1. Deploying and monitoring Applications

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| Computers used in  this Lab | ROUTER01  SRV0001  SRV0002  WKS0001  WKS0002  WKS0004 |
| More information | Deploy applications with System Center Configuration Manager  <https://docs.microsoft.com/en-us/sccm/apps/deploy-use/deploy-applications>  Monitor applications from the System Center Configuration Manager console  <https://docs.microsoft.com/en-us/sccm/apps/deploy-use/monitor-applications-from-the-console> |
| All Systems & All Users collection | Deploying anything to All Systems or All Users is not recommended, and it goes against best practices. We are using these 2 collections for demonstration purposes only. |
| Description | In this chapter, we will look at all steps required to deploy an existing application as well as monitor its deployment status |

* 1. Deploying Application

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| Perform this task on the SRV0002 virtual machine logged on as sccmadmin |
| 01. Start Configuration Manager Console and Click Software Library. |
| 02. Expand Application Management and click Applications |
| 03. Select Google Chrome and click Deploy |
| 04. Under Specify general information for this deployment, click Browse (Collection) and select the Collection you want to deploy. Click Next  Note: You can deploy to Devices as well as Users. In this example, we are using a Device Collection – Workstation OU |
| 05. Under Specify the content destination, click Next |
| 06. Under specify settings to control how this software is deployed, click Next  Note: Action can be Install or Uninstall and Purpose can be Available or Required. |
| 07. Under Specify the schedule for this deployment, click Next |
| 08. Under Specify the user experience for the installation of this software on the selected devices, click Next |
| 09. Under specify Configuration Manager and Operations Manager alert options, click Next |
| 10. Under Confirm the settings for this new deployment click Next |
| 11. Under Completion, click Close |

This can also be achieved via PowerShell using the commands below:

$AppName = "Google Chrome"

$ColName = "Workstation OU"

New-CMApplicationDeployment -CollectionName "$ColName" -Name "$AppName" -DeployAction Install -DeployPurpose Available

* 1. Installing available application

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| Perform this task on the wks0001 virtual machine logged on as user01 |
| 01. Open Control Panel and then Configuration Manager. |
| 02. Change to the actions tab. Select Machine Policy Retrieval & Evaluation cycle and click Run now  Note: Using this option will force the client to connect to the server and update its settings. By default, this happen every 60 minutes and can be changed under Client Settings -> Client Policy -> Client policy polling interval (minutes) |
| 03. Once the Machine Policy Retrieval & Evaluation cycle message appears, click Ok.  Note: Depending on the SCCM environment, the machine policy retrieval & evaluation cycle can take few minutes. |
| 04. Click Start, Microsoft System Center, Configuration Manager and click Software Center |
| 05. Under Available Software, select Google Chrome and click Install |
| 06. If needed, click Installation Status tab to follow the installation process |
| 07. Once the installation is finished, click Installed Software to see all installed software  Note: Repeat the process on the WKS0002.  Note: You will not be able to install the application on WKS0004 as it does not meet the requirements |

This can also be achieved via PowerShell using the commands below:

$SMSCli = [wmiclass] "root\ccm:SMS\_Client"

$SMSCli.TriggerSchedule("{00000000-0000-0000-0000-000000000021}")

start-sleep 10

$SMSCli.TriggerSchedule("{00000000-0000-0000-0000-000000000022}")

Start-Sleep 60

$AppName = "Google Chrome"

$app = gwmi -Namespace 'root\CCM\ClientSDK' -Class 'CCM\_Application' | Where-Object { ($\_.Name -eq "$($AppName)") -and ($\_.InstallState -eq "NotInstalled") -and ($\_.AllowedActions -contains "Install")}

[int]$code = Invoke-WmiMethod -Namespace 'root\CCM\ClientSDK' -Class 'CCM\_Application' -Name Install -ArgumentList @(0, $app.Id, $app.IsMachineTarget, $false, 'High', $app.Revision) | select -ExpandProperty ReturnValue

if ($code -ne 0) {

throw "Error invoking Installation of '$($app.Name)' ($code)."

} else {

"Successfully invoked Installation of '$($app.Name)'."

}

* 1. Monitoring Application Deployment via Console

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| Perform this task on the SRV0002 virtual machine logged on as sccmadmin |
| 01. Start Configuration Manager Console and Click Monitoring. |
| 02. Click Deployments |
| 03. Select Google Chrome and click Summarization  Note: The Application Deployment summarization runs once every 60 minutes by default, this can be changed on Administration -> Site Configuration -> Sites -> <Site> -> Status Summarizers -> Application Deployment Summarizer |
| 04. Click Ok once the Configuration Manager information screen appears |
| 05. After the summarization, under Completion Statistics, view Status.  Click View Status for more information |
| 06. Under View Status, Asset Details, you can see which device received the software and Under Requirements Not Met you can see which device did not have the software installed. |

This can also be achieved via PowerShell using the commands below:

$AppName = "Google Chrome"

$ColName = "Workstation OU"

Get-CMDeployment -CollectionName "$ColName" -SoftwareName "$AppName" | Invoke-CMDeploymentSummarization

Start-Sleep 10

Get-CMDeployment -CollectionName "$ColName" -SoftwareName "$AppName" | select ApplicationName, CollectionName, NumberErrors, NumberInProgress, NumberOther, NumberSuccess, NumberTargeted, NumberUnknown

Get-CMApplication -Name $AppName | Get-CMApplicationDeploymentStatus | Get-CMDeploymentStatusDetails | select MachineName, ComplianceState, InstalledState, StatusType

* 1. Monitoring Application Deployment via Client Logs

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| Perform this task on the wks0001 virtual machine logged on as user01 |
| 01. On the client, you can also review the following client logs:   * C:\Windows\ccm\Logs\AppDiscovery.log: Records details about the discovery or detection of applications on client computers. * C:\Windows\ccm\Logs\AppEnforce.log: Records details about enforcement actions (install and uninstall) taken for applications on the client. * C:\Windows\ccm\Logs\ContentTransferManager.log: Schedules the Background Intelligent Transfer Service (BITS) or the Server Message Block (SMB) to download or to access packages. * C:\Windows\ccm\Logs\DataTransferService.Log: Records all BITS communication for policy or package access. * C:\Windows\ccm\Logs\LocationServices.log: Records the client activity for locating management points, software update points, and distribution points. * C:\Windows\ccm\Logs\SCCClient\_<Domain>@<User>\_1.log: Records the activity in Software Center for the specified user on the client computer. * C:\Windows\ccm\Logs\SCCClient\_<Domain>@<User>\_2.log: Records the historical activity in Software Center for the specified user on the client computer. * C:\Windows\ccm\Logs\SCNotify\_<Domain>@<User>\_1.log: Records the activity for notifying users about software for the specified user. * C:\Windows\ccm\Logs\SCNotify\_<Domain>@<User>\_2.log: Records the historical information for notifying users about software for the specified user. |

This can also be achieved via PowerShell using the commands below:

Start-Process -Filepath ("c:\windows\cmtrace.exe") -ArgumentList ("c:\Windows\ccm\Logs\AppDiscovery.log c:\Windows\ccm\Logs\AppEnforce.log c:\Windows\ccm\Logs\ContentTransferManager.log c:\Windows\ccm\Logs\DataTransferService.Log")

* 1. Monitoring Application Deployment via Reports

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| Perform this task on the SRV0002 virtual machine logged on as sccmadmin |
| 01. Start Configuration Manager Console and Click Monitoring. |
| 02. Expand Reporting, Reports and click Software Distribution – Application Monitoring |
| 03. Select Application Compliance and click Run |
| 04. Under Application Compliance reports, use Google Chrome for Application and All System for collection and click View report  Note: You can drill down to a more specific report using the links inside the reports |

This can also be achieved via PowerShell using the commands below:

$SiteCode = "001"

$servername = "SRV0002.classroom.intranet"

$AppName = "Google Chrome"

$ColName = "Workstation OU"

#Open Report

Invoke-CMReport -ReportPath "Software Distribution - Application Monitoring/Application compliance" -SiteCode "$SiteCode" -SrsServerName "$servername" -ReportParameter @{"Application"="$($AppName)"; "Collection"="$($ColName)"}