1. Client Health

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| Computers used in  this Lab | ROUTER01  SRV0001  SRV0002  WKS0001  WKS0002 |
| More information | How to configure client status in System Center Configuration Manager  <https://docs.microsoft.com/en-us/sccm/core/clients/deploy/configure-client-status> |
| Description | In this chapter, we will look at the Client Health monitoring solution build in the SCCM, we will understand how it works, reporting as well as break some client for reporting |

* 1. Client Status Settings

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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 Client Status and then Client Status Settings |
| 03. On Client Status Settings Properties, change the default values to:   * Client policy requests during the following days: 1 * Heartbeat discovering during the following days: 1 * Hardware inventory during the following days: 1 * Software inventory during the following days: 1 * Status messages during the following days: 1   Note: These settings are being used in a lab environment. It is not recommended to decrease these numbers, however, sometimes you will need to increase these number to reflect individual company requirements.  Click OK |

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

Set-CMClientStatusSetting -ClientPolicyDays 1 -HardwareInventoryDays 1 -HeartbeatDiscoveryDays 1 -SoftwareInventoryDays 1 -StatusMessageDays 1

* 1. Client Health Configuration

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| Perform this task on the wks0001 virtual machine logged on as user01 |
| 01. On the client, open the Task Scheduler |
| 02. On the task scheduler, expand Task Scheduler (Local) -> Task Scheduler Library -> Microsoft and click Configuration Manager  Note: This Task is created during the client installation  Note: If you want to control when the client is executed and control the remediation procedures, use the CCMEVALINTERVAL, CCMEVALHOUR and NOTIFYONLY Client Installation Properties |
| 03. Select Configuration Manager Health Evaluation and click Properties |
| 04. On the General tab confirm that the task runs as a System |
| 05. Change to the Actions tab and confirm that it executes a program called ccmeval.exe |
| 06. Change to the Settings tab and confirm that it runs on demand and start if a scheduled start is missed.  Click Ok |
| 07. Open C:\windows\ccm\CcmEval.xml on Notepad and examine the validations  Note: SCCM Client executes up to 30 validations (depending on OS version).  Note: Editing the ccmeval.xml is not supported. |

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

$Task = Get-ScheduledTask -TaskName "Configuration Manager Health Evaluation"

$task.Principal.UserId # should be System

$task.Actions.Execute # should be c:\windows\ccm\ccmeval.exe

$task.Settings.AllowDemandStart # should be true

$task.Settings.StartWhenAvailable # should be true

* 1. Executing CCMEVAL manually

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| Perform this task on the wks0001 virtual machine logged on as user01 |
| 01. Open Command Prompt (run as administrator) |
| 02. Navigate to C:\Windows\CCM |
| 03. Type ccmeval.exe and press Enter |
| 04. You can also review the following logs:   * C:\Windows\ccm\logs\ccmeval.log: Records Configuration Manager Client status evaluation activities and details for components that are required by the Configuration Manager client. * C:\Windows\ccm\logs\CcmEvalTask.log: Records the Configuration Manager Client status evaluation activities that are initiated by the evaluation scheduled task. |

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

Start-Process -Filepath ("c:\windows\ccm\ccmeval.exe") -wait

* 1. Forcing CCMEVAL failure

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| Perform this task on the srv0001 virtual machine logged on as administrator |
| 01. Open Active Directory User and Computers |
| 02. Navigate to classroom.intranet->Classroom->Workstations->Enabled |
| 03. Move WKS0002 to classroom.intranet->Classroom->Workstations->Disabled |

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

#On SRV0001

Get-ADComputer WKS0002 | Move-ADObject -TargetPath 'OU=Disabled,OU=Workstations,OU=Classroom,DC=classroom,DC=intranet'

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| Perform this task on the wks0002 virtual machine logged on as administrator |
| 01. Start services console |
| 02. Search for Background Intelligent Transfer Service, it will exist. |
| 03. Open Command Prompt (run as administrator) |
| 04. Type gpupdate /force and press Enter and execute it again |
| 05. Start services console |
| 06. Search for Background Intelligent Transfer Service, it will not exist. |
| 07. Navigate to C:\Windows\CCM |
| 08. Type ccmeval.exe and press Enter |
| 09. You can also review the following logs:   * C:\Windows\ccm\logs\ccmeval.log: Records Configuration Manager Client status evaluation activities and details for components that are required by the Configuration Manager client. * C:\Windows\ccm\logs\CcmEvalTask.log: Records the Configuration Manager Client status evaluation activities that are initiated by the evaluation scheduled task. |

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

#On WKS0002

#get service information

Get-Service -Name BITS

#force group policy update

Start-Process -Filepath ("gpupdate") -ArgumentList ("/force") -wait -NoNewWindow

Start-sleep 10

#force group policy update

Start-Process -Filepath ("gpupdate") -ArgumentList ("/force") -wait -NoNewWindow

Start-sleep 10

#get service information, it will generate error if bits does not exist/access denied

Get-Service -Name BITS

#execute evaluation

Start-Process -Filepath ("c:\windows\ccm\ccmeval.exe") -wait

Start-sleep 60

* 1. Monitoring Client Health

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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 Client Status and click Client Check. |
| 03. Click Refresh Client Status |
| 04. Click client check passed.  Note: All links are clickable as well as the graphic |
| 05. Under the Client that passed client check from All Desktop and Server clients, select a WKS0001 and click Client Check details. |
| 06. Confirm that all rules passed evaluation and/or remediation (green button)  Note: if there is any remediation to be taken and passed, the rule name will be displayed. |
| 07. Click Monitoring |
| 08. Expand Client Status and click Client Check. Click client check failed. |
| 08. Under the Client that failed client check from All Desktop and Server clients, select a WKS0002 and click Client Check details. |
| 09. A Remediation Failed result is shown for the Verify BITS service exist with error Access Denied and another for Verfity/Remediate BITS Startup type with error Dependency Failed. |

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

#On SRV0002

$SiteCode = "001"

$task = Get-CMSiteSummaryTask -TaskName "Client Health Scheduled Task"

$Task.RunNow = $true

$Task.Put()

Start-Sleep 10

$Device = Get-CMDevice -Name "WKS0001" -Fast

gwmi -namespace "root\sms\site\_$SiteCode" -query "select \* from SMS\_CH\_EvalResult where ResourceID = $($Device.ResourceID)" | select HealthCheckDescription

$Device = Get-CMDevice -Name "WKS0002" -Fast

gwmi -namespace "root\sms\site\_$SiteCode" -query "select \* from SMS\_CH\_EvalResult where ResourceID = $($Device.ResourceID)" | select HealthCheckDescription

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| Perform this task on the srv0001 virtual machine logged on as administrator |
| 01. Open Active Directory User and Computers |
| 02. Navigate to classroom.intranet->Classroom->Workstations->Disabled |
| 03. Move WKS0002 to classroom.intranet->Classroom->Workstations-> Enabled |

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

#On SRV0001

Get-ADComputer "WKS0002" | Move-ADObject -TargetPath 'OU=Enabled,OU=Workstations,OU=Classroom,DC=classroom,DC=intranet'

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| Perform this task on the wks0002 virtual machine logged on as administrator |
| 01. Open Command Prompt (run as administrator) |
| 02. Type gpupdate /force and press Enter and execute it again |
| 03. Start services console |
| 04. Search for Background Intelligent Transfer Service. The service now exists and the Startup type is set to Manual and the Status is not running. |
| 05. Navigate to C:\Windows\CCM |
| 06. Type ccmeval.exe and press Enter |

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

#On WKS0002

#get service information

Get-Service -Name BITS

#force group policy update

Start-Process -Filepath ("gpupdate") -ArgumentList ("/force") -wait -NoNewWindow

Start-sleep 10

#force group policy update

Start-Process -Filepath ("gpupdate") -ArgumentList ("/force") -wait -NoNewWindow

Start-sleep 10

#get service information

Get-Service -Name BITS

#execute evaluation

Start-Process -Filepath ("c:\windows\ccm\ccmeval.exe") -wait

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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 Client Status and click Client Check. |
| 03. Click Refresh Client Status |
| 04. Click client check passed.  Note: All links are clickable as well as the graphic |
| 05. Under the Client that passed client check from All Desktop and Server clients, select a WKS0002 and click Client Check details. |
| 06. Confirm that all rules passed evaluation and/or remediation (green button)  Note: if there is any remediation to be taken and passed, the rule name will be displayed. |

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

#On SRV0002

$SiteCode = "001"

$task = Get-CMSiteSummaryTask -TaskName "Client Health Scheduled Task"

$Task.RunNow = $true

$Task.Put()

Start-Sleep 10

$Device = Get-CMDevice -Name "WKS0002"

gwmi -namespace "root\sms\site\_$SiteCode" -query "select \* from SMS\_CH\_EvalResult where ResourceID = $($Device.ResourceID)" | select HealthCheckDescription