RouterOS and USB Devices

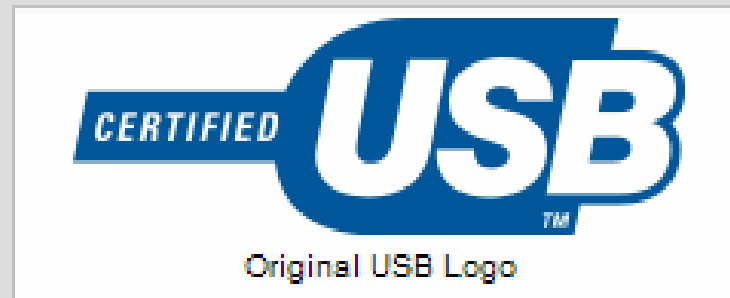Original USB Logo

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MikroTik

Supported USB Devices

- USB Peripheral Devices:
  - UPS
  - Ethernet Controllers
  - Flash Disks
  - HSDPA/EDGE/GPRS Modems
- USB Hosts running RouterOS:
  - Any x86 hardware (PC)
  - RouterBoard 230
  - RouterBoard 433U - new!

UPS Control

- Similar to the "old" style over serial port
- Requires the ups-3.x.npk or ups-2.9.x.npk software package installed

UPS Configuration

UPS Status

UPS

	Name ▲	Port	Model	Offline After	Load [%]	On Li...	▼
!	ups1	usb1	Back-UPS BR 800 FW:9.o2 .I USB FW:o2		33	yes	

UPS <ups1>

General | Model | **Status**

Field	Value
Transfer Cause:	
Run Time Left:	00:15:19
Offline After:	
Battery Charge:	100 %
Battery Voltage:	27 V
Line Voltage:	27 V
Ouput Voltage:	230 V
Load:	33 %
Temperature:	29 C
Frequency:	50 Hz

☑ On Line
☐ On Battery

☐ Repleace Battery
☐ Smart Boost
☐ Smart Trim
☐ Overload
☐ Low Battery

OK
Cancel
Apply
Disable
Copy
Remove
Beep

USB Ethernet

- RouterOS Supports:
  - Planet 10/100Base-TX USB Ethernet Adapter UE-9500
  - Linksys Instant EtherFast 10/100 USB Network Adapter USB100TX
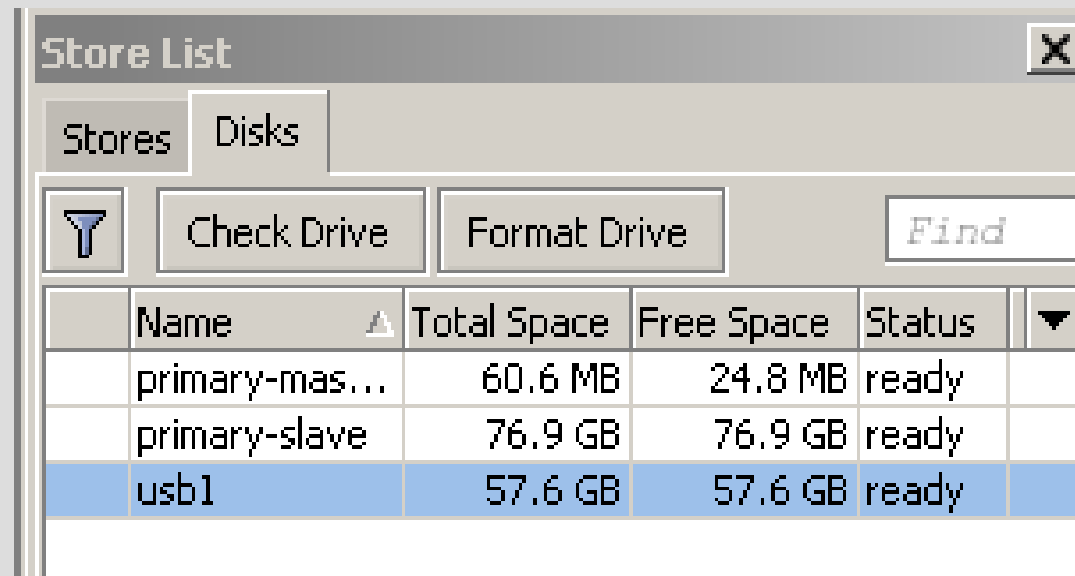- See the Device Driver List in the RouterOS Manual

USB Flash Disk

- Booting from Flash, if the hardware supports it
- Storage for proxy cache
- USB storage shows up under the new **/store disk** menu (since ROS V3.15)
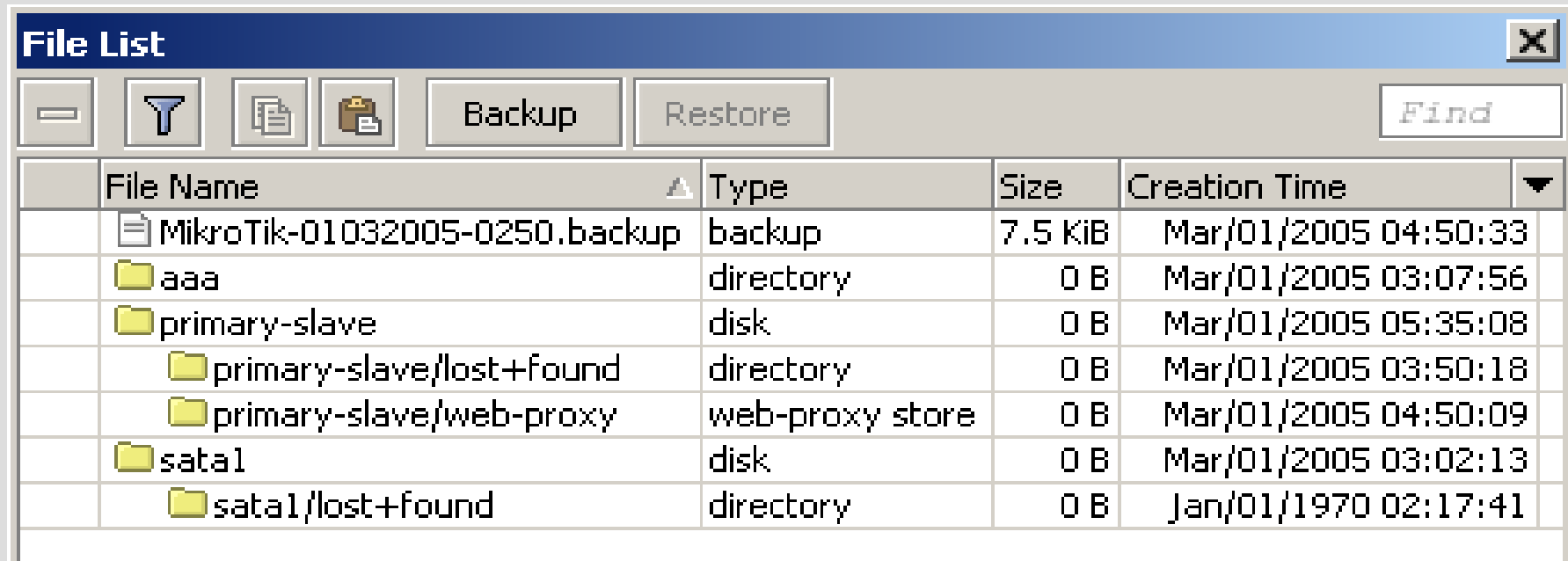
Store Menu

- USB storage shows up under the new **/store disk** menu (since ROS V3.15)

Accessing External Storage

File Name	Type	Size	Creation Time
MikroTik-01032005-0250.backup	backup	7.5 KiB	Mar/01/2005 04:50:33
aaa	directory	0 B	Mar/01/2005 03:07:56
primary-slave	disk	0 B	Mar/01/2005 05:35:08
primary-slave/lost+found	directory	0 B	Mar/01/2005 03:50:18
primary-slave/web-proxy	web-proxy store	0 B	Mar/01/2005 04:50:09
sata1	disk	0 B	Mar/01/2005 03:02:13
sata1/lost+found	directory	0 B	Jan/01/1970 02:17:41

- USB storage can be accessed through the **/file** menu, where it shows up as a folder

HSDPA/EDGE/GPRS Modems

- HUAWEI E220
- TELTONIKA

GSM Modem Applications

- Main link to the Internet
- Backup link
- Sending SMS from the router (V3.0rc11)
- Receiving SMS on the router and executing scripts (to be implemented)

Main Link over GSM

- Suitable for locations where WiFi or DSL cannot be used:
  - rural areas
  - public transport
  - in your car
  - hotel with overpriced Internet access

Backup Link over GSM

- In case the main link goes down router can be configured to use data connection over GSM network

Sending SMS over GSM Modem

- Signaling the network status by sending SMS text not to a SMS-to-email gateway, but through the GSM network

GSM Modem Applications

Configuring the PPP

Configuring the PPP (2)

Sending SMS from Router

- Command line example to send an SMS:
  - /tool sms send usb3 "29111222" message="Help!"
- Additional arguments can be specified:
  - smsc=<number> is number of the SMS service center
  - type=<value> is for adjusting SMS properties. Currently only class 0 SMS messages are supported, thus, type=class-0 by default
- SMS cannot be sent while the port is used by other service (PPP or terminal)

Troubleshooting GPRS

- Can you talk to the modem at all?
  - Use serial terminal on usb port and try to issue some AT commands (AT, ATI, AT+CPIN=?
- Is the SIM card requiring to enter the PIN?
  - Disable PIN request, or,
  - Include it into the modem initialization string
- Consult
  - Any GPRS AT Command Reference
  - MikroTik WIKI

Questions and Suggestions

- Ideas for more applications
  - ...
  - ...
- Additional feature suggestions
  - ...
  - ...
- Thank you!