Automating Veeam with PowerShell

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Veeam Backup and Replication has a lot to offer for a disaster recovery solution and is easily my favorite tool to use for virtual backups. However, if you are using the free edition and VeeamZIP to get those backups completed you will be forced to complete the task yourself. After running into this problem you may have already found a way to fix this, or you may still be searching for a solution.

Automating the Issue

The main thing that was made available to fix this issue with the free edition of Veeam was the PowerShell cmdlet **Start-VBRZip**. VeeamZip is similar to the full VM backup in that it always produces a full backup file (.VBK file) that may be used as a restore point. This can then be sent to a backup repository, local folder, or a network share. With at least Powershell 3.0 and Veeam Backup Free Edition v8 Update 2 (currently v9), you can access the cmdlets needed to write a script to automate your virtual backups. The following script will trigger the backup as well as email you a report of your backup job status.

Let's Get You Backed Up.ps1

This script allows for backups of any VMs that exist on your vCenter with all the same settings you would be asked for in the GUI of Veeam. You are required to fill out the VM names, vCenter IP/DNS name, and the directory that the backups will be targeted at.

```
# VM names separated by commas
$VMNames = "VM1", "VM1"
# vCenter name/IP
$HostName = "10.30.10.140"
# Directory that VM backups should go to
$Directory = "\\10.30.10.85\Veeam"
```

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```
# Desired compression level, following
compression level from Veeam (Optional)
$CompressionLevel = "4"
# Quiesce VM when taking snapshot
(Optional; VMware Tools are required;
Possible values: $True/$False)
$EnableQuiescence = $True
# Protect resulting backup with
encryption key (Optional; $True/$False)
$EnableEncryption = $False
# Encryption Key (Optional; path to a
secure string, C:\SecureString.txt"
$EncryptionKey = ""
# Retention settings (Optional; By default,
VeeamZIP files are not removed and kept
in the specified location for an indefinite
period of time.
# Possible values: Never , Tonight,
TomorrowNight, In3days, In1Week,
In2Weeks, In1Month)
$Retention = "In3days"
# Email Settings
# Enable notification (Optional)
$EnableNotification = $True
# Email SMTP server
$SMTPServer = "smtp.smtp.com"
# Email FROM
$EmailFrom = "sender@cnwr.com"
# Email TO
$EmailTo = "recipient@cnwr.com"
# Email subject
$EmailSubject = "Veeam Backup Job"
# Email formatting
$style = "<style>BODY{font-family: Arial;
font-size: 10pt;}"
$style = $style + "TABLE{border: 1px solid
black; border-collapse: collapse;}"
$style = $style + "TH{border: 1px solid
black; background: #54b948; padding:
5px; }"
$style = $style + "TD{border: 1px solid
black; padding: 5px; }"
$style = $style + "</style>"
##############################################
# End User Defined Variables
##############################################
#################### DO NOT
MODIFY PAST THIS LINE
```

› Ron Robinson on
  QuickTime
  Deprecated

› billiga skjortor
  herr on
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```
###############
Asnp VeeamPSSnapin
$Server = Get-VBRServer -name
$HostName
$mbody = @()
foreach ($VMName in $VMNames)
{
$VM = Find-VBRViEntity -Name $VMName
-Server $Server
$ZIPSession = Start-VBRZip -Entity $VM -
Folder $Directory -Compression
$CompressionLevel -DisableQuiesce:
(!$EnableQuiescence) -AutoDelete
$Retention
If ($EnableNotification)
{
$TaskSessions =
$ZIPSession.GetTaskSessions()
$FailedSessions = $TaskSessions | where
{$_.status -eq "EWarning" -or $_.Status -eq
"EFailed"}
if ($FailedSessions -ne $Null)
{
$mbody = $mbody + ($ZIPSession |
Select-Object @{n="Name";e=
{($_.name).Substring(0,
$_.name.LastIndexOf("("))}} ,@{n="Start
Time";e={$_.CreationTime}},@{n="End
Time";e=
{$_.EndTime}},Result,@{n="Details";e=
{$FailedSessions.Title}})
}
Else
{
$mbody = $mbody + ($ZIPSession |
Select-Object @{n="Name";e=
{($_.name).Substring(0,
$_.name.LastIndexOf("("))}} ,@{n="Start
Time";e={$_.CreationTime}},@{n="End
Time";e=
{$_.EndTime}},Result,@{n="Details";e=
{($TaskSessions | sort creationtime -
Descending | select -first 1).Title}})
}
}
}
If ($EnableNotification)
{
$Message = New-Object
```

```
System.Net.Mail.MailMessage
$EmailFrom, $EmailTo
$Message.Subject = $EmailSubject
$Message.IsBodyHTML = $True
$message.Body = $mbody | ConvertTo-
Html -head $style | Out-String
$SMTP = New-Object
Net.Mail.SmtpClient($SMTPServer)
$SMTP.Send($Message)
}
```

The script can be edited to change whatever settings you want or send an email that has your company's logo in it. Each variable that can be changed has comments on the available inputs for that variable. If you would like to encrypt the backup data from unauthorized access you can do that with the $EnableEncryption variable. The easiest way to do that is to create a secure string beforehand that will be saved for this script's usage.

```
$SecurePassword = Read-Host -Prompt
"Enter password" -AsSecureString
$SecurePassword | ConvertFrom-
SecureString > "Directory where secure
string should be stored;
C:\SecureString.txt, for instance"
```

This allows you to simply put the path to the .txt file for the script. If you test the script the job should start and upon completion you will receive an email with the details. Then all that is left is scheduling it.

Setting a Schedule

Now that we have a simple PowerShell script we can just use Windows Task Scheduler to automate the periodic backups. Just go to **Task Scheduler** and **Action > Create Basic Task....**

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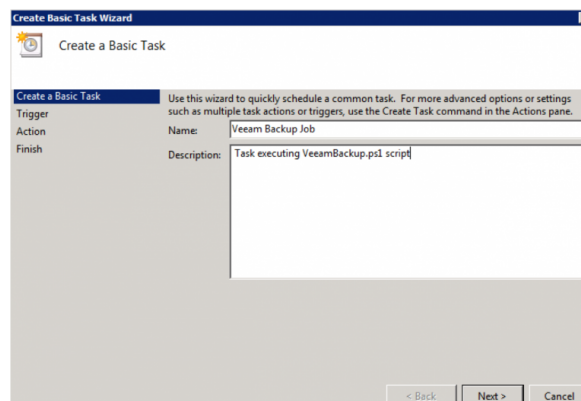
Set the name and description for it so that you can tell which task runs which script easily. Then hit Next and we'll set the trigger. How often you backup is determined on your RPO so if you want to run this several times a day or just daily that is up to you. If your RPO is less than a day you may want to think about your recovery plan and if the free edition is really for you.
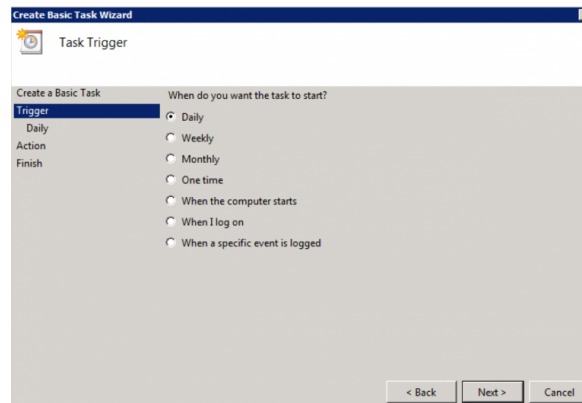
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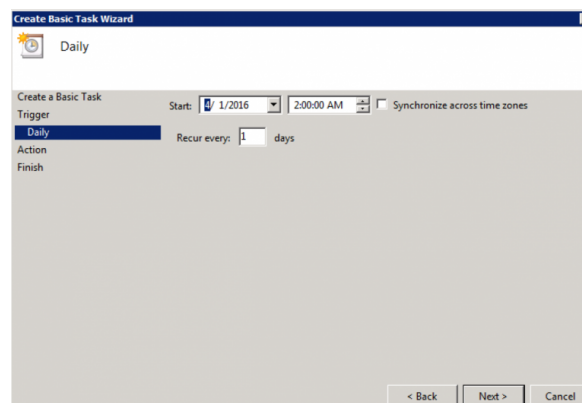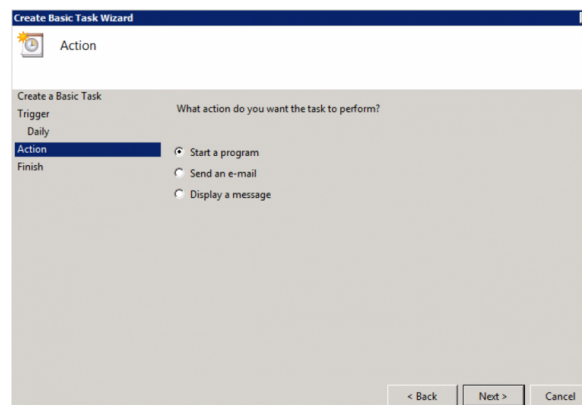
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Simply set the start time you would like the job to run.
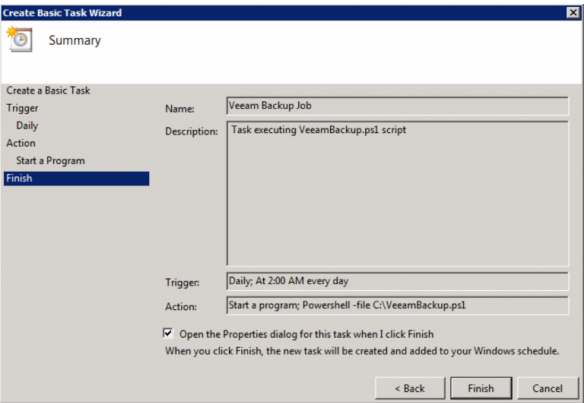

Then choose **Start a program**

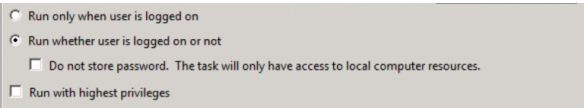In the **Program/script** field you want to place the following command:

Powershell -file "C:\VeeamBackup.ps1"

Replacing that path with the path to your PowerShell file. Then put a check in the **Open the Properties dialog...** as we need to make a few changes.

Change the radio of **Run only when user is logged on** to **Run whether user is logged on or not**.

Then you can right-click the job and select Run to test the task.

Once the backup is completed you should receive your email based on your notification settings. Now that you can do scheduled backups with the Veeam Backup Free Edition you can be sure that your backups are being completed for your virtual environment.

By Matt Clark | April 7th, 2016 | Automation, Virtualization | 6 Comments

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About the Author: Matt Clark

Systems Engineer working for CNWR, Inc. I specialize in virtualization design and consultation. I have a strong passion for virtualization and hope to become a leader in the

virtualization field as I think it is the right decision for a lot of businesses and want to help them implement it.

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6 Comments

Carlos July 8, 2016 at 8:24 am - Reply

Hi, first of all, great script, it's the better i've seen to do a backup job with powershell in veeam, but i have a question, if i want to do the backup in a shared folder with credentials, what i have to modify? i tried to put "net use $server /user:$user $password" at the top of the script to map the network drive, but it doesn`t works well. Any help would be apreciatted.

Matt Clark July 18, 2016 at 4:13 pm - Reply

If you are going to use $user $password you either need to pass it in from a text file, inline variable, or use Get-Credential. Easiest way to test the command is to try it outside of the script, believe you are missing some syntax there (net use z: \\$server\backup /user:admin password).

Robert Wills September 14, 2016 at 9:14 pm - Reply

Hi Matt thanks for thisI have it working as far as backing up and restoring of files but I do have a problem with Retention option. I have set my script to have the option of retention of 1 week by using $Retention = "In1Week" but my store fills up and runs out of space as they are never deleted. have tried 3 days retention as well with no joy. Have you a suggestions? Thanks

Bostjanc January 31, 2017 at 12:16 pm - Reply

This script does not work with UNC PATH. If if I do a mapped drive. Please help. Where are the logs if the script fails to do backup?

Adam June 14, 2017 at 3:15 pm - Reply

Hi Bostjanc,

Hopefully this will help resolve your issue;
1) Modify the service 'VeeamTransportSvc' to run as the user that has write access to the destination where your Veeam backups will reside.
2) On the Server where your share resides. Add the Veeam Server computer account to the UNC paths' folder permissions – full control.

Ian April 18, 2017 at 8:58 am - Reply

Hi Matt,

All works like clockwork except the retention option. I would really appreciate if you could take a look. Thanks

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