

3-3-9：每月巡检-服务器健康情况统计并输出HTML

作者简介

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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。

这个脚本同样可以每个月运行一次，查看服务器的健康状况。

可以生成exchange的健康报告，比如连通性、服务状态、数据库状态、DAG状态等。

下载地址是：Generate Health Report for an Exchange Server 2016/2013/2010 Environment

<https://gallery.technet.microsoft.com/scriptcenter/Generate-Health-Report-for-19f5fe5f>

官方说明的该脚本会测试包括如下几个项目：

General server health/uptime

Status of Exchange services

Transport queues and mail flow

Mailbox database status

Database Availability Group health

=====

默认情况下，如果直接运行脚本的话，是会把测试结果反馈到当前的屏幕上，如图。

```
Public Folder databases mounted: Pass
Mailbox databases mounted: Pass
MAPI connectivity: Success
Mail flow test: 成功
----- Finishing
```

714e31b22d6a496fb58e83757e44a634

也可以把结果以html格式的形式发送到自己的邮箱中，只需要我们修改脚本中的\$smtpsettings相关内容就行，如图。

```
$smtpsettings = @{
    To = "mailuser1@demo.com"
    From = "mailuser2@demo.com"
    Subject = "$reportemailsubject - $now"
    SmtpServer = "mail.demo.com"
}
```

f36c37fbc5b44584ba840126ce7afbfd

另外这个脚本是带example的，而且定义了param，所以也就意味着我们可以查看脚本的使用帮助信息，也可以在脚本后面跟参数。

具体来说，首先我们可以查看脚本的帮助信息，如图。

```
[PS] C:\>help .\Test-ExchangeServerHealth.ps1 -full

名称
    C:\Test-ExchangeServerHealth.ps1

摘要
    Test-ExchangeServerHealth.ps1 - Exchange Server Health Check Script.

语法
    C:\Test-ExchangeServerHealth.ps1 [[-Server] <String>] [[-ServerList] <String>] [[-ReportFile] <String>] [-ReportMode] [-SendEmail] [-AlertsOnly] [-Log] [<CommonParameters>]

说明
    Performs a series of health checks on Exchange servers and DAGs and outputs the results to screen, and optionally to log file, HTML report, and HTML email.

    Use the ignorelist.txt file to specify any servers, DAGs, or databases you want the script to ignore (eg test/dev servers).
```

6a198b94057f45859459642c12ee7596

在帮助信息中可以看到脚本参数的含义，以及脚本的example示例，如图。

```
参数
-Server <String>
    Perform a health check of a single server

    是否必需?           False
    位置?               1
    默认值
    是否接受管道输入?   false
    是否接受通配符?

-ServerList <String>

    是否必需?           False
    位置?               2
    默认值
    是否接受管道输入?   false
    是否接受通配符?

-ReportFile <String>
    Allows you to specify a different HTML report file name than the default.

    是否必需?           False
```

a73542d3c8c140439e9ee6958a26cd5b

```
----- 示例 1 -----

C:\PS>.\Test-ExchangeServerHealth.ps1

Checks all servers in the organization and outputs the results to the shell window.

----- 示例 2 -----

C:\PS>.\Test-ExchangeServerHealth.ps1 -Server H0-EX2010-MB1

Checks the server H0-EX2010-MB1 and outputs the results to the shell window
```

88d97577d78943dcbda159e579ff86ea

具体脚本的帮助信息在哪定义的呢，我们打开脚本，如图。

```

<#
.SYNOPSIS
Test-ExchangeServerHealth.ps1 - Exchange Server Health Check Script.

.DESCRIPTION
Performs a series of health checks on Exchange servers and DAGs
and outputs the results to screen, and optionally to log file, HTML report,
and HTML email.

Use the ignorelist.txt file to specify any servers, DAGs, or databases you
want the script to ignore (eg test/dev servers).

.OUTPUTS
Results are output to screen, as well as optional log file, HTML report, and HTML email

.PARAMETER Server
Perform a health check of a single server

.PARAMETER ReportMode
Set to $true to generate a HTML report. A default file name is used if none is specified.

.PARAMETER ReportFile
Allows you to specify a different HTML report file name than the default.

.PARAMETER SendEmail
Sends the HTML report via email using the SMTP configuration within the script.

.PARAMETER AlertsOnly
Only sends the email report if at least one error or warning was detected.

.PARAMETER Log
Writes a log file to help with troubleshooting.

.EXAMPLE
.\Test-ExchangeServerHealth.ps1
Checks all servers in the organization and outputs the results to the shell window.

.EXAMPLE
.\Test-ExchangeServerHealth.ps1 -Server HO-EX2010-MB1
Checks the server HO-EX2010-MB1 and outputs the results to the shell window.

.EXAMPLE
.\Test-ExchangeServerHealth.ps1 -ReportMode -SendEmail
Checks all servers in the organization, outputs the results to the shell window, a HTML
report, and
emails the HTML report to the address configured in the script.

.LINK
http://exchangeserverpro.com/powershell-script-health-check-report-exchange-2010

```

bc60459dfdb94e32a3585c29c047928d

脚本的param如图。使用【cmdletbinding()】来实现。

```

[CmdletBinding()]
param (
    [Parameter( Mandatory=$false)]
    [string]$Server,

    [Parameter( Mandatory=$false)]
    [string]$ServerList,

    [Parameter( Mandatory=$false)]
    [string]$ReportFile="exchangeserverhealth.html",

    [Parameter( Mandatory=$false)]
    [switch]$ReportMode,

    [Parameter( Mandatory=$false)]
    [switch]$SendEmail,

    [Parameter( Mandatory=$false)]
    [switch]$AlertsOnly,

    [Parameter( Mandatory=$false)]
    [switch]$Log
)

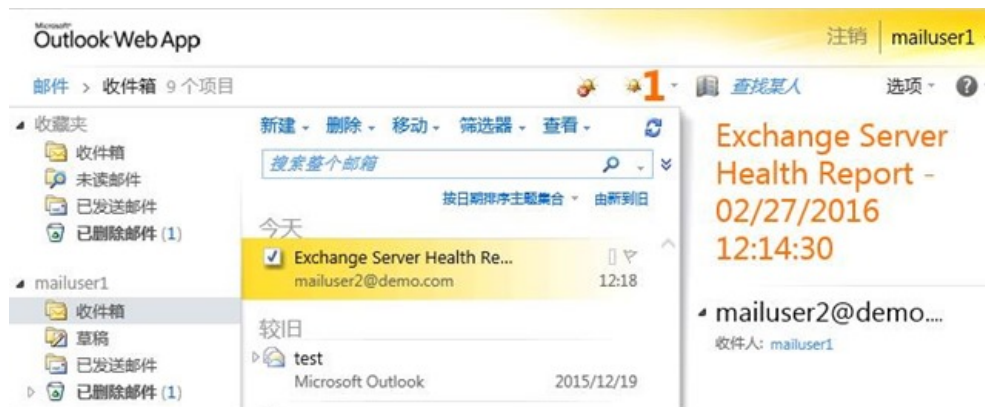
```

456471355fda4f29914a95c6492fa121

举个例子，首先我想生成报告并以邮件形式发送，输入命令：

[PS] C:\>.\Test-ExchangeServerHealth.ps1 -SendEmail

然后打开邮箱后，可以看到收到的报告。



59a7552ef02240bcb66809c2b3c0942

具体内容如图。可以清晰地看到那些测试项目失败，哪些是成功的。

C:\exchangeserverhealth.html - Internet Explorer

C:\exchangeserverhealth.html mailuser1 - 0... C:\exchang...

Exchange Server Health Check Report

Generated: 02/27/2016 12:18:10

Exchange Server Health Check Summary

The following server errors and warnings were detected.

- DAG01 - Mail flow test failed.
- DAG02 - Mail flow test failed.

Database Availability Group Health Check Summary

The following DAG errors and warnings were detected.

- db01 - unhealthy content index count is 2 (of 2)
- DB02 - unhealthy content index count is 2 (of 2)
- DB03 - unhealthy content index count is 1 (of 1)

Exchange Server Health

Server	Site	Roles	Version	DNS	Ping	Uptime (hrs)	Client Access Server Role Services	Hub Transport Server Role Services	Mailbox Server Role Services	Unified Messaging Server Role Services	Transport Queue	PF DBs Mounted	MB Mou
CAS01	Default-First-Site-Name	ClientAccess, HubTransport	Exchange 2010	Pass	Pass	60	n/a	n/a	n/a	n/a	Pass (0)	n/a	n/a
CAS02	Default-First-Site-Name	ClientAccess, HubTransport	Exchange 2010	Pass	Pass	60	n/a	n/a	n/a	n/a	Pass (0)	n/a	n/a
DAG01	Default-First-Site-Name	Mailbox	Exchange 2010	Pass	Pass	60	n/a	n/a	n/a	n/a	n/a	n/a	Pass
DAG02	Default-First-Site-Name	Mailbox	Exchange 2010	Pass	Pass	60	n/a	n/a	n/a	n/a	n/a	Pass	Pass

Database Availability Group dag-bj Health Summary:

Database	Mounted on	Preference	Total Copies	Healthy Copies	Unhealthy Copies	Healthy Queues	Unhealthy Queues	Lagged Queues	Healthy Indexes	Unhealthy Indexes
db01	DAG01	1	2	2	0	2	0	0	0	2
DB02	DAG01	1	2	2	0	2	0	0	0	2
DB03	DAG02	1	1	1	0	1	0	0	0	1

Database Availability Group dag-bj Health Details:

Database Copy	Database Name	Mailbox Server	Activation Preference	Status	Copy Queue	Replay Queue	Replay Lagged	Truncation Lagged	Content Index
db01 \DAG01	db01	DAG01	1	Mounted	0	0	False	False	Failed
db01 \DAG02	db01	DAG02	2	Healthy	0	0	False	False	Failed

b6fe9440e44344c0ad16aabda20e28a1

也可以直接生成HTML，如图。默认如果不指定HTML的名称，那就是默认的名称exchangeserverhealth，如图。

C:\exchangeserverhealth.html - Internet Explorer

C:\exchangeserverhealth.html mailu... C:\ex... C:\... ×

Exchange Server Health Check Report

Generated: 02/27/2016 12:18:10

Exchange Server Health Check Summary

The following server errors and warnings were detected.

- DAG01 - Mail flow test failed.
- DAG02 - Mail flow test failed.

Database Availability Group Health Check Summary

The following DAG errors and warnings were detected.

- db01 - unhealthy content index count is 2 (of 2)
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- DB03 - unhealthy content index count is 1 (of 1)

Exchange Server Health

4375a40c77d74b4ab7da138ae26872f1

利用这个报告可以清楚看到当前exchange环境中有哪些健康问题。