssc-esx-02.target.ssc.dell.local]
System : FINL016
Create a Persona : true
vSwitches : Default
O/S Family : linux
O/S Architecture : x86_32
Default g/w :
DNS Server : 10.254.1.10
DNS Search String : mgmt.ssc.dell.local
System Icon : CentOS
Application Icon :
AD Username : Finance_User
Controller IP : 192.168.1.20
Department : Finance
C:\dell\SDK\bin\FINL016-VS-ifile-20110310-100820573.txt
FINL016-VS-ofile-20110310-100820573.txt:
Default Gateway : 10.254.20.1
vSwitches : SSC-Finance
Application Icon : Finance-Server
C:\dell\SDK\bin\FINL016-VM-ifile-20110310-100822760.txt
FINL016-VM-ofile-20110310-100822760.txt:
AIM VM ID : VMware-42 1b d0 b2 96 37 bd 23-a4 71 dd 52 20 f6 9c 6b
C:\dell\SDK\bin\FINL016-AddPersona-20110310-100834760.txt
```

Figure 8. Post-provisioning script output extract from VrmAgent.log



## Dell Advanced Infrastructure Manager and Dell VIS Self-Service Creator Integration Overview

```
>> login host=192.168.1.20
>> >> open
>> >> add persona newId=SSC.FINL016 newImageId=IN.FINL016-Disk bootType=disk agentExists=true
networkingEnabled=true networkMode=trunk dnsSearchDomain=mgmt.ssc.dell.local osFamily=linux
osArch=x86_32
>> >> save
>> >> update persona scn id=SSC.FINL016 set assignmentType=Pool
>> >> assign dns address=10.254.1.10 to persona id=SSC.FINL016
>> >> assign default gateway address=10.254.20.1 to persona id=SSC.FINL016
>> >> save
>> >> assign persona id=SSC.FINL016 to host id="VMware-42 1b d0 b2 96 37 bd 23-a4 71 dd 52 20
f6 9c 6b"
>> >> save
>> >> layout persona id=SSC.FINL016 set hidden=false icon=_scalenticonid_Finance-Server osIcon=_
scalenticonid_os_CentOS xVirtual=540 yVirtual=2250
>> >> save
>> >> save layout
>> >> add vnic newId=VN.FINL016.1 to persona id=SSC.FINL016 name=VN.FINL016.1 type=VoeAssigned
dnsRegistration=enabled netBiosOverTCP=Default
>> >> save
>> >> sleep time=18
>> >> cable newId=VC.FINL016.1 vnic id=VN.FINL016.1 persona id=SSC.FINL016 to vswitch id=VS.
SSC-Finance
>> >> save
>>
Completed PostProvisioning script: [postprovisioningvbooperation.ps1]
```

Figure 8. Post-provisioning script output extract from VrmAgent.log, continued



## Un-provisioning script

The first section of the un-provisioning script is a common code piece from DynamicOps. It sets up the environment and reads the parameters passed to the script.

```
# Usage string
$usage = "Script to delete AIM Personas during VIS Creator machine un-provisioning."

# has to be in top script to be able to exit
trap {
    # if we get exception from usage message exception simply exit
    if ($_.Exception.Message -eq "Usage") {
        exit
    }
    throw $_
}

# include common functions
. (Join-Path (Split-Path $script:MyInvocation.MyCommand.Path)
Functions\VrmFunctions.ps1) $true $args $args[0] $args[1]
write "Invoked $parentScript with [$args]"
```

Next, loop through all the parameters and extract the values of the ones in which AIM is interested. If a parameter does not have a value, it is set to notset.

```
Foreach ($arg in $args)
{
    $Parameter = $arg.split("(=*)")
    $cpValue = "notset"
    if ( $Parameter[1] -ne $null )
    {
        if ($Parameter[1].StartsWith("="))
        {
            $cpValue = $Parameter[1].Remove(0,1)
        }
        $cpValue = $Parameter[1]
    }

    switch ($Parameter[0])
    {
        VirtualMachine.Admin.Name { $System = $cpValue }
        Create.Persona.Value      { $Persona = $cpValue.ToLower() }
        AIM.Controller.Value      { $AIMController = $cpValue }
        vSwitch.Value             { $vSwitches = $cpValue }
        osFamily.Value            { $osFamily = $cpValue }
    }
}
}
```





## Dell Advanced Infrastructure Manager and Dell VIS Self-Service Creator Integration Overview

```
write "System           : $system"
Write "Persona Created  : $Persona"
Write "osFamily         : $osFamily"
```

If a persona was created during the provisioning process, it will be deleted. Create a new AIM script and add commands to log in to the controller, stop the persona, wait a maximum of 300 seconds for the persona to become idle, and then force the persona into a dormant state.

```
if ( $Persona -eq "true" )
{
    write "vSwitches       : $vSwitches"
    write "Controller IP   : $AIMController"

    $PathDir="C:\dell\SDK\bin"
    $Filename = $System + "-RemovePersona-" +
    [DateTime]::Now.ToString("yyyyMMdd-HHmmsfff") + ".txt"
    cd $PathDir

    New-Item $Filename -type file
    Add-Content $Filename "login host=$AIMController"
    Add-Content $Filename "`nopen"

    Add-Content $Filename "`nstop persona id=SSC.$system"
    Add-Content $Filename "`nsave"
    Add-Content $Filename "`nwait for persona state=dormant id=SSC.$system timeout=300"
    Add-Content $Filename "`nsave"
    Add-Content $Filename "`nforce persona id=SSC.$system dormant"
    Add-Content $Filename "`nsave"
```

If vSwitches were used during the persona creation, add commands to remove the cables and vNICs from the persona.

```
if ( $vSwitches -ne "notset" )
{
    $i = 1
    $vSwitches = $vSwitches.Split(",,: ")

    Foreach ($vSwitch in $vSwitches)
    {
        Add-Content $Filename "`nremove cable id=VC.$system.$i"
        Add-Content $Filename "`nsave"
        Add-Content $Filename "`nremove vnic id=VN.$system.$i from persona
        id=SSC.$system"
        Add-Content $Filename "`nsave"

        $i++
    }
}
```



## Dell Advanced Infrastructure Manager and Dell VIS Self-Service Creator Integration Overview

Add the command to remove the persona, execute the script, and remove the temporary file.

```
Add-Content $Filename "`nremove persona id=SSC.$system`n"
Add-Content $Filename "`nsave`n"

write "Issuing persona remove commands to AIM..."
.\voeCli.bat ifile=$Filename

Remove-Item $Filename -ea SilentlyContinue
}
```

If the OS is Windows, remove the object from Active Directory.

```
If ( $osFamily.ToLower() -eq "windows" )
{
    $ADSystem = $System.ToUpper()

    $StrFilter = "&(objectCategory=Computer)(Name=$ADSystem)"
    $strResult = "No Such Server Found in AD: $ADSystem"

    $objDomain = New-Object System.DirectoryServices.DirectoryEntry

    $objSearcher = New-Object System.DirectoryServices.DirectorySearcher
    $objSearcher.SearchRoot = $objDomain
    $objSearcher.PageSize = 1000
    $objSearcher.Filter = $StrFilter
    $objSearcher.SearchScope = "Subtree"

    $colProplist = "name"

    Foreach ( $i in $colProplist ) { $objSearcher.PropertiesToLoad.Add($i) }

    $colResults = $objSearcher.FindAll()

    Foreach ( $objResult in $colResults )
    {
        $objItem = $objResult.Properties
        If ( $objItem.name -eq $ADSystem )
        {
            $ADObjectPath = $objItem.adspath
            $objADSI = [ADSI]"$ADObjectPath"

            $PathValue = $objADSI.distinguishedName.ToString()
            $pathValue = $PathValue.Replace("CN=$ADSystem,", "")
            $objADSI = [ADSI]"LDAP://$pathValue"

            $objComputer = $objADSI.delete("Computer", "CN=$ADSystem")
            $strResult = "Server Delete request issued to AD."
        }
    }
    Write $strResult
}
```



## Dell Advanced Infrastructure Manager and Dell VIS Self-Service Creator Integration Overview

Finally, write the script completion message and exit.

```
write "Completed UnProvisioning script: [$parentScript]"
```

**Note:** All the output from the un-provisioning script is written to the VrmAgent.log file in the PowerShell subdirectory of the VIS Self-Service Creator's Program Files directory (see Figure 9).

```
[10/03/2011 10:14:54] [Debug] PowerShell output:
Invoked unprovisioningvboperation.ps1 with [FINL016 VirtualMachine.Admin.ID=90a8a603-ba8c-4fc1-9087-28083169324c VirtualMachine.Admin.Name=FINL016 VirtualMachine.Admin.Owner=SSC\Finance_User VirtualMachine.Admin.Approver= VirtualMachine.Admin.UUID=B2D01B42-3796-23BD-A471-DD5220F69C6B VirtualMachine.Admin.DnsName=FINL016 VirtualMachine.Admin.Hostname=SSC-Cluster-1 VirtualMachine.Admin.ProxyAgentID=VMWareAgent VirtualMachine.Admin.ClusterName=SSC-Cluster-1 VirtualMachine.ManagementEndpoint.Name=SSC-Cluster-1 VirtualMachine.ManagementEndpoint.Identity= clonefrom=CentOS_5.5 Template Notes= request_reason= SentExpireAlert=true callExternalWorkflowActivityPreDisposing=False storage.archival.name=Images Infrastructure.ResourcePool.Name= Infrastructure.Admin.MachineObjectOU=ou=Finance,ou=VMServers,dc=mgmt,dc=ssc,dc=dell,dc=local VirtualMachine.Storage.Name=Virtual Machines VirtualMachine.Network0.Name=SCN Network 2 AIM. Controller.Value=192.168.1.20 Create.Persona.Value=true DNS.Search.Value=mgmt.ssc.dell.local DNS.Server.Value=10.254.1.10 Icon.System.Value=CentOS osArch.Value=x86_32 osFamily.Value=linux VbScript.PostProvisioning.Name=C:\Program Files\Dell VIS\Self-Service Creator Agent\powershell\Scripts\PostProvisioningVbOperation.ps1 VbScript.UnProvisioning.Name=C:\Program Files\Dell VIS\Self-Service Creator Agent\powershell\Scripts\UnProvisioningVbOperation.ps1 VirtualMachine.Admin.AgentID=B2D01B42-3796-23BD-A471-DD5220F69C6B VirtualMachine.Admin.ApplicationID= VirtualMachine.Admin.TotalDiskUsage=10240 VirtualMachine.CPU.Count=4 VirtualMachine.Disk0.Size=10 VirtualMachine.LeaseDays=5 VirtualMachine.Memory.Size=2048 VirtualMachine.Network0.MacAddress=00:50:56:9b:7f:38 VirtualMachine.Network1.MacAddress=00:50:56:9b:42:9a VMWare.VirtualCenter. OperatingSystem=rhel5Guest Vrm.DataCenter.Location= vSwitch.Value=Default VirtualMachine.Admin.AdministratorEmail=FinanceManager@ssc.dell.local VirtualMachine.Admin.Description= VirtualMachine.ManagementEndpoint.Endpoint0=ssc-esx-01.target.ssc.dell.local VirtualMachine.ManagementEndpoint.Endpoint1=ssc-esx-02.target.ssc.dell.local]
System          : FINL016
Persona Created  : true
osFamily        : linux
vSwitches       : Default
Controller IP   : 192.168.1.20
C:\dell\SDK\bin\FINL016-RemovePersona-20110310-101351390.txt
Issuing persona remove commands to AIM...
>> login host=192.168.1.20
>> >> open
>> >> stop persona id=SSC.FINL016
>> >> save
```

Figure 9. Un-provisioning script output extract from VrmAgent.log



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```
>> >> wait for persona state=dormant id=SSC.FINL016 timeout=300
>> >> save
>> >> force persona id=SSC.FINL016 dormant
Can only force personas to the dormant state if they are retargetting or going dormant
>> >> save
>> >> remove cable id=VC.FINL016.1
>> >> save
>> >> remove vnic id=VN.FINL016.1 from persona id=SSC.FINL016
>> >> save
>> >> remove persona id=SSC.FINL016
>> >> save
>>
Completed UnProvisioning script: [unprovisioningvbooperation.ps1]
```

Figure 9. Un-provisioning script output extract from VrmAgent.log, continued



## Appendix: Full code listings

### DSC-Build-SSC.txt

```
!!!+
!!! Filename: DSC-Build-SSC.txt
!!!
!!! Author: Tom Maher
!!! Edited: 25-Feb-2011
!!!
!!! Function: Build the Self Service Creator Environment
!!!-

login account=admin password=admin host=192.168.1.20
open

//
// Add VWWPNS
//

// add vwwpn newId=VWWN.2.1 wwpn=50:00:ea:a1:01:00:00:07 name="VWWPN.SSC-ESX-01" description="SSC-ESX-01"
// add vwwpn newId=VWWN.2.2 wwpn=50:00:ea:a1:01:00:00:08 name="VWWPN.SSC-ESX-02" description="SSC-ESX-02"
// add vwwpn newId=VWWN.2.3 wwpn=50:00:ea:a1:01:00:00:09 name="VWWPN.SSC-ESX-03" description="SSC-ESX-03"
// save

//
// Add VM Rack SSC-ESX-01
//

add vmrack newId=VMR.SSC-ESX-01 type=esx newImageId=IN.SSC-ESX-01-Fibre bootType=pxe_linux_san
address=10.254.2.20 user="Administrator" password="password" template=false name="SSC-ESX-01"
description="Retargetable ESX 4.0 Server (Fibre based)" osArch=x86_32 osFamily=esx osSubType="4.0"
osVersion="4.0.0" vCenterAddress=10.254.2.15 agentExists=false networkingEnabled=true
healthMonitorEnabled=false networkMode=trunk managementType=HTTPS
save
update vmrack scn id=VMR.SSC-ESX-01 set assignmentType=Static primaryAddress=192.168.1.150
secondaryAddress=192.168.1.151
save

assign vwwpn id=VWWN.2.1 to vmrack id=VMR.SSC-ESX-01
save

assign server pool id=SP.Hypervisors to vmrack id="VMR.SSC-ESX-01" priority=1
save
```



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```
//  
// Add VM Rack SSC-ESX-02  
//  
add vmrack newId=VMR.SSC-ESX-02 type=esx newImageId=IN.SSC-ESX-02-Fibre bootType=pxe_linux_san  
address=10.254.2.30 user="Administrator" password="password" template=false name="SSC-ESX-02"  
description="Retargetable ESX 4.0 Server (Fibre based)" osArch=x86_32 osFamily=esx osSubType="4.0"  
osVersion="4.0.0" vCenterAddress=10.254.2.15 agentExists=false networkingEnabled=true  
healthMonitorEnabled=false networkMode=trunk managementType=HTTPS  
save  
update vmrack scn id=VMR.SSC-ESX-02 set assignmentType=Static primaryAddress=192.168.1.152  
secondaryAddress=192.168.1.153  
save  
  
assign vwwpn id=VWWN.2.2 to vmrack id=VMR.SSC-ESX-02  
save  
  
assign server pool id=SP.Hypervisors to vmrack id="VMR.SSC-ESX-02" priority=1  
save  
  
//  
// Add VM Rack SSC-ESX-03  
//  
add vmrack newId=VMR.SSC-ESX-03 type=esx newImageId=IN.SSC-ESX-03-Fibre bootType=pxe_linux_san  
address=10.254.2.40 user="Administrator" password="password" template=false name="SSC-ESX-03"  
description="Retargetable ESX 4.0 Server (Fibre based)" osArch=x86_32 osFamily=esx osSubType="4.0"  
osVersion="4.0.0" vCenterAddress=10.254.2.15 agentExists=false networkingEnabled=true  
healthMonitorEnabled=false networkMode=trunk managementType=HTTPS  
save  
update vmrack scn id=VMR.SSC-ESX-03 set assignmentType=Static primaryAddress=192.168.1.154  
secondaryAddress=192.168.1.155  
save  
  
assign vwwpn id=VWWN.2.3 to vmrack id=VMR.SSC-ESX-03  
save  
  
assign server pool id=SP.Hypervisors to vmrack id="VMR.SSC-ESX-03" priority=1  
save  
  
//  
// Add VM Rack SSC-Hyper-V-1 and lock it to server R610-4  
//
```



## Dell Advanced Infrastructure Manager and Dell VIS Self-Service Creator Integration Overview

```
add vmrack newId=VMR.SSC-Hyper-V-1 type=hyperv newImageId=IN.SSC-Hyper-V-1-iSCSI bootType=iscsi
image="iscsiwbi|EqualLogic|10.6.0.11|3260|iqn.2001-05.com.equallogic:0-8a0906-b197ba106-
33192d373334d33f-ssc-hyperv-1|SSC-Hyper-V-1|iscsiwbi" address=192.168.1.156 user="Administrator"
password="password" template=false name="SSC-Hyper-V-1" osArch=x86_64 osFamily=windows
osSubType="Microsoft Windows Server 2008 R2 (build 7600)" osVersion="6.1(7600)" agentExists=false
networkingEnabled=false healthMonitorEnabled=false networkMode=trunk managementType=HTTPS
save
update vmrack scn id=VMR.SSC-Hyper-V-1 set assignmentType=Static
primaryAddress=192.168.1.156 secondaryAddress=192.168.1.157
save

assign vmrack id=VMR.SSC-Hyper-V-1 to host id="CNWKP4J" locked=true
save

//
// Adding Persona SSC-Exchange
//

add persona newId=SSC-Exchange newImageId=IN.SSC-Exchange-ESX bootType=vmware_vmdk
image="[ESX-iSCSI-Storage] rawluns/SSC-Exchange.vmdk" template=false name="SSC-Exchange"
description="32 bit" osArch=x86_32 osFamily=windows osSubType="Microsoft Windows Server 2003 R2,
Enterprise Edition Service Pack 2 (build 3790)" osVersion="5.2(3790)" dnsSearchDomain=mgmt.ssc.dell.
local confirmationsEnabled=false agentExists=true networkingEnabled=true extensionsEnabled=true
healthMonitorEnabled=true networkMode=trunk
add image newId=IN.SSC-Exchange-iSCSI to persona id=SSC-Exchange bootType=iscsi image="iscsiwbi|EqualLo
gic|10.6.0.10|3260|iqn.2001-05.com.equallogic:0-8a0906-36a7ba106-45192d373234d2c9-ssc-exchange|SSC-
Exchange|iscsiwbi"
assign dns address=10.254.1.10 to persona id=SSC-Exchange
update persona scn id=SSC-Exchange set assignmentType=Static primaryAddress=192.168.1.32
secondaryAddress=192.168.1.33
save
assign route address=10.254.2.0 subnetMask=255.255.255.0 gateway=10.254.1.1 to persona id=SSC-Exchange
save

assign server pool id=SP.Blades to persona id="SSC-Exchange" priority=1
save
```



## Dell Advanced Infrastructure Manager and Dell VIS Self-Service Creator Integration Overview

```
//  
// Adding Persona SSC-VRM  
//  
add persona newId=SSC-VRM newImageId=IN.SSC-VRM-ESX bootType=vmware_vmdk image="[ESX-iSCSI-Storage]  
rawluns/SSC-VRM.vmdk" template=false name="SSC-VRM" description="32 bit" osArch=x86_32 osFamily=windows  
osSubType="Microsoft Windows Server 2003 R2, Enterprise Edition Service Pack 2 (build 3790)"  
osVersion="5.2(3790)" dnsSearchDomain=mgmt.ssc.dell.local confirmationsEnabled=false agentExists=true  
networkingEnabled=true extensionsEnabled=true healthMonitorEnabled=true networkMode=trunk  
add image newId=IN.SSC-VRM-iSCSI to persona id=SSC-VRM bootType=iscsi image="iscsiwbi|EqualLogic|10.6.0  
.10|3260|iqn.2001-05.com.equallogic:0-8a0906-ec17ba106-86a92d373304d2dc-ssc-vm|SSC-VRM|iscsiwbi"  
assign dns address=10.254.1.10 to persona id=SSC-VRM  
update persona scn id=SSC-VRM set assignmentType=Static primaryAddress=192.168.1.34  
secondaryAddress=192.168.1.35  
save  
assign route address=10.254.2.0 subnetMask=255.255.255.0 gateway=10.254.1.1 to persona id=SSC-VRM  
save  
  
assign server pool id=SP.Blades to persona id="SSC-VRM" priority=1  
save  
  
//  
// Adding Persona SSC-AD-1  
//  
add persona newId=SSC-AD-1 newImageId=IN.SSC-AD-1-ESX bootType=vmware_vmdk image="[ESX-iSCSI-Storage]  
rawluns/SSC-AD-1.vmdk" template=false name="SSC-AD-1" description="32 bit" osArch=x86_32  
osFamily=windows osSubType="Microsoft Windows Server 2003 R2, Enterprise Edition Service Pack 2 (build  
3790)" osVersion="5.2(3790)" dnsSearchDomain=mgmt.ssc.dell.local confirmationsEnabled=false  
agentExists=true networkingEnabled=true extensionsEnabled=true healthMonitorEnabled=true  
networkMode=trunk  
add image newId=IN.SSC-AD-1-iSCSI to persona id=SSC-AD-1 bootType=iscsi image="iscsiwbi|EqualLogic|10.6  
.0.10|3260|iqn.2001-05.com.equallogic:0-8a0906-feb7ba106-d8592d373114d2c0-ssc-ad-1|SSC-AD-1|iscsiwbi"  
assign dns address=10.254.1.10 to persona id=SSC-AD-1  
update persona scn id=SSC-AD-1 set assignmentType=Static primaryAddress=192.168.1.30  
secondaryAddress=192.168.1.31  
save  
  
assign server pool id=SP.Blades to persona id="SSC-AD-1" priority=1  
save
```





## Dell Advanced Infrastructure Manager and Dell VIS Self-Service Creator Integration Overview

```
//  
// Adding Persona SSC-VC  
//  
add persona newId=SSC-VC newImageId=IN.SSC-VC-ESX bootType=vmware_vmdk image="[ESX-iSCSI-Storage]  
rawluns/SSC-VC.vmdk" template=false name="SSC-VC" description="32 bit" osArch=x86_32 osFamily=windows  
osSubType="Microsoft Windows Server 2003 R2, Enterprise Edition Service Pack 2 (build 3790)"  
osVersion="5.2(3790)" dnsSearchDomain=mgmt.ssc.dell.local confirmationsEnabled=false agentExists=true  
networkingEnabled=true extensionsEnabled=true healthMonitorEnabled=true networkMode=trunk  
add image newId=IN.SSC-VC-iSCSI to persona id=SSC-VC bootType=iscsi image="iscsiwbi|EqualLogic|10.6.0.1  
0|3260|iqn.2001-05.com.equallogic:0-8a0906-02d7ba106-02592d373264d2d6-ssc-vc|SSC-VC|iscsiwbi"  
assign dns address=10.254.1.10 to persona id=SSC-VC  
update persona scn id=SSC-VC set assignmentType=Static primaryAddress=192.168.1.36  
secondaryAddress=192.168.1.37  
save  
  
assign server pool id=SP.Blades to persona id="SSC-VC" priority=1  
save  
  
//  
// Adding Persona SSC-Client-Admin  
//  
add persona newId=SSC-Client-Admin newImageId=IN.SSC-Client-Admin-ESX bootType=vmware_vmdk image="[ESX-  
iSCSI-Storage] rawluns/SSC-Client-Admin.vmdk" template=false name="SSC-Client-Admin" description="32  
bit" osArch=x86_32 osFamily=windows osSubType="Microsoft Windows Server 2003 R2, Enterprise Edition  
Service Pack 2 (build 3790)" osVersion="5.2(3790)" dnsSearchDomain=mgmt.ssc.dell.local  
confirmationsEnabled=false agentExists=true networkingEnabled=true extensionsEnabled=true  
healthMonitorEnabled=true networkMode=trunk  
add image newId=IN.SSC-Client-Admin-iSCSI to persona id=SSC-Client-Admin bootType=iscsi image="iscsiwbi  
|EqualLogic|10.6.0.10|3260|iqn.2001-05.com.equallogic:0-8a0906-0227ba106-02192d373144d2c1-ssc-client-  
admin|SSC-Client-Admin|iscsiwbi"  
assign dns address=10.254.1.10 to persona id=SSC-Client-Admin  
update persona scn id=SSC-Client-Admin set assignmentType=Static primaryAddress=192.168.1.38  
secondaryAddress=192.168.1.39  
save  
  
assign server pool id=SP.W2K3-VMs to persona id="SSC-Client-Admin" priority=1  
save
```



## Dell Advanced Infrastructure Manager and Dell VIS Self-Service Creator Integration Overview

```
//  
// Adding Persona SSC-HR-Manager  
//  
add persona newId=SSC-HR-Manager newImageId=IN.SSC-HR-Manager-ESX bootType=vmware_vmdk image="[ESX-iSCSI-Storage] rawluns/SSC-HR-Manager.vmdk" template=false name="SSC-HR-Manager" description="32 bit" osArch=x86_32 osFamily=windows osSubType="Microsoft Windows Server 2003 R2, Enterprise Edition Service Pack 2 (build 3790)" osVersion="5.2(3790)" dnsSearchDomain=mgmt.ssc.dell.local confirmationsEnabled=false agentExists=true networkingEnabled=true extensionsEnabled=true healthMonitorEnabled=true networkMode=trunk  
add image newId=IN.SSC-HR-Manager-iSCSI to persona id=SSC-HR-Manager bootType=iscsi image="iscsiwbi|EqualLogic|10.6.0.10|3260|iqn.2001-05.com.equallogic:0-8a0906-c787ba106-a5892d3739a4d467-ssc-hr-manager|SSC-HR-Manager|iscsiwbi"  
assign dns address=10.254.1.10 to persona id=SSC-HR-Manager  
update persona scn id=SSC-HR-Manager set assignmentType=Static primaryAddress=192.168.1.40 secondaryAddress=192.168.1.41  
save  
  
assign server pool id=SP.W2K3-VMs to persona id="SSC-HR-Manager" priority=1  
save  
  
//  
// Adding Persona SSC-HR-User  
//  
add persona newId=SSC-HR-User newImageId=IN.SSC-HR-User-ESX bootType=vmware_vmdk image="[ESX-iSCSI-Storage] rawluns/SSC-HR-User.vmdk" template=false name="SSC-HR-User" description="32 bit" osArch=x86_32 osFamily=windows osSubType="Microsoft Windows Server 2003 R2, Enterprise Edition Service Pack 2 (build 3790)" osVersion="5.2(3790)" dnsSearchDomain=mgmt.ssc.dell.local confirmationsEnabled=false agentExists=true networkingEnabled=true extensionsEnabled=true healthMonitorEnabled=true networkMode=trunk  
add image newId=IN.SSC-HR-User-iSCSI to persona id=SSC-HR-User bootType=iscsi image="iscsiwbi|EqualLogic|10.6.0.10|3260|iqn.2001-05.com.equallogic:0-8a0906-c377ba106-41092d373914d467-ssc-hr-user|SSC-HR-User|iscsiwbi"  
assign dns address=10.254.1.10 to persona id=SSC-HR-User  
update persona scn id=SSC-HR-User set assignmentType=Static primaryAddress=192.168.1.42 secondaryAddress=192.168.1.43  
save  
  
assign server pool id=SP.W2K3-VMs to persona id="SSC-HR-User" priority=1  
save
```



## Dell Advanced Infrastructure Manager and Dell VIS Self-Service Creator Integration Overview

```
//  
// Adding Persona SSC-Finance-Manager  
//  
add persona newId=SSC-Finance-Manager newImageId=IN.SSC-Finance-Manager-ESX bootType=vmware_vmdk  
image="[ESX-iSCSI-Storage] rawluns/SSC-Finance-Manager.vmdk" template=false name="SSC-Finance-Manager"  
description="32 bit" osArch=x86_32 osFamily=windows osSubType="Microsoft Windows Server 2003 R2,  
Enterprise Edition Service Pack 2 (build 3790)" osVersion="5.2(3790)" dnsSearchDomain=mgmt.ssc.dell.  
local confirmationsEnabled=false agentExists=true networkingEnabled=true extensionsEnabled=true  
healthMonitorEnabled=true networkMode=trunk  
add image newId=IN.SSC-Finance-Manager-iSCSI to persona id=SSC-Finance-Manager bootType=iscsi image="is  
csiwbi|EqualLogic|10.6.0.10|3260|iqn.2001-05.com.equallogic:0-8a0906-c647ba106-27f92d373974d467-ssc-  
finance-manager|SSC-Finance-Manager|iscsiwbi"  
assign dns address=10.254.1.10 to persona id=SSC-Finance-Manager  
update persona scn id=SSC-Finance-Manager set assignmentType=Static primaryAddress=192.168.1.44  
secondaryAddress=192.168.1.45  
save  
  
assign server pool id=SP.W2K3-VMs to persona id="SSC-Finance-Manager" priority=1  
save  
  
//  
// Adding Persona SSC-Finance-User  
//  
add persona newId=SSC-Finance-User newImageId=IN.SSC-Finance-User-ESX bootType=vmware_vmdk image="[ESX-  
iSCSI-Storage] rawluns/SSC-Finance-User.vmdk" template=false name="SSC-Finance-User" description="32  
bit" osArch=x86_32 osFamily=windows osSubType="Microsoft Windows Server 2003 R2, Enterprise Edition  
Service Pack 2 (build 3790)" osVersion="5.2(3790)" dnsSearchDomain=mgmt.ssc.dell.local  
confirmationsEnabled=false agentExists=true networkingEnabled=true extensionsEnabled=true  
healthMonitorEnabled=true networkMode=trunk  
add image newId=IN.SSC-Finance-User-iSCSI to persona id=SSC-Finance-User bootType=iscsi image="iscsiwbi  
|EqualLogic|10.6.0.10|3260|iqn.2001-05.com.equallogic:0-8a0906-c4e7ba106-47092d373944d467-ssc-finance-  
user|SSC-Finance-User|iscsiwbi"  
assign dns address=10.254.1.10 to persona id=SSC-Finance-User  
update persona scn id=SSC-Finance-User set assignmentType=Static primaryAddress=192.168.1.46  
secondaryAddress=192.168.1.47  
save  
  
assign server pool id=SP.W2K3-VMs to persona id="SSC-Finance-User" priority=1  
save
```



## Dell Advanced Infrastructure Manager and Dell VIS Self-Service Creator Integration Overview

```
//  
// Add vSwitches  
//  
add vswitch newId=VS.SSC-Mgmt primaryChannelId=1 secondaryChannelId=2 name="SSC-Mgmt" description="SSC  
Management Network" network=10.254.1.0 subnetMask=255.255.255.0 startAddress=10.254.1.101  
endAddress=10.254.1.199 vlanId=3500  
save  
  
add vswitch newId=VS.SSC-Virtual primaryChannelId=1 secondaryChannelId=2 name="SSC-Virtual"  
network=10.254.2.0 subnetMask=255.255.255.0 startAddress=10.254.2.101 endAddress=10.254.2.199  
vlanId=3501  
save  
  
add vswitch newId=VS.SSC-IT primaryChannelId=1 secondaryChannelId=2 name="SSC-IT" description="IT  
Department Network" network=10.254.40.0 subnetMask=255.255.255.0 startAddress=10.254.40.11  
endAddress=10.254.40.199 vlanId=3505  
save  
  
add vswitch newId=VS.SSC-HR primaryChannelId=1 secondaryChannelId=2 name="SSC-HR" description="HR  
Department Network" network=10.254.10.0 subnetMask=255.255.255.0 startAddress=10.254.10.11  
endAddress=10.254.10.199 vlanId=3502  
save  
  
add vswitch newId=VS.SSC-Finance primaryChannelId=1 secondaryChannelId=2 name="SSC-Finance"  
description="Finance Department Network" network=10.254.20.0 subnetMask=255.255.255.0  
startAddress=10.254.20.11 endAddress=10.254.20.199 vlanId=3503  
save  
  
add vswitch newId=VS.SSC-Dev primaryChannelId=1 secondaryChannelId=2 name="SSC-Dev"  
description="Development Network" network=10.254.30.0 subnetMask=255.255.255.0  
startAddress=10.254.30.11 endAddress=10.254.30.199 vlanId=3504  
save  
  
//  
// Add vNICs  
//  
add vnic newId=VN.SSC-ESX-01.1 to vmrack id=VMR.SSC-ESX-01 name="vNic1"  
save  
update vnic id=VN.SSC-ESX-01.1 set type=Static  
assign ip address=10.254.2.20 subnetMask=255.255.255.0 to vnic id=VN.SSC-ESX-01.1  
save  
  
add vnic newId=VN.SSC-ESX-02.1 to vmrack id=VMR.SSC-ESX-02 name="vNic1"  
save  
update vnic id=VN.SSC-ESX-02.1 set type=Static  
assign ip address=10.254.2.30 subnetMask=255.255.255.0 to vnic id=VN.SSC-ESX-02.1  
save
```



## Dell Advanced Infrastructure Manager and Dell VIS Self-Service Creator Integration Overview

```
add vnic newId=VN.SSC-ESX-03.1 to vmrack id=VMR.SSC-ESX-03 name="vNic1"  
save  
update vnic id=VN.SSC-ESX-03.1 set type=Static  
assign ip address=10.254.2.40 subnetMask=255.255.255.0 to vnic id=VN.SSC-ESX-03.1  
save
```

```
add vnic newId=VN.SSC-Hyper-V-1.1 to vmrack id=VMR.SSC-Hyper-V-1 name="vNic1"  
save  
update vnic id=VN.SSC-Hyper-V-1.1 set type=Static  
assign ip address=10.254.2.50 subnetMask=255.255.255.0 to vnic id=VN.SSC-Hyper-V-1.1  
save
```

```
add vnic newId=VN.SSC-Exchange.1 to persona id=SSC-Exchange name="vNic1" type=Static  
dnsRegistration=enabled netBiosOverTCP=Default  
assign ip address=10.254.1.11 subnetMask=255.255.255.0 to vnic id=VN.SSC-Exchange.1  
save
```

```
add vnic newId=VN.SSC-VRM.1 to persona id=SSC-VRM name="vNic1" type=Static dnsRegistration=enabled  
netBiosOverTCP=Default  
assign ip address=10.254.1.12 subnetMask=255.255.255.0 to vnic id=VN.SSC-VRM.1  
save
```

```
add vnic newId=VN.SSC-AD-1.1 to persona id=SSC-AD-1 name="vNic1" type=Static dnsRegistration=enabled  
netBiosOverTCP=Default  
assign ip address=10.254.1.10 subnetMask=255.255.255.0 to vnic id=VN.SSC-AD-1.1  
save
```

```
add vnic newId=VN.SSC-AD-1.2 to persona id=SSC-AD-1 name="vNic2" type=Static dnsRegistration=enabled  
netBiosOverTCP=Default  
assign ip address=10.254.2.10 subnetMask=255.255.255.0 to vnic id=VN.SSC-AD-1.2  
save
```

```
add vnic newId=VN.SSC-VC.1 to persona id=SSC-VC name="vNic1" type=Static dnsRegistration=enabled  
netBiosOverTCP=Default  
assign ip address=10.254.1.15 subnetMask=255.255.255.0 to vnic id=VN.SSC-VC.1  
save
```

```
add vnic newId=VN.SSC-VC.2 to persona id=SSC-VC name="vNic2" type=Static dnsRegistration=enabled  
netBiosOverTCP=Default  
assign ip address=10.254.2.15 subnetMask=255.255.255.0 to vnic id=VN.SSC-VC.2  
save
```

```
add vnic newId=VN.SSC-Client-Admin.1 to persona id=SSC-Client-Admin name="vNic1" type=Static  
dnsRegistration=enabled netBiosOverTCP=Default  
assign ip address=10.254.1.21 subnetMask=255.255.255.0 to vnic id=VN.SSC-Client-Admin.1  
save
```

```
add vnic newId=VN.SSC-HR-Manager.1 to persona id=SSC-HR-Manager name="vNic1" type=Static  
dnsRegistration=enabled netBiosOverTCP=Default  
assign ip address=10.254.1.22 subnetMask=255.255.255.0 to vnic id=VN.SSC-HR-Manager.1  
save
```

```
add vnic newId=VN.SSC-HR-User.1 to persona id=SSC-HR-User name="vNic1" type=Static  
dnsRegistration=enabled netBiosOverTCP=Default  
assign ip address=10.254.1.23 subnetMask=255.255.255.0 to vnic id=VN.SSC-HR-User.1  
save
```



## Dell Advanced Infrastructure Manager and Dell VIS Self-Service Creator Integration Overview

```
add vnic newId=VN.SSC-Finance-Manager.1 to persona id=SSC-Finance-Manager name="vNic1" type=Static
dnsRegistration=enabled netBiosOverTCP=Default
assign ip address=10.254.1.24 subnetMask=255.255.255.0 to vnic id=VN.SSC-Finance-Manager.1
save

add vnic newId=VN.SSC-Finance-User.1 to persona id=SSC-Finance-User name="vNic1" type=Static
dnsRegistration=enabled netBiosOverTCP=Default
assign ip address=10.254.1.25 subnetMask=255.255.255.0 to vnic id=VN.SSC-Finance-User.1
save

//
// Add Cables
//

cable newId=VC.SSC-ESX-01.1 vnic id=VN.SSC-ESX-01.1 to vswitch id=VS.SSC-Virtual
cable newId=VC.SSC-ESX-02.1 vnic id=VN.SSC-ESX-02.1 to vswitch id=VS.SSC-Virtual
cable newId=VC.SSC-ESX-03.1 vnic id=VN.SSC-ESX-03.1 to vswitch id=VS.SSC-Virtual
cable newId=VC.SSC-Hyper-V-1.1 vnic id=VN.SSC-Hyper-V-1.1 to vswitch id=VS.SSC-Virtual
save

cable newId=VC.SSC-Exchange.1 vnic id=VN.SSC-Exchange.1 persona id=SSC-Exchange to vswitch id=VS.
SSC-Mgmt
cable newId=VC.SSC-VRM.1 vnic id=VN.SSC-VRM.1 persona id=SSC-VRM to vswitch id=VS.SSC-Mgmt
cable newId=VC.SSC-AD-1.1 vnic id=VN.SSC-AD-1.1 persona id=SSC-AD-1 to vswitch id=VS.SSC-Mgmt
cable newId=VC.SSC-AD-1.2 vnic id=VN.SSC-AD-1.2 persona id=SSC-AD-1 to vswitch id=VS.SSC-Virtual
cable newId=VC.SSC-VC.1 vnic id=VN.SSC-VC.1 persona id=SSC-VC to vswitch id=VS.SSC-Mgmt
cable newId=VC.SSC-VC.2 vnic id=VN.SSC-VC.2 persona id=SSC-VC to vswitch id=VS.SSC-Virtual
cable newId=VC.SSC-Client-Admin.1 vnic id=VN.SSC-Client-Admin.1 persona id=SSC-Client-Admin to vswitch
id=VS.SSC-Mgmt
cable newId=VC.SSC-HR-Manager.1 vnic id=VN.SSC-HR-Manager.1 persona id=SSC-HR-Manager to vswitch id=VS.
SSC-Mgmt
cable newId=VC.SSC-HR-User.1 vnic id=VN.SSC-HR-User.1 persona id=SSC-HR-User to vswitch id=VS.SSC-Mgmt
cable newId=VC.SSC-Finance-Manager.1 vnic id=VN.SSC-Finance-Manager.1 persona id=SSC-Finance-Manager to
vswitch id=VS.SSC-Mgmt
cable newId=VC.SSC-Finance-User.1 vnic id=VN.SSC-Finance-User.1 persona id=SSC-Finance-User to vswitch
id=VS.SSC-Mgmt

save
```



## Dell Advanced Infrastructure Manager and Dell VIS Self-Service Creator Integration Overview

```
//  
// Layouts  
//  
  
layout rack id=VMR.SSC-ESX-01 set hideSlots=false hidden=false icon=ichassis2 detail=75  
xFullView=-1.000000 yFullView=-1.000000 xCompactView=-1.000000 yCompactView=-1.000000  
layout vmrack id=VMR.SSC-ESX-01 set hidden=false xVirtual=1140 yVirtual=1315 hideNonScalentVMs=false  
detail=75  
  
layout rack id=VMR.SSC-ESX-02 set hideSlots=false hidden=false icon=ichassis2 detail=75  
xFullView=-1.000000 yFullView=-1.000000 xCompactView=-1.000000 yCompactView=-1.000000  
layout vmrack id=VMR.SSC-ESX-02 set hidden=false xVirtual=1140 yVirtual=1465 hideNonScalentVMs=false  
detail=75  
  
layout rack id=VMR.SSC-ESX-03 set hideSlots=false hidden=false icon=ichassis2 detail=75  
xFullView=-1.000000 yFullView=-1.000000 xCompactView=-1.000000 yCompactView=-1.000000  
layout vmrack id=VMR.SSC-ESX-03 set hidden=false xVirtual=1140 yVirtual=1615 hideNonScalentVMs=false  
detail=75  
  
layout rack id=VMR.SSC-Hyper-V-1 set hideSlots=false hidden=false icon=ichassis2 detail=75  
xFullView=-1.000000 yFullView=-1.000000 xCompactView=-1.000000 yCompactView=-1.000000  
layout vmrack id=VMR.SSC-Hyper-V-1 set hidden=false xVirtual=1140 yVirtual=1765 hideNonScalentVMs=false  
detail=75  
  
layout persona id=SSC-Exchange set hidden=false icon=_scalenticonid_Exchange osIcon=_scalenticonid_os_  
Windows2003 xVirtual=60 yVirtual=1400  
layout persona id=SSC-VRM set hidden=false icon=_scalenticonid_SSC osIcon=_scalenticonid_os_Windows2003  
xVirtual=245 yVirtual=1400  
layout persona id=SSC-AD-1 set hidden=false icon=_scalenticonid_ActiveDirectory osIcon=_scalenticonid_  
os_Windows2003 xVirtual=800 yVirtual=1350  
layout persona id=SSC-VC set hidden=false icon=_scalenticonid_vmware-2 osIcon=_scalenticonid_os_  
Windows2003 xVirtual=800 yVirtual=1508  
  
layout persona id=SSC-Client-Admin set hidden=false icon=_scalenticonid_Client osIcon=_scalenticonid_  
os_Windows2003 xVirtual=60 yVirtual=1690  
layout persona id=SSC-HR-Manager set hidden=false icon=_scalenticonid_Client osIcon=_scalenticonid_os_  
Windows2003 xVirtual=245 yVirtual=1690  
layout persona id=SSC-HR-User set hidden=false icon=_scalenticonid_Client osIcon=_scalenticonid_os_  
Windows2003 xVirtual=430 yVirtual=1690  
layout persona id=SSC-Finance-Manager set hidden=false icon=_scalenticonid_Client osIcon=_  
scalenticonid_os_Windows2003 xVirtual=615 yVirtual=1690  
layout persona id=SSC-Finance-User set hidden=false icon=_scalenticonid_Client osIcon=_scalenticonid_  
os_Windows2003 xVirtual=800 yVirtual=1690  
  
layout vswitch id=VS.SSC-Mgmt set hidden=false xVirtual=430 yVirtual=1570  
layout vswitch id=VS.SSC-Virtual set hidden=false xVirtual=990 yVirtual=1570  
layout vswitch id=VS.SSC-IT set xVirtual=300 yVirtual=2000  
layout vswitch id=VS.SSC-HR set xVirtual=430 yVirtual=2000  
layout vswitch id=VS.SSC-Finance set xVirtual=990 yVirtual=2000  
layout vswitch id=VS.SSC-Dev set xVirtual=1550 yVirtual=2000  
  
save
```



## DSC-Start-SSC.txt

```
#!/+  
#!/  Filename:  DSC-Start-SSC.txt  
#!/  
#!/  Author:    Tom Maher  
#!/  Edited:    03-Feb-2011  
#!/  
#!/  Function:  Start the Self-Service Creator personas in order.  
#!/-
```

```
login account=admin password=admin host=192.168.1.20  
open
```

```
start persona id=SSC-AD-1  
save
```

```
wait for persona state=up id=SSC-AD-1 timeout=300
```

```
start persona id=SSC-VC  
start persona id=SSC-Exchange  
save
```

```
start persona id=SSC-Client-Admin  
start persona id=SSC-HR-Manager  
start persona id=SSC-HR-User  
start persona id=SSC-Finance-Manager  
start persona id=SSC-Finance-User  
save
```

```
wait for persona state=up id=SSC-VC timeout=300
```

```
start vmrack id=VMR.SSC-ESX-01  
start vmrack id=VMR.SSC-ESX-02  
start vmrack id=VMR.SSC-ESX-03  
start vmrack id=VMR.SSC-Hyper-V-1  
save
```

```
wait for vmrack state=up id=VMR.SSC-ESX-01 timeout=300
```

```
start persona id=SSC-VRM  
save
```





## DSC-Stop-SSC.txt

```
#!/+
#!/  Filename:  DSC-Stop-SSC.txt
#!/
#!/  Author:    Tom Maher
#!/  Edited:    10-Feb-2011
#!/
#!/  Function:  Stop the Self-Service Creator vmracks and personas in order.
#!/-

login account=admin password=admin host=192.168.1.20
open

stop vmrack id=VMR.SSC-ESX-01
stop vmrack id=VMR.SSC-ESX-02
stop vmrack id=VMR.SSC-ESX-03
stop vmrack id=VMR.SSC-Hyper-V-1
save

stop persona id=SSC-Client-Admin
stop persona id=SSC-HR-Manager
stop persona id=SSC-HR-User
stop persona id=SSC-Finance-Manager
stop persona id=SSC-Finance-User
save

stop persona id=SSC-Exchange
save

wait for vmrack state=dormant id=VMR.SSC-ESX-01 timeout=300
wait for vmrack state=dormant id=VMR.SSC-ESX-02 timeout=300
wait for vmrack state=dormant id=VMR.SSC-ESX-03 timeout=300

stop persona id=SSC-VC
stop persona id=SSC-VRM
save

wait for persona state=dormant id=SSC-VC timeout=300
wait for persona state=dormant id=SSC-VRM timeout=300

stop persona id=SSC-AD-1
save
```



## Destroy-SSC.bat

```
@echo off
rem #!+
rem #!  Filename:  Destroy-SSC.bat
rem #!
rem #!  Author:    Tom Maher
rem #!  Edited:    10-Feb-2011
rem #!
rem #!  Batch file to call the scripts required to remove the SSC environment from AIM.
rem #!-

cd C:\Dell\SDK\bin

echo Deleting Creator provisioned VMs...
powershell .\SSC-Remove-VMs.ps1

echo Stopping the SSC Environment...
call voeCli.bat ifile=DSC-Stop-SSC.txt

echo Removing the SSC Environment from AIM...
call voeCli.bat ifile=DSC-Remove-SSC.txt
```

## SSC-Remove-VMs.ps1

```
#!+
#!  Filename:  SSC-Remove-VMs.ps1
#!
#!  Author:    Tom Maher
#!  Edited:    09-Feb-2011
#!
#!  Script to find all the SSC. personas and issue commands to Self-Service Creator to
#!  unprovision them. This will cause the SCC un-provisioning script to delete
#!  the AIM personas.
#!-

$AIMController="192.168.1.20"
$vrAdmin = "SSC\SSC_Admin"
$url = "http://10.254.1.12:9003/VMPS"
$event = "Destroy"
$rand = New-Object System.Random

$PathDir="C:\dell\SDK\bin"
cd $PathDir

$iFile = "AIM-iframe-" + [DateTime]::Now.ToString("yyyyMMdd-HHmssfff") + ".txt"
$oFile = "AIM-oframe-" + [DateTime]::Now.ToString("yyyyMMdd-HHmssfff") + ".txt"

New-Item $iFile -type file | out-null
Add-Content $iFile "login host=$AIMController"
Add-Content $iFile "`nopen"
Add-Content $iFile "`nlist personas id=SSC.*"
Add-Content $iFile "`nexit"
```



## Dell Advanced Infrastructure Manager and Dell VIS Self-Service Creator Integration Overview

```
.\voeCli.bat ifile=$iFile ofile=$oFile
.\unix2dos.exe $oFile

$Check=(Get-Content $oFile -totalcount 6)[-1]

if ( $Check -eq "NO PERSONAS" )
{
    write "No AIM Personas to delete..."
    exit
}

$FileContents = (Get-Content $oFile)

$proxy = New-WebServiceProxy -Uri $url -Namespace VRM -Verbose
$proxy.PreAuthenticate = 1
$proxy.UseDefaultCredentials = 0

$token = New-Object VRM.IdentityToken
$token.User = $vrmAdmin

$vrmmregvms = $proxy.EnumerateVirtualMachineInfos($token,$null,1,1)
foreach( $vrmmregvm in $vrmmregvms )
{
    $id = 0
    $i=1
    foreach( $line in $fileContents )
    {
        if ( $i -gt 5 -and $line -ne "" )
        {
            $Fields = $line.split('')
            $VM = $Fields[1].split('.')
            if ( $($vrmmregvm.name) -eq $VM[1] )
            {
                $rand = New-Object System.Random
                $WaitSeconds = $rand.next(5,31)
                write "Issuing destroy commands to Creator in $WaitSeconds seconds..."
                Start-Sleep -s $WaitSeconds

                write "Fire Event [$(($event)) - $($vrmmregvm.name) $(($vrmmregvm.id))"
                $id = $vrmmregvm.id
                $result = $proxy.FireVirtualMachineEvent($token,$id, $event, "")
                write $result
            }
        }
        $i++
    }
}

Remove-Item $iFile -ea SilentlyContinue
Remove-Item $oFile -ea SilentlyContinue

exit
```



## DSC-Remove-SSC.txt

```
#!/+
#!/  Filename:  DSC-Remove-SSC.txt
#!/
#!/  Author:    Tom Maher
#!/  Edited:    10-Feb-2011
#!/
#!/  Function:  Stop all the VIS Creator Hypervisors and Personas, delete the
#!/             cables and vNics associated with them and finally delete them.
#!/-
```

```
login host=192.168.1.20
open
```

```
//
// Stop the Hypervisors and Personas and wait for shutdown
//
```

```
stop vmrack id=VMR.SSC-ESX-01
stop vmrack id=VMR.SSC-ESX-02
stop vmrack id=VMR.SSC-ESX-03
stop vmrack id=VMR.SSC-Hyper-V-1
save
```

```
stop persona id=SSC-Client-Admin
stop persona id=SSC-HR-Manager
stop persona id=SSC-HR-User
stop persona id=SSC-Finance-Manager
stop persona id=SSC-finance-User
save
```

```
stop persona id=SSC-Exchange
save
```

```
wait for vmrack state=dormant id=VMR.SSC-ESX-01 timeout=300
wait for vmrack state=dormant id=VMR.SSC-ESX-02 timeout=300
wait for vmrack state=dormant id=VMR.SSC-ESX-03 timeout=300
wait for vmrack state=dormant id=VMR.SSC-Hyper-V-1 timeout=300
```

```
stop persona id=SSC-VC
stop persona id=SSC-VRM
save
```

```
wait for persona state=dormant id=SSC-VC timeout=300
wait for persona state=dormant id=SSC-VRM timeout=300
```

```
stop persona id=SSC-AD-1
save
```

```
wait for persona state=dormant id=SSC-AD-1 timeout=300
```



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```
//  
// Remove the cables  
//  
  
remove cable id=VC.SSC-Exchange.1  
remove cable id=VC.SSC-VRM.1  
remove cable id=VC.SSC-VC.1  
remove cable id=VC.SSC-VC.2  
remove cable id=VC.SSC-AD-1.1  
remove cable id=VC.SSC-AD-1.2  
  
remove cable id=VC.SSC-Client-Admin.1  
remove cable id=VC.SSC-HR-Manager.1  
remove cable id=VC.SSC-HR-User.1  
remove cable id=VC.SSC-Finance-Manager.1  
remove cable id=VC.SSC-Finance-User.1  
  
remove cable id=VC.SSC-ESX-01.1  
remove cable id=VC.SSC-ESX-02.1  
remove cable id=VC.SSC-ESX-03.1  
remove cable id=VC.SSC-Hyper-V-1.1  
  
save  
  
//  
// Remove the vNICs  
//  
  
remove vnic id=VN.SSC-ESX-01.1  
remove vnic id=VN.SSC-ESX-02.1  
remove vnic id=VN.SSC-ESX-03.1  
remove vnic id=VN.SSC-Hyper-V-1.1  
  
remove vnic id=VN.SSC-Exchange.1 from persona id=SSC-Exchange  
remove vnic id=VN.SSC-VRM.1 from persona id=SSC-VRM  
remove vnic id=VN.SSC-VC.1 from persona id=SSC-VC  
remove vnic id=VN.SSC-VC.2 from persona id=SSC-VC  
remove vnic id=VN.SSC-AD-1.1 from persona id=SSC-AD-1  
remove vnic id=VN.SSC-AD-1.2 from persona id=SSC-AD-1  
  
remove vnic id=VN.SSC-Client-Admin.1 from persona id=SSC-Client-Admin  
remove vnic id=VN.SSC-HR-Manager.1 from persona id=SSC-HR-Manager  
remove vnic id=VN.SSC-HR-User.1 from persona id=SSC-HR-User  
remove vnic id=VN.SSC-Finance-Manager.1 from persona id=SSC-Finance-Manager  
remove vnic id=VN.SSC-Finance-User.1 from persona id=SSC-Finance-User  
  
save
```



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```
//  
// Delete the vSwitches  
//  
  
remove vswitch id=VS.SSC-Mgmt  
remove vswitch id=VS.SSC-Virtual  
remove vswitch id=VS.SSC-HR  
remove vswitch id=VS.SSC-Finance  
remove vswitch id=VS.SSC-Dev  
  
save  
  
//  
// Delete the Personas  
//  
  
wait for persona state=dormant id=SSC-Client-Admin timeout=120  
force persona id=SSC-Client-Admin dormant  
save  
remove persona id=SSC-Client-Admin  
save  
  
wait for persona state=dormant id=SSC-HR-Manager timeout=120  
force persona id=SSC-HR-Manager dormant  
save  
remove persona id=SSC-HR-Manager  
save  
  
wait for persona state=dormant id=SSC-HR-User timeout=120  
force persona id=SSC-HR-User dormant  
save  
remove persona id=SSC-HR-User  
save  
  
wait for persona state=dormant id=SSC-Finance-Manager timeout=120  
force persona id=SSC-Finance-Manager dormant  
save  
remove persona id=SSC-Finance-Manager  
save  
  
wait for persona state=dormant id=SSC-Finance-User timeout=120  
force persona id=SSC-Finance-User dormant  
save  
remove persona id=SSC-Finance-User  
save  
  
wait for persona state=dormant id=SSC-Exchange timeout=120  
force persona id=SSC-Exchange dormant  
save  
remove persona id=SSC-Exchange  
save
```



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```
wait for persona state=dormant id=SSC-VRM timeout=120
force persona id=SSC-VRM dormant
save
remove persona id=SSC-VRM
save

wait for persona state=dormant id=SSC-VC timeout=120
force persona id=SSC-VC dormant
save
remove persona id=SSC-VC
save

wait for persona state=dormant id=SSC-AD-1 timeout=120
force persona id=SSC-AD-1 dormant
save
remove persona id=SSC-AD-1
save

//
// Delete the Hypervisors
//

wait for vmrack state=dormant id=VMR.SSC-ESX-01 timeout=120
force vmrack id=VMR.SSC-ESX-01 dormant
save
remove vmrack id=VMR.SSC-ESX-01
save

wait for vmrack state=dormant id=VMR.SSC-ESX-02 timeout=120
force vmrack id=VMR.SSC-ESX-02 dormant
save
remove vmrack id=VMR.SSC-ESX-02
save

wait for vmrack state=dormant id=VMR.SSC-ESX-03 timeout=120
force vmrack id=VMR.SSC-ESX-03 dormant
save
remove vmrack id=VMR.SSC-ESX-03
save

wait for vmrack state=dormant id=VMR.SSC-Hyper-V-1 timeout=120
force vmrack id=VMR.SSC-Hyper-V-1 dormant
save
remove vmrack id=VMR.SSC-Hyper-V-1
save
```



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```
//  
// Finally Change the assignment of R610-4 back to pool assignment.  
//  
  
assign server pool id=SP.HBAs-W2K3 to host id="CNWKP4J" priority=1  
assign server pool id=SP.HBAs-W2K8 to host id="CNWKP4J" priority=2  
assign server pool id=SP.Linux to host id="CNWKP4J" priority=3  
assign server pool id=SP.ESX to host id="CNWKP4J" priority=4  
save
```

### cleanup\_orphaned\_personas.sh

```
#!/bin/bash  
#!/+  
#! Filename: cleanup_orphaned_personas.sh  
#!  
#! Author: Tom Maher  
#! Edited: 28-Jan-2011  
#!  
#! Function: Find disk booted personas which have no server assignment.  
#! Delete any cables associated then and finally remove the persona.  
#!-  
  
WORK_TO_DO=false  
  
TIMESTAMP=`date +%s.%N`  
  
IFILE="/tmp/AIM-ifile-${TIMESTAMP}.tmp"  
OFILE="/tmp/AIM-ofile-${TIMESTAMP}.tmp"  
CFILE="/tmp/AIM-cfile-${TIMESTAMP}.tmp"  
  
cat <<EOF > $IFILE  
login host=192.168.1.20 account=admin password=admin  
open  
list all  
exit  
EOF  
  
cat <<EOF > $CFILE  
login host=192.168.1.20 account=admin password=admin  
open  
EOF  
  
/opt/scalent/bin/sdk ifile=$IFILE ofile=$OFILE  
  
for persona in `grep disk $OFILE | grep PERSONA: | cut -d'"' -f2`  
do  
    count=`grep $persona $OFILE | grep ASSIGNED | wc -l`  
    if [ $count -eq 0 ]  
    then  
        WORK_TO_DO=true  
        echo "stop persona id=${persona}" >> $CFILE  
        echo "save" >> $CFILE
```





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```
for cable in `grep $persona $OFILE | grep VCABLE: | cut -d' ' -f2`
do
    echo "remove cable id=${cable}" >> $CFILE
    echo "save" >> $CFILE
done

for vnic in `grep $persona $OFILE | grep VNIC: | cut -d' ' -f2`
do
    echo "remove vnic id=${vnic} from persona id=${persona}" >> $CFILE
    echo "save" >> $CFILE
done

echo "wait for persona state=dormant id=${persona} timeout=120" >> $CFILE
echo "save" >> $CFILE
echo "force persona id=${persona} dormant" >> $CFILE
echo "save" >> $CFILE
echo "remove persona id=${persona}" >> $CFILE
echo "save" >> $CFILE
fi
done
echo "exit" >> $CFILE

if [ "$WORK_TO_DO" = "true" ]
then
    /opt/scalent/bin/sdk ifile=$CFILE
else
    echo "Nothing to do."
fi

cat $CFILE
rm $IFILE $OFILE $CFILE
```



## Dell Advanced Infrastructure Manager and Dell VIS Self-Service Creator Integration Overview

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