

3-3-2：每日巡检-查看邮件服务器本地磁盘空间并输出HTML

作者简介

曾垂鑫，毕业于中国人民大学商务管理专业。微软（2013-2017五届）MVP，具有丰富的项目实施和解决方案经验，51CTO传媒推荐博客、博客之星，微软MCP/MCTS/MCITP/MCSA/MCSE认证系统专家和解决方案顾问。属于实战派的讲师，具备丰富的万人规模以上企业的运维经验。课程内容侧重于实战实用。

曾垂鑫的博客地址：<http://543925535.blog.51cto.com/>

曾垂鑫的课程地址：http://edu.51cto.com/lecturer/index/user_id-639838.html

课程后续会形成完善的Windows运维工程师路线图，涵盖企业常用的Windows平台运维技术，后期课程包括但不限于AD、Exchange、Windows、System Center、Powershell、Hyper-v、Office 365等。

1) 脚本内容

```
#####
#
# Check disk space and send an HTML report as the body of an email.      #
# Reports only disks on computers that have low disk space.              #
# Author: Mike Carmody                                                    #
# Some ideas extracted from Thiyagu's Exchange DiskspaceHTMLReport module. #
# Date: 8/10/2011                                                         #
# I have not added any error checking into this script yet.              #
#
#
#####
# Continue even if there are errors
$ErrorActionPreference = "Continue";

#####
# Items to change to make it work for you.
#
# EMAIL PROPERTIES
# - the $users that this report will be sent to.
# - near the end of the script the smtpserver, From and Subject.

# REPORT PROPERTIES
# - you can edit the report path and report name of the html file that is the report.
#####

# Set your warning and critical thresholds
$percentWarning = 100;
$percentCritical = 100;

# EMAIL PROPERTIES
# Set the recipients of the report.
$users = "administrator@contoso.com";
#$users = "You@company.com" # I use this for testing by using my email address.
#$users = "you@company.com", "manager@company.com", "etc@company.com"; # can be sent to individuals.
```

```

# REPORT PROPERTIES
# Path to the report
$reportPath = "C:\ps";

# Report name
$reportName = "DiskSpaceRpt_$(get-date -format ddMMyyyy).html";

# Path and Report name together
$diskReport = $reportPath + $reportName

#Set colors for table cell backgrounds
$redColor = "#FF0000"
$orangeColor = "#FBB917"
$whiteColor = "#FFFFFF"

# Count if any computers have low disk space. Do not send report if less than 1.
$i = 0;

# Get computer list to check disk space
$computers = Get-Content "C:\ps\sl.txt";
$datetime = Get-Date -Format "MM-dd-yyyy_HH:mm:ss";

# Remove the report if it has already been run today so it does not append to the existing report
If (Test-Path $diskReport)
{
    Remove-Item $diskReport
}

# Cleanup old files..
$Daysback = "-7"
$CurrentDate = Get-Date;
$DateToDelete = $CurrentDate.AddDays($Daysback);
Get-ChildItem $reportPath | Where-Object { $_.LastWriteTime -lt $DateToDelete } | Remove-Item;

# Create and write HTML Header of report
$titleDate = get-date -uformat "%m-%d-%Y - %A"
$header = "
<html>
<head>
<meta http-equiv='Content-Type' content='text/html; charset=GBK'>
<title>磁盘情况</title>
<STYLE TYPE='text/css'>
<!--
td {
font-family: Tahoma;
font-size: 11px;
border-top: 1px solid #999999;
border-right: 1px solid #999999;
border-bottom: 1px solid #999999;
border-left: 1px solid #999999;
padding-top: 0px;
padding-right: 0px;

```

```
padding-bottom: 0px;
padding-left: 0px;
}
body {
margin-left: 5px;
margin-top: 5px;
margin-right: 0px;
margin-bottom: 10px;
table {
border: thin solid #000000;
}
-->
</style>
</head>
<body>
<table width='100%'>
<tr bgcolor='#CCCCCC'>
<td colspan='7' height='25' align='center'>
<font face='tahoma' color='#003399' size='4'><strong>磁盘空间巡检报告 for $titledate</strong></font>
</td>
</tr>
</table>
"
```

Add-Content \$diskReport \$header

Create and write Table header for report

```
$tableHeader = "
<table width='100%'><tbody>
<tr bgcolor=#CCCCCC>
<td width='10%' align='center'>主机名</td>
<td width='5%' align='center'>盘符号</td>
<td width='15%' align='center'>盘符标记</td>
<td width='10%' align='center'>总容量(GB)</td>
<td width='10%' align='center'>已用容量(GB)</td>
<td width='10%' align='center'>可用容量(GB)</td>
<td width='5%' align='center'>可用率 %</td>
</tr>
"
```

Add-Content \$diskReport \$tableHeader

Start processing disk space reports against a list of servers

```
foreach($computer in $computers)
{
$disk = Get-WmiObject -ComputerName $computer -Class Win32_LogicalDisk -Filter "DriveType = 3"
```

```
$computer = $computer.toupper()
foreach($disk in $disks)
{
$deviceId = $disk.DeviceID;
$volName = $disk.VolumeName;
$size = $disk.Size;
$freespace = $disk.FreeSpace;
```

```

$percentFree = [Math]::Round(($freespace / $size) * 100, 0);
$sizeGB = [Math]::Round($size / 1073741824, 0);
$freeSpaceGB = [Math]::Round($freespace / 1073741824, 0);
    $usedSpaceGB = $sizeGB - $freeSpaceGB;
    $color = $whiteColor;

# Set background color to Orange if just a warning
if($percentFree -lt $percentWarning)
{
    $color = $orangeColor

# Set background color to Orange if space is Critical
    if($percentFree -lt $percentCritical)
    {
        $color = $orangeColor
    }

# Create table data rows
    $dataRow = "
    <tr>
        <td width='10%'>$computer</td>
        <td width='5%' align='center'>$deviceId</td>
        <td width='15%'>$volName</td>
        <td width='10%' align='center'>$sizeGB</td>
        <td width='10%' align='center'>$usedSpaceGB</td>
        <td width='10%' align='center'>$freeSpaceGB</td>
        <td width='5%' bgcolor=`$color` align='center'>$percentFree</td>
    </tr>
"

Add-Content $diskReport $dataRow;
Write-Host -ForegroundColor DarkYellow "$computer $deviceId percentage free space = $percentFree";
    $i++
}
}
}

# Create table at end of report showing legend of colors for the critical and warning
$tableDescription = ""
Add-Content $diskReport $tableDescription
Add-Content $diskReport " </body> </html>"

# Send Notification if alert $i is greater then 0
if ($i -gt 0)
{
    foreach ($user in $users)
    {
        Write-Host "Sending Email notification to $user"

$smtpServer = "172.168.1.10"
$smtp = New-Object Net.Mail.SmtpClient($smtpServer)
$msg = New-Object Net.Mail.MailMessage
$msg.To.Add($user)

```

```

$msg.From = "zengchuixin@contoso.com"
$msg.Subject = "磁盘巡检情况报告 for $titledate"
$msg.IsBodyHTML = $true
$msg.Body = get-content $diskReport
$smtp.Send($msg)
$body = "磁盘巡检情况"
}
}

```

2) 输出结果

```

EX1601 C: percentage free space = 61
Sending Email notification to administrator@contoso.com

```

到邮箱中看收到的邮件



搜索 当前邮箱 (Ctrl+E) 当前邮箱

全部 未读 按日期 最新 ↓

今天

zengchuixin@con...
磁盘巡检情况报告 for 04-12-2... 17:15
磁盘空间巡检报告 for

两周前

Microsoft Outlook
未送达: test 2017/4/1
向以下收件人或组传递邮件失败:

回复 全部回复 转发

zengchuixin@contoso.com Administrator
磁盘巡检情况报告 for 04-12-2017 - 星期三

磁盘空间巡检报告 for 04-12-2017 - 星期三

主机名	盘符号	盘符标记	总容量(GB)	已用容量(GB)	可用容量(GB)	可用率 %
EX1601	C:		127	50	77	61