



Stefan Stranger's Weblog

# Associating Run As Accounts in Operations Manager 2007

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A short tutorial on how to associate a Run As Account to a monitor in  
Operations Manager 2007

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## Introduction

In Operations Manager 2007, Run As Profiles and Run As Accounts are used to select users with the privileges needed for running rules, tasks, and monitors.

Management Pack authors create a rule, task, or monitor, and then associate it with a Run As Profile. The named Run As Profile is imported along with the Management Pack into Operations Manager 2007.

The Operations Manager 2007 administrator creates a named Run As Account and specifies users and groups. The administrator then adds the Run As Account to the Run As Profile and specifies the target computers that the account should run on.

The goal in this short tutorial is to create a Timed Script Two State Monitor and associate a run as account to this monitor and save it all in a Management Pack. The Timed Script Two State Monitor is a vbscript that uses WMI to check if BizTalk orchestrations are not started.

I've got some great help from Jakub Oleksy (<http://blogs.msdn.com/jakuboleksy/default.aspx>) and Steve Wilson (<http://www.authormps.com/dnn/>)

## Pre-requisites

- Domain Account which can be used as Run As Account and who has sufficient rights to run the CheckOrchestrations vbscript.  
I've created a Domain Account which is a member of the Domain Users, BizTalk Server Operators Global Group (Global Group created for the BizTalk Operators Group) and member of the local Administrator Group on the BizTalk server (through a Policy)

## Steps

1. Create a MP with the monitor in it.
2. Export the MP
3. Open the xml file with your favorite XML editor
4. Add a SecureReference in the MP.

```
<SecureReferences>
  <SecureReference ID="BizTalk.Monitor.RunAsAccount" Accessibility="Internal"
Context="System!System.Entity" />
/SecureReferences>
```

Define Run As Profile

5. Set the RunAs attribute on the unit monitor to the secure reference you want to use.

```
<UnitMonitor ID="UIGeneratedMonitorbf1283cc99634f39b46d76f5adc0f26f"
Accessibility="Public" Enabled="true"
Target="UINameSpace126a3abb20064e299a8f440831ada258.Group"
ParentMonitorID="Health!System.Health.AvailabilityState" Remotable="true"
Priority="Normal" RunAs="BizTalk.Monitor.RunAsAccount"
TypeID="Windows!Microsoft.Windows.TimedScript.TwoStateMonitorType"
ConfirmDelivery="false">
```

6. Add SecureInput in the MP after Scriptbody

```
<SecureInput>$RunAs[Name="BizTalk.Monitor.RunAsAccount"]/Domain$\[Name="BizTalk.Monitor.RunAsAccount"]/UserName$</SecureInput>
```

7. Add DisplayString for the Run As Profile (SecureReference)

```
<DisplayString ElementID="BizTalk.Monitor.RunAsAccount">
  <Name>Run As Account for BizTalks Monitors</Name>
  <Description>This account is used for running the BizTalk
Monitors</Description>
</DisplayString>
```

8. Import the MP.
9. Add the Run As Account to the Run As Profile for the computer you want to monitor.

## Complete Example MP

```
<?xml version="1.0" encoding="utf-8" ?>
```

- <ManagementPack xmlns:xsd="<http://www.w3.org/2001/XMLSchema>"  
xmlns:xsl="<http://www.w3.org/1999/XSL/Transform>" ContentReadable="true">
- <Manifest>
- <Identity>  
  <ID>**Test.BizTalk.MP**</ID>  
  <Version>**1.0.0.1**</Version>  
  </Identity>  
  <Name>**Test BizTalk MP**</Name>
- <References>
- <Reference Alias="BizTalkServer">  
  <ID>**Microsoft.BizTalkServer.2006**</ID>  
  <Version>**6.0.5000.0**</Version>  
  <PublicKeyToken>**31bf3856ad364e35**</PublicKeyToken>  
  </Reference>
- <Reference Alias="Windows">  
  <ID>**Microsoft.Windows.Library**</ID>  
  <Version>**6.0.5000.0**</Version>  
  <PublicKeyToken>**31bf3856ad364e35**</PublicKeyToken>  
  </Reference>
- <Reference Alias="SystemMomBackwardCompatibilityLibrary60500012">  
  <ID>**System.Mom.BackwardCompatibility.Library**</ID>  
  <Version>**6.0.5000.12**</Version>  
  <PublicKeyToken>**31bf3856ad364e35**</PublicKeyToken>  
  </Reference>
- <Reference Alias="MicrosoftSystemCenterInstanceGroupLibrary6050000">  
  <ID>**Microsoft.SystemCenter.InstanceGroup.Library**</ID>  
  <Version>**6.0.5000.0**</Version>  
  <PublicKeyToken>**31bf3856ad364e35**</PublicKeyToken>  
  </Reference>
- <Reference Alias="System">  
  <ID>**System.Library**</ID>  
  <Version>**6.0.5000.0**</Version>  
  <PublicKeyToken>**31bf3856ad364e35**</PublicKeyToken>  
  </Reference>
- <Reference Alias="SystemCenter">  
  <ID>**Microsoft.SystemCenter.Library**</ID>  
  <Version>**6.0.5000.28**</Version>  
  <PublicKeyToken>**31bf3856ad364e35**</PublicKeyToken>  
  </Reference>
- <Reference Alias="Health">  
  <ID>**System.Health.Library**</ID>  
  <Version>**6.0.5000.28**</Version>  
  <PublicKeyToken>**31bf3856ad364e35**</PublicKeyToken>  
  </Reference>
- </References>
- </Manifest>
- <TypeDefinitions>

```

- <EntityTypes>
- <ClassTypes>
  <ClassType ID="UINameSpace126a3abb20064e299a8f440831ada258.Group"
    Accessibility="Public" Abstract="false"
    Base="MicrosoftSystemCenterInstanceGroupLibrary6050000!Microsoft.SystemCenter.InstanceGroup" Hosted="false" Singleton="true" />
  </ClassTypes>
</EntityTypes>
- <SecureReferences>
  <SecureReference ID="BizTalk.Monitor.RunAsAccount" Accessibility="Internal"
    Context="System!System.Entity" />
</SecureReferences>
</TypeDefinitions>
- <Monitoring>
- <Discoveries>
- <Discovery
  ID="UINameSpace126a3abb20064e299a8f440831ada258.Group.DiscoveryRule"
  Enabled="true"
  Target="UINameSpace126a3abb20064e299a8f440831ada258.Group"
  ConfirmDelivery="false" Remotable="true" Priority="Normal">
  <Category>Discovery</Category>
- <DiscoveryTypes>
  <DiscoveryRelationship
    TypeID="MicrosoftSystemCenterInstanceGroupLibrary6050000!Microsoft.SystemCenter.InstanceGroupContainsEntities" />
  </DiscoveryTypes>
- <DataSource ID="GroupPopulationDataSource"
  TypeID="SystemCenter!Microsoft.SystemCenter.GroupPopulator">
  <RuleId>$MPElement$</RuleId>

  <GroupInstanceId>$MPElement[Name="UINameSpace126a3abb20064e299a8f440831ada258.Group"]$</GroupInstanceId>
- <MembershipRules>
- <MembershipRule>

  <MonitoringClass>$MPElement[Name="SystemMomBackwardCompatibilityLibrary60500012!System.Mom.BackwardCompatibility.Computer.Server"]$</MonitoringClass>

  <RelationshipClass>$MPElement[Name="MicrosoftSystemCenterInstanceGroupLibrary6050000!Microsoft.SystemCenter.InstanceGroupContainsEntities"]$</RelationshipClass>
- <IncludeList>
  <MonitoringObjectId>c44c5530-8347-6ef3-ab26-19a8854b3fb8</MonitoringObjectId>
  </IncludeList>
  </MembershipRule>
</MembershipRules>
</DataSource>
</Discovery>
</Discoveries>
- <Monitors>
- <UnitMonitor ID="UIGeneratedMonitor079c4644820c46a8b30735c38faec9de"
  Accessibility="Public" Enabled="false" Target="System!System.Computer"

```

```

ParentMonitorID="Health\System.Health.AvailabilityState" Remotable="true"
Priority="Normal" RunAs="BizTalk.Monitor.RunAsAccount"
TypeID="Windows!Microsoft.Windows.TimedScript.TwoStateMonitorType"
ConfirmDelivery="false">
<Category>Custom</Category>
- <AlertSettings
  AlertMessage="UIGeneratedMonitor079c4644820c46a8b30735c38faec9de_AlertMes
  sageResourceID">
  <AlertOnState>Warning</AlertOnState>
  <AutoResolve>true</AutoResolve>
  <AlertPriority>Normal</AlertPriority>
  <AlertSeverity>Error</AlertSeverity>
  </AlertSettings>
- <OperationalStates>
  <OperationalState ID="UIGeneratedOpStateId0e38b67924df45c99dff5715b18c1b56"
  MonitorTypeStateID="Error" HealthState="Warning" />
  <OperationalState ID="UIGeneratedOpStateIdc561419fb3454ee5aa1bf3c8d97bb57a"
  MonitorTypeStateID="Success" HealthState="Success" />
  </OperationalStates>
- <Configuration>
  <IntervalSeconds>300</IntervalSeconds>
  <SyncTime />
  <ScriptName>BizTalk_OrchestrationsCheck_Acceptatiev0.8.vbs</ScriptName>
  <Arguments />

```

```

<ScriptBody>'=====
===== ' Description: Checks all BizTalk
orchestrations for status not "started" (4) ' Scriptname:
BizTalk_OrchestrationsCheck_Acceptatie.vbs ' Author: Stefan Stranger ' Date: 03-
12-2007 ' Version: 0.8 ' Info: Script uses WMI to check if BizTalk orchestrations
are not started. ' Please don't configure Orchestrations that are default not ' not
running.
'=====
===== On Error Resume Next Dim oAPI, oBag,
strComputer, strStatus, strOrchestration Set oAPI =
CreateObject("MOM.ScriptAPI") Set oBag = oAPI.CreateTypedPropertyBag(3)
'Eventlog Type constants for OpsMgr Eventlog. Const EVENT_TYPE_ERROR = 1
Const EVENT_TYPE_WARNING = 2 Const EVENT_TYPE_INFORMATION = 4 'Use
WMI to check if Orchestrations are running. strComputer = "." Set objWMIService
= GetObject("winmgmts:\"" & strComputer & "\"\root\MicrosoftBizTalkServer") Set
colItems = objWMIService.ExecQuery("SELECT * FROM
MSBTS_Orchestration",,48) For Each objItem in colItems wscript.echo
objItem.Name 'wscript.echo objItem.OrchestrationStatus If
(objItem.OrchestrationStatus<>4) Then 'wscript.echo "BAD" strStatus = "BAD"
strOrchestration = objItem.Name wscript.echo strOrchestration Exit For Else
'wscript.echo "GOOD" strStatus = "GOOD" End If Next If strStatus = "BAD" Then
Call oBag.AddValue("State","BAD") Call
OBag.AddValue("Orchestration",strOrchestration) 'Write stopped orchestration to
OpsMgr eventlog. call
oAPI.LogScriptEvent("BizTalk_OrchestrationsCheck_Acceptatie.vbs", 10112,
EVENT_TYPE_WARNING, strOrchestration & " Orchestration is stopped.") Else Call
oBag.AddValue("State","GOOD") End If 'If script fails you can check the OpsMgr
eventlog for debug info. 'strErrDescription = "Erron Description: "& err.Description

```

```

& " Error number: " & err.number & strCurrentUser 'wscript.echo "Error is " &
strErrDescription If err.number <> 0 then 'Get user where cscript.exe is running
under. strComputer = "." Set objWMIService = GetObject("winmgmts:" _ &
"{impersonationLevel=impersonate}!\\" _ & strComputer & "\root\cimv2") Set
colProcesses = objWMIService.ExecQuery( _ "select * from win32_process where
Name='cscript.exe'") For Each objProcess in colProcesses If objProcess.GetOwner
( User, Domain ) = 0 Then strCurrentUser = " Script has run under account: " &
Domain & "\" & User 'call
oAPI.LogScriptEvent("BizTalk_OrchestrationsCheck_Acceptatie.vbs", 10115,
EVENT_TYPE_INFORMATION, strCurrentUser) Else Wscript.Echo "Problem " & Rtn
& _ " getting the owner for process " _ & objProcess.Caption End If Next
strErrDescription = "Error Description: "& err.Description & " Error number: " &
err.number & strCurrentUser call
oAPI.LogScriptEvent("BizTalk_OrchestrationsCheck_Acceptatie.vbs", 10111,
EVENT_TYPE_WARNING, strErrDescription) End If Call oAPI.AddItem(oBag) Call
oAPI.ReturnItems</ScriptBody>

```

```

<SecureInput>$RunAs[Name="BizTalk.Monitor.RunAsAccount"]/Domain$\[Name=
"BizTalk.Monitor.RunAsAccount"]/Username$</SecureInput>
<TimeoutSeconds>60</TimeoutSeconds>
- <ErrorExpression>
- <RegExExpression>
- <ValueExpression>
  <XPathQuery>Property[@Name='State']</XPathQuery>
  </ValueExpression>
  <Operator>ContainsSubstring</Operator>
  <Pattern>BAD</Pattern>
  </RegExExpression>
  </ErrorExpression>
- <SuccessExpression>
- <RegExExpression>
- <ValueExpression>
  <XPathQuery>Property[@Name='State']</XPathQuery>
  </ValueExpression>
  <Operator>ContainsSubstring</Operator>
  <Pattern>GOOD</Pattern>
  </RegExExpression>
  </SuccessExpression>
</Configuration>
</UnitMonitor>
</Monitors>
- <Overrides>
- <MonitorPropertyOverride
  ID="OverrideForMonitorUIGeneratedMonitor079c4644820c46a8b30735c38faec9de
  ForContextd15ebcdc75a04fcf993432fa7e9962d8"
  Context="UINameSpace126a3abb20064e299a8f440831ada258.Group"
  ContextInstance="aa952890-c390-a8ee-c41d-b84b6f8745e7" Enforced="false"
  Monitor="UIGeneratedMonitor079c4644820c46a8b30735c38faec9de"
  Property="Enabled">
<Value>>true</Value>
</MonitorPropertyOverride>
</Overrides>

```

```

    </Monitoring>
- <Presentation>
- <Folders>
  <Folder ID="Folder_ce814859db984280a964438edbb7707a" Accessibility="Public"
    ParentFolder="SystemCenter!Microsoft.SystemCenter.Monitoring.ViewFolder.Root"
  />
</Folders>
- <StringResources>
  <StringResource
    ID="UIGeneratedMonitorfb8a580fdf324c65833d7a4f77c5531f_AlertMessageResou
    rceID" />
  <StringResource
    ID="UIGeneratedMonitorbf1283cc99634f39b46d76f5adc0f26f_AlertMessageResou
    rceID" />
  <StringResource
    ID="UIGeneratedMonitor079c4644820c46a8b30735c38faec9de_AlertMessageReso
    urceID" />
</StringResources>
</Presentation>
- <LanguagePacks>
- <LanguagePack ID="NLD" IsDefault="false">
- <DisplayStrings>
- <DisplayString ElementID="Test.BizTalk.MP">
  <Name>Test BizTalk MP</Name>
  <Description>MP voor het testen van de BizTalk Monitors</Description>
</DisplayString>
- <DisplayString ElementID="Folder_ce814859db984280a964438edbb7707a">
  <Name>Test BizTalk MP</Name>
</DisplayString>
- <DisplayString
  ElementID="UIGeneratedMonitorfb8a580fdf324c65833d7a4f77c5531f_AlertMessag
  eResourceID">
  <Name>BizTalk OrchestrationsCheck Acceptatie Monitor (test)</Name>
  <Description>Eén of meerdere Orchestrations zijn gestopt.</Description>
</DisplayString>
- <DisplayString ElementID="BizTalk.Monitor.RunAsAccount">
  <Name>Run As Account for BizTalks Monitors</Name>
  <Description>Deze account wordt gebruikt om met de BizTalk Monitors WMI queries
  uit te voeren</Description>
</DisplayString>
- <DisplayString ElementID="UIGeneratedMonitorbf1283cc99634f39b46d76f5adc0f26f"
  SubElementID="UIGeneratedOpStateId17a76c532562478cb154111f49b57542">
  <Name>Healthy</Name>
</DisplayString>
- <DisplayString ElementID="UIGeneratedMonitorbf1283cc99634f39b46d76f5adc0f26f"
  SubElementID="UIGeneratedOpStateIdb404f7451c714f3fac75f2ef4371e96f">
  <Name>Unhealthy</Name>
</DisplayString>
- <DisplayString
  ElementID="UIGeneratedMonitor079c4644820c46a8b30735c38faec9de">
  <Name>BizTalk OrchestrationsCheck Monitor (test)</Name>

```



```

    </DisplayString>
- <DisplayString ElementID="UIGeneratedMonitor079c4644820c46a8b30735c38faec9de"
  SubElementID="UIGeneratedOpStateIdc561419fb3454ee5aa1bf3c8d97bb57a">
  <Name>Healthy</Name>
  </DisplayString>
- <DisplayString ElementID="UIGeneratedMonitor079c4644820c46a8b30735c38faec9de"
  SubElementID="UIGeneratedOpStateId0e38b67924df45c99dff5715b18c1b56">
  <Name>Unhealthy</Name>
  </DisplayString>
- <DisplayString
  ElementID="UIGeneratedMonitor079c4644820c46a8b30735c38faec9de_AlertMessa
  geResourceID">
  <Name>BizTalk OrchestrationsCheck Monitor (test)</Name>
  <Description>Eén of meer Orchestrations zijn gestopt</Description>
  </DisplayString>
  </DisplayStrings>
  </LanguagePack>
- <LanguagePack ID="ENU" IsDefault="false">
- <DisplayStrings>
- <DisplayString
  ElementID="UINamespace126a3abb20064e299a8f440831ada258.Group">
  <Name>BizTalk Computers Acceptatie Test</Name>
  </DisplayString>
- <DisplayString
  ElementID="UINamespace126a3abb20064e299a8f440831ada258.Group.Discovery
  Rule">
  <Name>Populate BizTalk Computers Acceptatie Test</Name>
  <Description>This discovery rule populates the group 'BizTalk Computers Acceptatie
  Test'</Description>
  </DisplayString>
- <DisplayString ElementID="UIGeneratedMonitorbf1283cc99634f39b46d76f5adc0f26f">
  <Name>BizTalk OrchestrationsCheck Acceptatie Monitor (test2)</Name>
  </DisplayString>
- <DisplayString
  ElementID="UIGeneratedMonitorbf1283cc99634f39b46d76f5adc0f26f_AlertMessag
  eResourceID">
  <Name>BizTalk OrchestrationsCheck Acceptatie Monitor (test2)</Name>
  <Description>Eén of meerdere Orchestrations zijn gestopt.</Description>
  </DisplayString>
  </DisplayStrings>
  </LanguagePack>
  </LanguagePacks>
  </ManagementPack>

```

## Tips & Tricks

### 1. Testing your script

You can test your script running under the run as account by scheduling the script using Scheduled Tasks.

If you want to test if your script will run under the local system account you can use [soon.exe](#) a Windows 2000 Resource Kit tool. Schedules commands to run within the next 24 hours.

### 2. Adding debug info to your script.

You can have error info and owner info of the cscript process being written to the OpsMgr eventlog for debugging your script.

Example:

```
'If script fails you can check the OpsMgr eventlog for debug info.
'Eventlog Type constants for OpsMgr Eventlog.
Const EVENT_TYPE_ERROR          = 1
Const EVENT_TYPE_WARNING        = 2
Const EVENT_TYPE_INFORMATION    = 4

If err.number <> 0 then
    'Get user where cscript.exe is running under.
    strComputer = "."
    Set objWMIService = GetObject("winmgmts:" _
        & "{impersonationLevel=impersonate}!\\" _
        & strComputer & "\root\cimv2")

    Set colProcesses = objWMIService.ExecQuery( _
        "select * from win32_process where Name='cscript.exe'")
    For Each objProcess in colProcesses
        If objProcess.GetOwner ( User, Domain ) = 0 Then
            strCurrentUser = " Script has run under account: " &
Domain & "\" & User
            call oAPI.LogScriptEvent("BizTalk_OrchestrationsCheck_Acceptatie.vbs",
10115, EVENT_TYPE_INFORMATION, strCurrentUser)
        Else
            Wscript.Echo "Problem " & Rtn & _
                " getting the owner for process " _
                & objProcess.Caption

        End If
    Next
    strErrDescription = "Error Description: "& err.Description & "
Error number: " & err.number & strCurrentUser
    call oAPI.LogScriptEvent("BizTalk_OrchestrationsCheck_Acceptatie.vbs",
10111, EVENT_TYPE_WARNING, strErrDescription)
End If
```