



MATRIX[®]
CORPORATION

Mikrotik Script

Leandro Rocha

- Analista de Redes e Sistemas na Matrix Corporation.

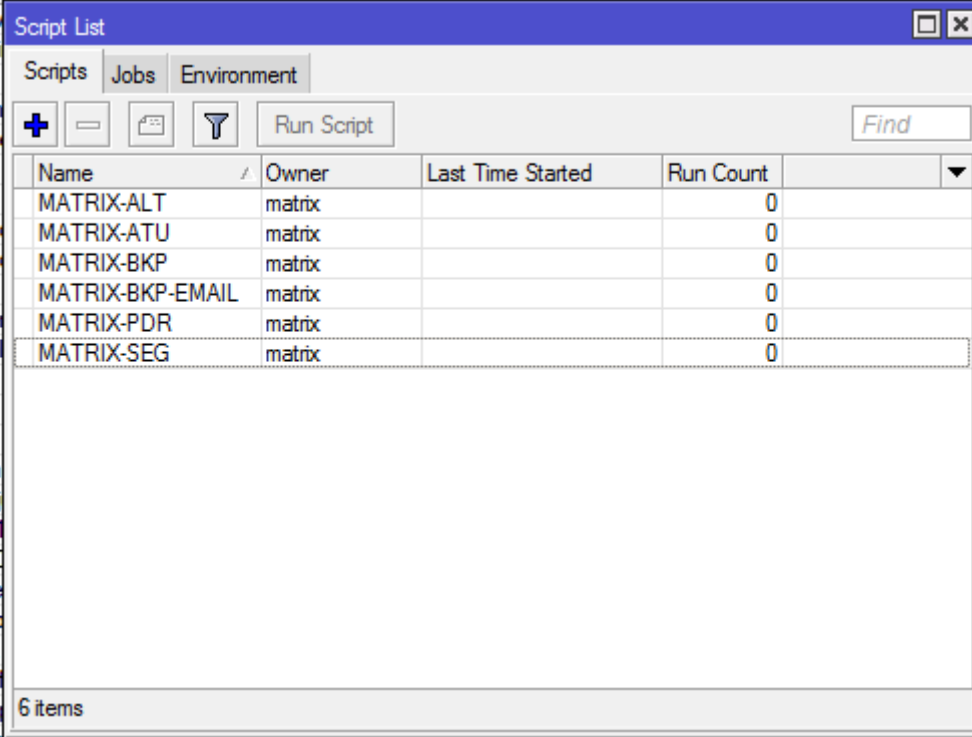
Meu setor é responsável por automações e desenvolvimento de soluções para o NOC e clientes da Matrix.

Scripting

Características

- Baixo processamento.
- Fácil aprendizado.
- Documentação oficial bem documentada.
- Integra com outras aplicações no RouterOS.
- Execução automática através de Scheduler.
- Política de execução.

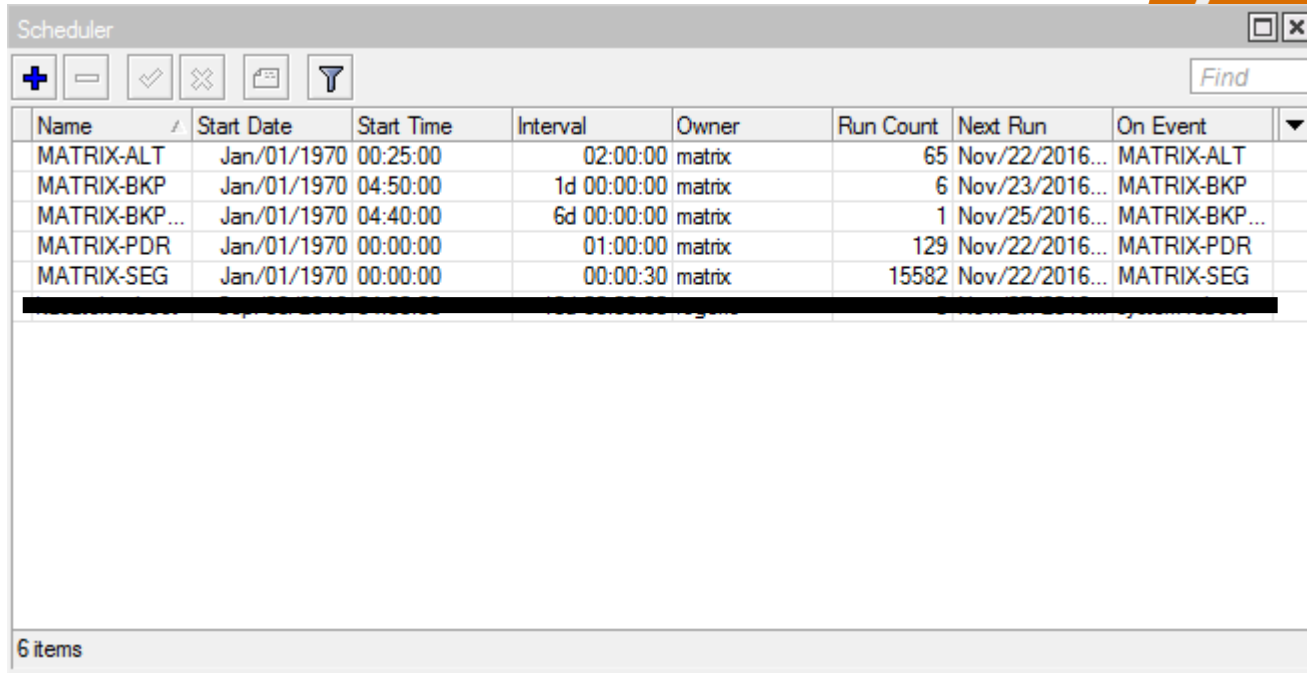
System>Scripts



The screenshot shows a window titled "Script List" with a blue header bar. Below the header are tabs for "Scripts", "Jobs", and "Environment". A toolbar contains icons for adding (+), removing (-), refreshing, and filtering, along with a "Run Script" button and a "Find" search box. The main area is a table with columns: Name, Owner, Last Time Started, Run Count, and a dropdown arrow. The table lists six scripts, all owned by "matrix" and with a "Run Count" of 0. The status bar at the bottom indicates "6 items".

Name	Owner	Last Time Started	Run Count	
MATRIX-ALT	matrix		0	
MATRIX-ATU	matrix		0	
MATRIX-BKP	matrix		0	
MATRIX-BKP-EMAIL	matrix		0	
MATRIX-PDR	matrix		0	
MATRIX-SEG	matrix		0	

System>Scheduler



The screenshot shows the Windows Task Scheduler window. The title bar reads "Scheduler". Below the title bar is a toolbar with icons for adding (+), deleting (-), enabling (checkmark), disabling (X), creating a new task (calendar), and filtering (funnel). A search box labeled "Find" is on the right. The main area contains a table of tasks. The table has columns for Name, Start Date, Start Time, Interval, Owner, Run Count, Next Run, and On Event. The tasks listed are MATRIX-ALT, MATRIX-BKP, MATRIX-BKP..., MATRIX-PDR, and MATRIX-SEG. The status bar at the bottom indicates "6 items".

Name	Start Date	Start Time	Interval	Owner	Run Count	Next Run	On Event
MATRIX-ALT	Jan/01/1970	00:25:00	02:00:00	matrix	65	Nov/22/2016...	MATRIX-ALT
MATRIX-BKP	Jan/01/1970	04:50:00	1d 00:00:00	matrix	6	Nov/23/2016...	MATRIX-BKP
MATRIX-BKP...	Jan/01/1970	04:40:00	6d 00:00:00	matrix	1	Nov/25/2016...	MATRIX-BKP...
MATRIX-PDR	Jan/01/1970	00:00:00	01:00:00	matrix	129	Nov/22/2016...	MATRIX-PDR
MATRIX-SEG	Jan/01/1970	00:00:00	00:00:30	matrix	15582	Nov/22/2016...	MATRIX-SEG

Policies

- Define as permissões do script/scheduler.

Policy: ftp reboot
 read write
 policy test
 password sniff
 sensitive romon
 dude

Cenários Práticos

- Configuração de CPE.
 - Criação das configurações padrões.
 - Firewall padrão.
 - Padronizar Wireless.

Configuração de CPE

The screenshot displays the Mikrotik WinBox interface with several configuration windows open:

- Firewall:** Shows a list of 16 firewall rules. Rule 0 is highlighted, showing an 'add...' action on the 'input' chain.
- PPP:** Shows the configuration for the 'pppoe-out1' interface, set as a 'PPPoE Client'.
- UPnP Settings:** A dialog box with 'Show Dummy Rule' checked and 'Enabled' unchecked.
- Script List:** A table listing scripts with their owners, last run times, and counts.
- DHCP Server:** Shows the configuration for the 'dhcp1' server on the 'bridge-lan' interface.

Name	Owner	Last Time Started	Run Count
MATRIX-ALT	matrix	Nov/23/2016 10:45:00	1004
MATRIX-ATU	matrix		0
MATRIX-BKP	matrix	Nov/23/2016 01:40:00	84
MATRIX-BKP...	matrix	Nov/19/2016 01:30:00	14
MATRIX-PDR	matrix	Nov/23/2016 12:00:00	2011
MATRIX-SEG	matrix	Nov/23/2016 12:40:00	241282

Name	Interface	Relay	Lease Time	Address Pool	Add AR...
dhcp1	bridge-lan		01:00:00	dhcp_pool1	no

Cenários Práticos

- Backup automático.
 - Com horário predefinido.
 - FTP/Email.

Backup Automático



Cenários Práticos

- Verificação de configurações periodicamente.
 - Regras de Firewall.
 - Interface Wireless.
 - Usuários do RouterOS.

Padronização

Sem padronização



Com padronização



Cenários Práticos

- Alterações de forma massiva na rede.
 - Adição/Remoção de usuários.
 - Adição/Remoção no firewall.
 - Adição de classes em address-list.

Alteração em Massa



Cenários Práticos

- Envio de notificações via e-mail.
 - Alarmes com condicionais, ex: CCQ < 70%.
 - Acesso ao equipamento.
 - Gargalo no Link.

Exemplo

Padronizar Interface Ethernet

- Objetivo:
 - Manter padrão no nome das interfaces.
 - Rodar periodicamente garantindo o nome default das interfaces.

Exemplo

Padronizar Interface Ethernet

The image shows two windows from a network management tool. The left window, titled 'Schedule <Sch_Exemplo_Mum>', is used for scheduling tasks. It contains the following fields and controls:

- Name: Sch_Exemplo_Mum
- Start Date: Jan/01/1970
- Start Time: 00:00:00
- Interval: 01:00:00
- Owner: leandro.rocha
- Policy: ftp, reboot, read, write, policy, test, password, sniff, sensitive, romon, dude
- Run Count: 0
- Next Run: Nov/24/2016 21:00:00
- On Event: Exemplo_Mum
- Buttons: OK, Cancel, Apply, Disable, Comment, Copy, Remove

The right window, titled 'Script <Exemplo_Mum>', is used for defining the script to be executed. It contains the following fields and controls:

- Name: Exemplo_Mum
- Owner: leandro.rocha
- Policy: ftp, reboot, read, write, policy, test, password, sniff, sensitive, romon, dude
- Last Time Started: Nov/24/2016 20:54:56
- Run Count: 1
- Source:

```
:global identity [/system identity get name];
foreach i in= [/interface ethernet find] do={
local nameatuale [/interface ethernet get $i name];
local namecertoe [/interface ethernet get $i default-name];
local comentarioe [/interface ethernet get $i comment];
#log info (nameatuale);
if ($nameatuale != $namecertoe) do={
/interface ethernet set $i name=$namecertoe comment="$comentarioe - $nameatuale";
}
}
```
- Buttons: OK, Cancel, Apply, Comment, Copy, Remove, Run Script

At the bottom left of the schedule window, the word 'enabled' is displayed.

Exemplo

Padronizar Interface Ethernet

```
:global identity [/system identity get name];
:foreach i in=[/interface ethernet find] do={
:local nameatuale [/interface ethernet get $i name];
:local namecertoe [/interface ethernet get $i default-name];
:local comentarioe [/interface ethernet get $i comment];
#:log info (nameatuale);
:if ($nameatuale != $namecertoe) do={
/interface ethernet set $i name=$namecertoe comment="$comentarioe - $nameatuale";}
}
```

Por que utilizar?

- Reduzir esforço.
- Automatizar tarefas rotineiras.
- Integrar com outros sistemas.
 - Zabbix
 - SmartISP
 - Nagios
 - PRTG
 - Zendesk

31 9 7345 5228 – 31 2517 3550
leandro.rocha@matrixdobrasil.com.br

Obrigado!

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