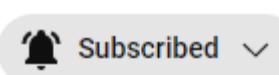


<https://MikroTikScripting.com>



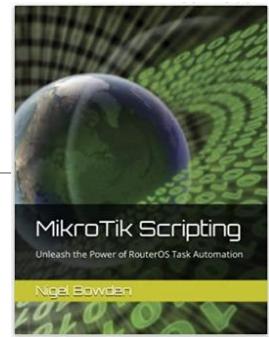
MikroTik Scripting

LESSON 1 - DEVELOPMENT ENVIRONMENT

Assumptions

Prerequisites/assumptions for this video series:

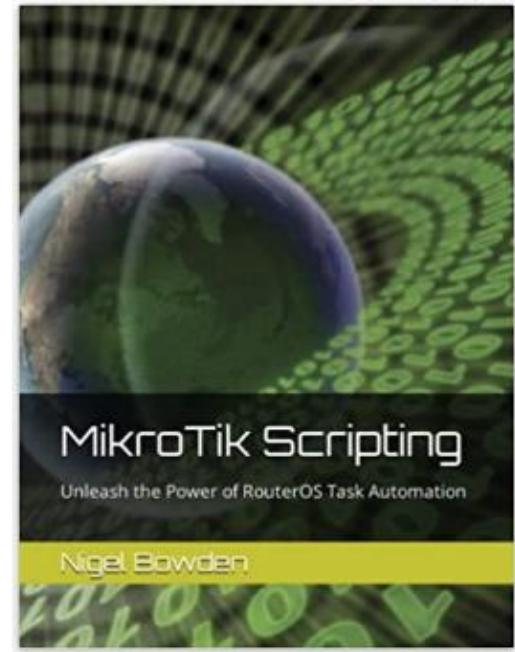
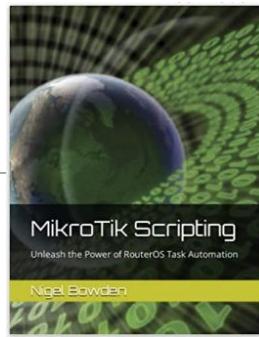
- You're a network engineer/admin/student who is familiar with:
 - RouterOS
 - Mikrotik configuration commands
 - Winbox
- Have access to a Mikrotik device to practice with
- May be using either v6 or v7 in your environment



MikroTik Scripting Book

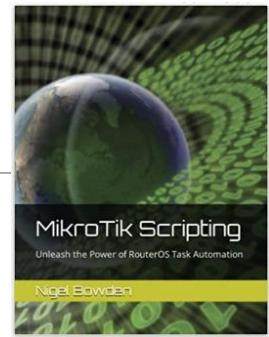
Quick plug!

- How to develop your own scripts for MikroTik
 - Even if you're not a developer
- Comprehensive coverage of development approaches & scripting commands
- Plenty of code examples
 - All available on GitHub!
- Visit <https://MikrotikScripting.com>
 - Print & Kindle versions available
 - (Download the cheatsheet too"!)



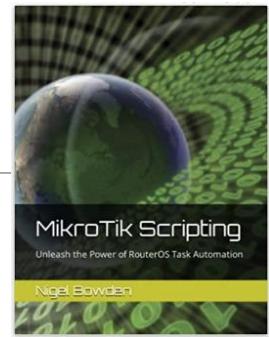
Why create RouterOS scripts?

- Automate complex configuration tasks
- Create own utilities
 - e.g. monitoring & alerting scripts
- Extend the functionality of RouterOS
- Automate administration tasks
- Automate repetitive tasks
- Create reporting data



What is a script?

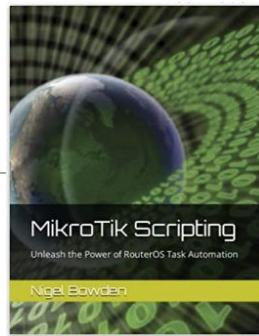
- Simple text file
- Contains series of commands
- Command types:
 - Configuration commands (e.g. /interface ethernet print)
 - Global commands (e.g. :log warn “Interface is down”)
- Script may be run from:
 - Scheduler
 - Script repository
 - CLI



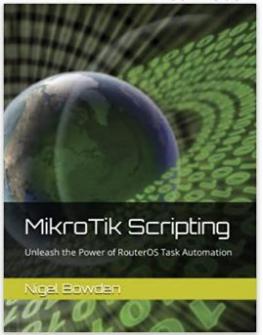
Simple Script: Config Commands

- Create 10 VLANs using RouterOS configuration commands

```
/interface vlan add name=vlan501 vlan-id=501 interface=ether5
/interface vlan add name=vlan502 vlan-id=502 interface=ether5
/interface vlan add name=vlan503 vlan-id=503 interface=ether5
/interface vlan add name=vlan504 vlan-id=504 interface=ether5
/interface vlan add name=vlan505 vlan-id=505 interface=ether5
/interface vlan add name=vlan506 vlan-id=506 interface=ether5
/interface vlan add name=vlan507 vlan-id=507 interface=ether5
/interface vlan add name=vlan508 vlan-id=508 interface=ether5
/interface vlan add name=vlan509 vlan-id=509 interface=ether5
/interface vlan add name=vlan510 vlan-id=510 interface=ether5
```



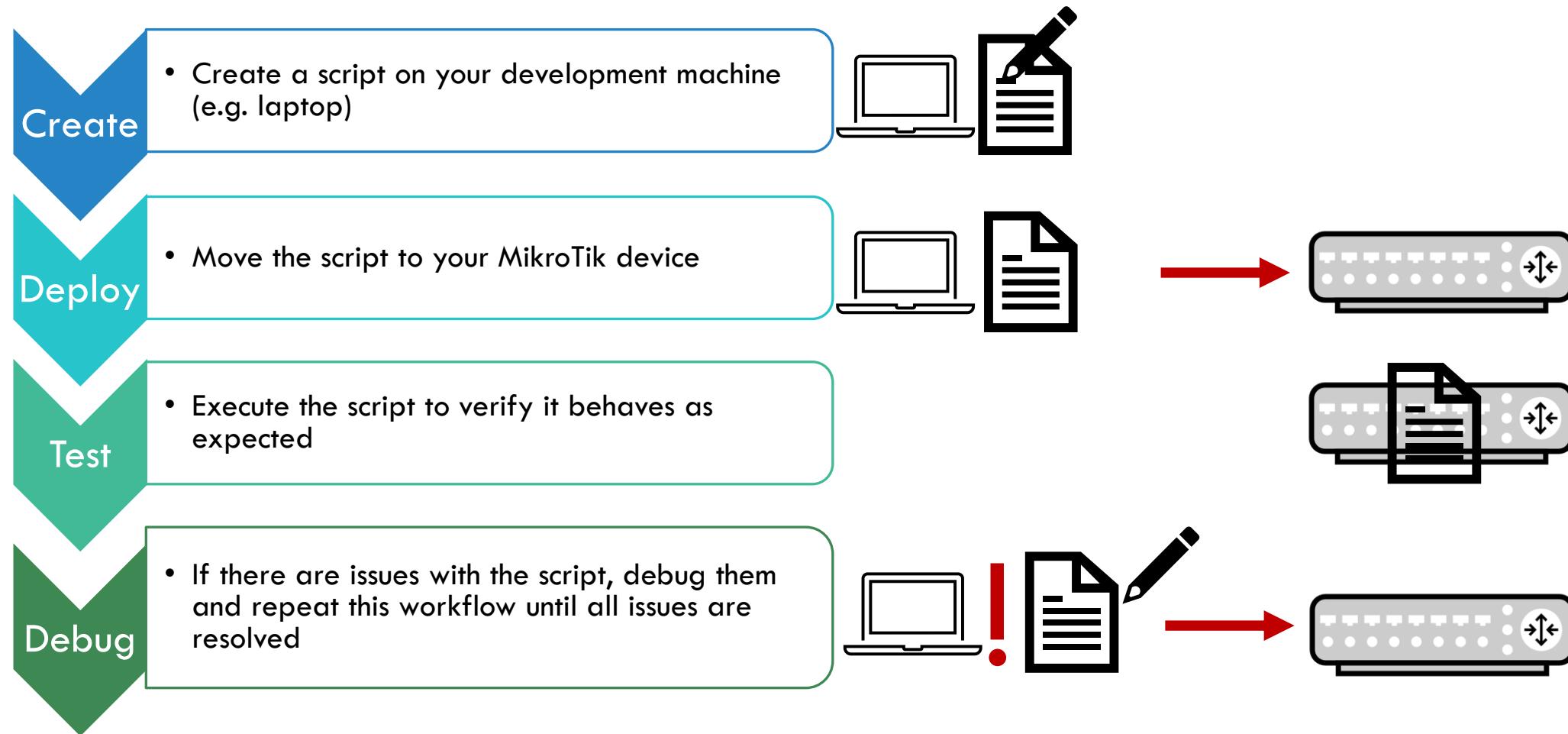
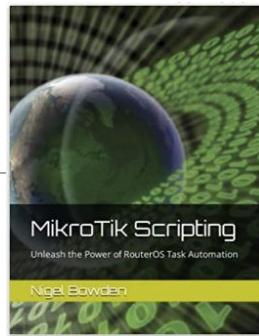
Simple Script: Config & Global Commands



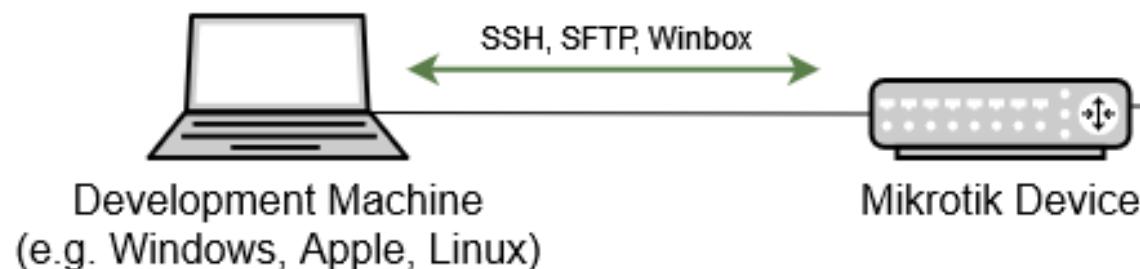
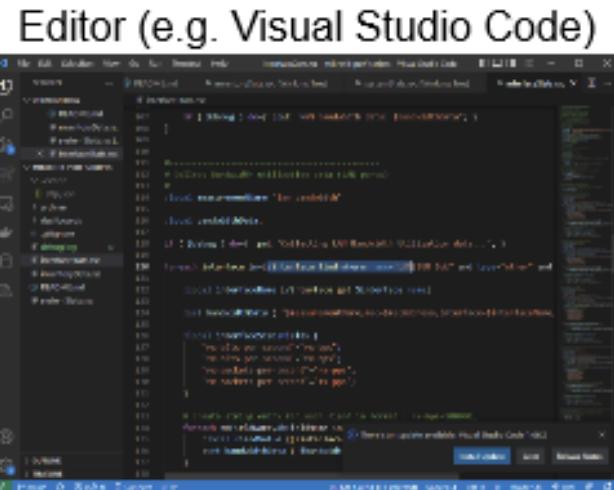
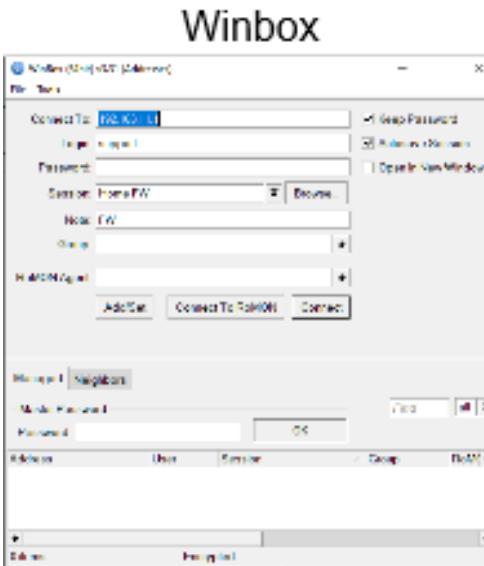
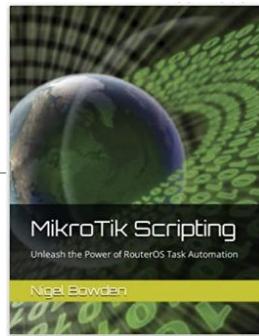
- Create 10 VLANs using RouterOS configuration & global commands

```
# create a for loop to add VLANs
:for VlanId from=500 to=510 do={
    :local VlanName ("vlan" . $VlanId);
    /interface vlan add name=$VlanName vlan-id=$VlanId interface=ether5;
}
```

Development Workflow



Development “Lab”



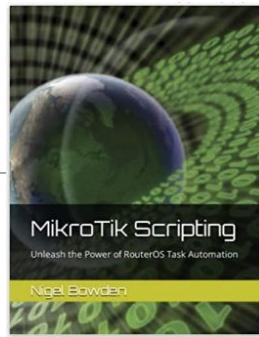
Lab Components

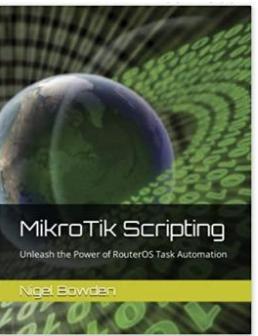
- **Development machine**
 - Windows, macOS or Linux
 - Winbox
 - Microsoft Visual Studio Code (VSC)
- **MikroTik device**
- **Internet Connection**

Configure Development Lab

Configuration tasks:

- Set up Mikrotik device on lab network
- Development machine:
 - Install Winbox: <https://mikrotik.com/download>
 - (Linux) <https://snapcraft.io/winbox>
 - (MacOS)
<https://help.mikrotik.com/docs/display/ROS/Winbox#Winbox-RunWinboxonmacOS>
 - Install Visual Studio Code: <https://code.visualstudio.com/download>
 - Ensure development machine has access to Internet & MikroTik device





<https://MikroTikScripting.com>



Subscribed



Lesson Complete

LESSON 1 - DEVELOPMENT ENVIRONMENT