



MATRIX[®]
CORPORATION

Mikrotik Script

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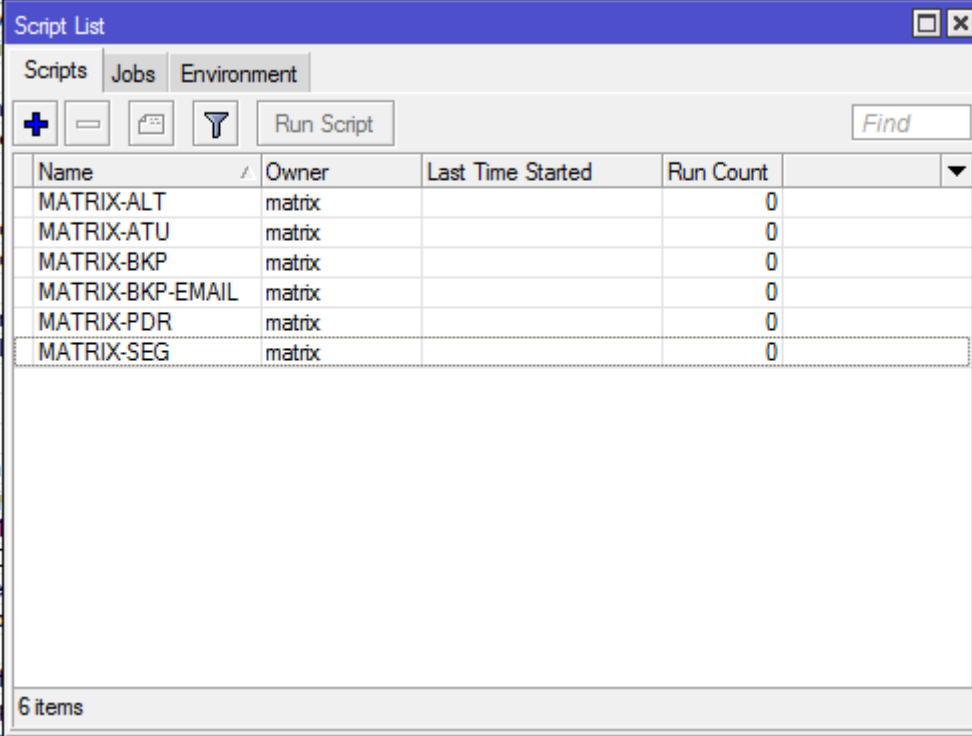
Meu setor é responsável por automações e desenvolvimento de soluções para o NOC e clientes da Matrix.

Scripting

Características

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

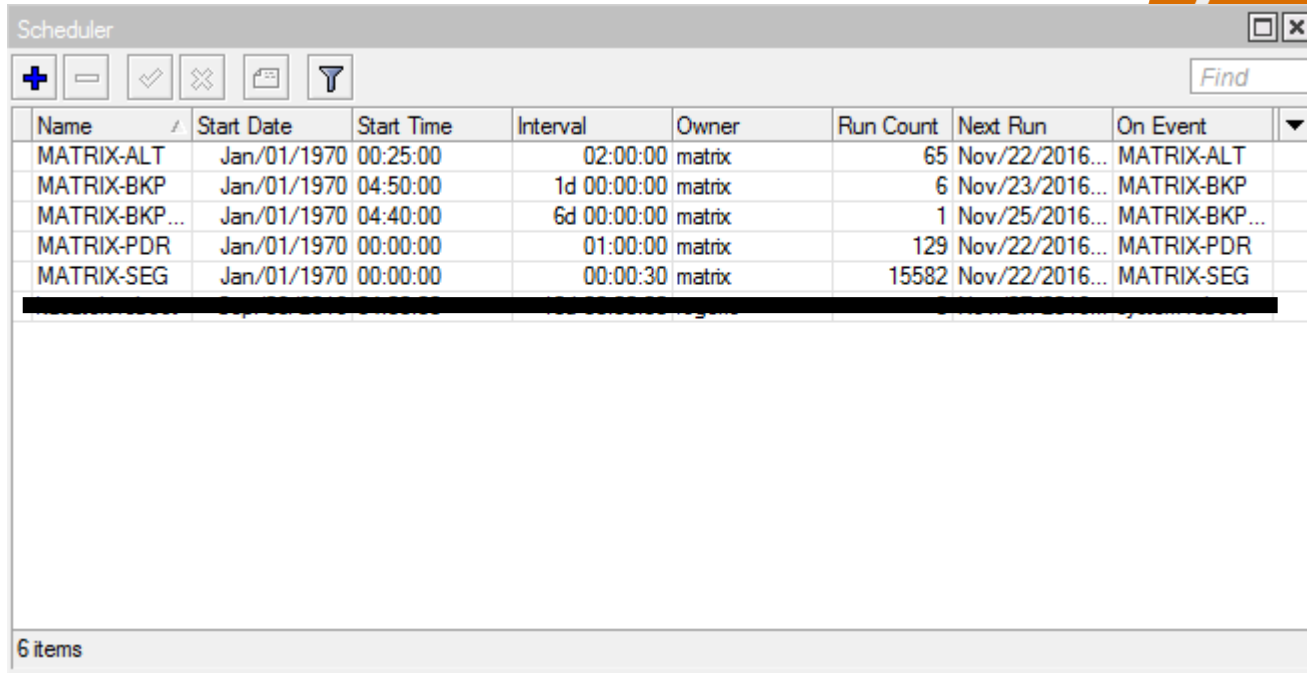
System>Scripts



The screenshot shows a window titled 'Script List' with a blue header bar. Below the header are tabs for 'Scripts', 'Jobs', and 'Environment'. The 'Scripts' tab is active. The window contains a table with the following 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 application 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 scheduled 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

6 items

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 action 'add...' on the 'input' chain. Rules 1-7 are 'drop' actions on the 'input' chain for various protocols and ports.
- 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

Schedule <Sch_Exemplo_Mum>

Name: OK

Start Date: Cancel

Start Time: Apply

Interval: Disable

Owner: Comment

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

Run Count: Copy

Next Run: Remove

On Event:

Exemplo_Mum

enabled

Script <Exemplo_Mum>

Name: OK

Owner: Cancel

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

Last Time Started: Apply

Run Count: Comment

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";
  }
}
```

Remove

Run Script

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

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Obrigado!

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