Transparently Bridge two Networks

From MikroTik Wiki

Remote networks can be easily bridged using WDS feature of MikroTik RouterOSTM. We will show it for the case when the networks are connected through Atheros wireless interface. Using EoIP, the can be extended to any other type of interfaces, like PPTP and CISCO/Aironet. WDS works only on Prism and Atheros based cards.

Let us assume the following network setup:



Follow the steps below to create transparent bridge using WDS:

1. Create a bridge interface on AP and add ether1 interface to the bridge in WinBox

	admin@192.168	I.0.1 - WinBox	_ _ ×
5	æ		a
	Interfaces		
	Wireless		
	Bridge	Bridge	×
	PPP	Bridges Ports Filters Broute NAT Hosts	
	IP 下		
	Ports		
	Queues	R 12wds-bridge 00:00:00:00:00 no	
	Drivers	Interface cude bridges	
	System 🗅	Consult are put to a	
	Files	General STP Status Traffic	ОК
	Log	Name: w/ds-bridge	Cancel
	SNMP	Type: Bridge	Apply
	Users	MTU: 1500	Direbia
	Radius		
	Tools 🗅	ARP: jenabled	Comment
×	New Terminal		Сору
Bo	Telnet		Remove
Vin	Password		
\geq	Certificate		
õ	Make Supout.rif	disabled running	
ē	Manual		
no	Routing		
Ř	Exit		

andge Bridges Ports Filters Broute	NAT Hosts	
+ - VX C	Bridge Port <unknown></unknown>	×
	General Status	ок
	Interface: ether1	Cancel
	Bridge: wds-bridge	Apply
	Priority: 128	Disable
	Path Cost 10	Comment
	tantaran lia	Сору
		Remove
	disabled disabled	

or in console

```
[admin@AP]> interface bridge add name=wds-bridge
[admin@AP]> interface bridge port add interface=ether1 bridge=wds-
bridge
```

Do the same on the Station, and add ether1, wlan1 interfaces to the bridge in Winbox

Brid	ge											×
Brid	ges	Ports	Filters	Broute	NAT	Host	ts					
÷	-		× 1									
	Inter	face	Δ	Bridge			Priority	Path Cost	Status			
	4 ±te	ther1		wds-bri	dge		128	10	forwarding			
	<u>4</u> ±∿v	vlan1		wds-bri	dge		128	10	forwarding			

or in console

[admin@Station]> interface bridge add name=wds-bridge [admin@Station]> interface bridge port add ether1 bridge=wds-bridge [admin@Station]> interface bridge port add wlan1 bridge=wds-bridge

2. Make sure you have communication between MikroTik routers, i.e., one router is configured as server (AP), the other one as client (station). Configure wireless interface wlan1 on AP in WinBox

Interfaces	Wireless Tables	Interface <wlan1></wlan1>			×
Wireless	Interfaces Access List	General Wireless	Data Rates Advanced VVI)S	ок
Bridge	+ * * 6	Radio Name	000868308444		Cancel
PPP	Name	Table Tame.			
IP Þ	X (Privilant) V	Mode:	bridge	<u> </u>	Apply
Ports	X •••wlan2 v	SSID:	MikroTik		Enable
Queues		Band:	5GHz	-	Comment
System		Frequency:	5805	*	Scan
Files		Scan List:	-		Freq. Usage
Log		Security Profile:	default	•	Align
SNMP					Spiff
Users		Frequency Mode:	manual txpower	•	Spooper
Radius	_	Country	Do country set		Shooper
Tools 🕴		Country.	Ino_country_set		
New Terminal		Antenna Gain:	0	dBm	
Telnet					
Password		DFS Mode:	none		
Certificate		Default AP Ty Rate	-	- hns	
Make Supout.rif		Derduit Ar TX Rate.			
Manual		Default Client Tx Rate:		bps	

or in conslole

```
[admin@AP]> interface wireless set wlan1 ssid=MikroTik frequency=5805
\
... mode=bridge disabled=no
```

Do the same configuration on Client wireless interface (wlan1) in Winbox

Seperal	Mireless	Date Pates Advensed MDS	
senerai	1 11 01000	Data Nates Advanced VVDS	. Г
	Radio Nam	e: 000B6B35E55C	Cancel
	Mod	e: station wds 💌	Apply
	SSI	D: 🔽 MikroTik	Disable
	Ban	d: 5GHz 💌	Comment
	Frequenc	y; 5180 💌	Scan
	Scan Lis	st: Г	Freq. Usage
Se	curity Profil	e: default	Align
			Sniff
Frec	luency Mod	e: superchannel 💌	Snooper
	Countr	y: no_country_set 📃	
A	kntenna Gai	n: 0 dBn	1
	DFS Mod	e: none 💌	[
Defaul	t AP Tx Rat	e: 🗂 bps	
efault C	lient Tx Rat	e: 🗂 bps	
		Default Authenticate	
		F Hide SSID	
rablad	la innina	searching for petwork	

or in console

[admin@Station] interface wireless> set wlan1 mode=station-wds \
\... ssid=MikroTik disabled=no

3. Create wds interface on AP and add the interface to the bridge in WinBox

Advanced WDS Nstreme Tx Power Status	с. ОК
WDS Mode: dynamic	Cancel
WDS Default Bridge: wds-bridge	Apply
VADS Default Cost: 100	Disable
WDS Cost Range: 50-150	Comment
	Scan
1 WDS ignore SSID	Freq. Usage.
	Align
	Sniff
	Snooper

or in console

[admin@AP] interface wireless> set wlan1 wds-mode=dynamic \
\... wds-default-bridge=wds-bridge

4. Check whether the WDS link is established in WinBox

nterfaces A	ccess List	Registration	Connect Lis	t Security Profiles				
+	 × 	0						
Name	4	Туре	MTU	MAC Address	Mode	Band	Frequen	SSID
R &-pwlan	t	Wireless (Athe	r 1500	00:0B:6B:30:B4:A4	bridge	SGHz	5805MHz	MikroTik
DRA ∢-≽w	ds1	WDS	1500	00:0B:6B:30:B4:A4				
X 🔹 🗱 🕹 🕷	2	Wireless (Ather	r 1500	00:0B:6B:31:52:69	station	5GHz	5180MHz	MikroTik

or in console

wds-address=00:0B:6B:35:E5:5C

nterfaces		02			
Wireless		Address List			
Bridge		+ - 🗸 🛛	1 1 1		
PP		Address	A Network	Broadcast	Interface
P 🕨	Addresses	<mark>+</mark> 192.168.0	1/24 192.168.0.0	192.168.0.255	ether1
Ports	Routes				
Queues	Pool		New Address		×
Drivers	ARP		Address 10.1.0	215/24	OK
System 🕒	VRRP				
Files	Firewall		Network:		Cancel
Log	Socks		Broadcast:		Apply
SNMP	UPnP		Interface: wds-l	oridge 💌	Disable
Jsers	Traffic Flow				Comment
Radius	Accounting			L.	Common
Tools 🕑	Services			Ļ	Сору
New Terminal	Packing			L	Remove
Felnet	Neighbors		disabled		
Password	DNS		a n		
Certificate	Proxy				
Make Supout.rif	DHCP Client				
Manual	DHCP Server				

4. Add IP address on AP in WinBox

or in console

[admin@AP]> ip address add address=10.1.0.215/24 interface=wds-bridge

And on Station:

[admin@Station]> ip address add address=10.1.0.216/24 interface=wds-bridge

5. Test the bridge by pinging from 10.0.0.215 to 10.0.0.216. Note, that the bridge needs 10...30s to learn addresses and start passing through traffic.

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