

# How to setup bandwidth control function in DSR

This scenario is about customers intended to ensure important applications with Email, Web and file transfer that can obtain guarantee bandwidth for business requirement in LAN environment. And also, Email communication is their first priority; Web application is second priority and file transfer is third priority depends on company policy.

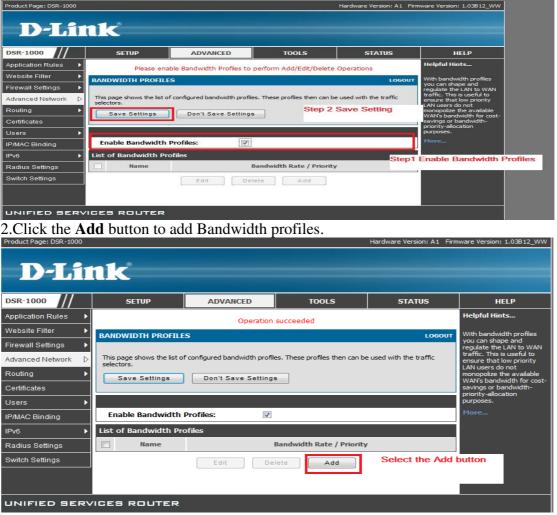
### [Topology]:

PC1(192.168.10.100)----DSR-1000WAN1(1.1.1.1)-----(1.1.1.2) Iperf\_Server

### DSR-firmware:1.03.B12

### [Configuration]:

1.Under the **ADVANCED->Advanced Network-> Traffic Management ->Bandwidth Profiles**, select **Enable Bandwidth Profiles** and click **Save settings**.



# 3.Specify the Name, Profile Type and Minimum Bandwidth Rate, Maximum bandwidth Rate, WAN Interface like as follows and click the Save Settings:

**3a.Name:** This field is the unique identifier for the profile.

**3b.Profile Type:** This field is to specify if the profile is a rate controlling profile or a priority controlling profile. Rate control will allow the User to define a minimum and maximum rate in Kbps and the internet pipeline availability is accordingly bounded. For a Priority type profile the exact rate itself is not bounded rather associated traffic is allocated to pre-defined priority segments to ensure available bandwidth is first consumed first by the highest priority segment.



**3c.Priority:** This is the priority of the traffic to set the bandwidth rate on. Choose from low, medium and high priorities.

**3d.Minimum Bandwidth Rate:** This field is the minimum bandwidth value in Kbps for the profile

**3e.Maximum Bandwidth Rate:** This field is the maximum bandwidth value in Kbps for the profile.

**3f.WAN Interface:** The WAN interface on which the bandwidth limiting profile is to be applied. Choose from Dedicated WAN (WAN1) or Configurable WAN (WAN2).

Product Page: DSR-1000					Hardware Version: A1 Firm	ware Version: 1.03B12_WW
D-Liı	nk					
DSR-1000	SETUP	ADVANCED	TOOL	s	STATUS	HELP
Application Rules						Helpful Hints
Website Filter 🕨 🕨	BANDWIDTH PROFILE	s			LOGOUT	The new configured
Firewall Settings	This page allows user to a	dd a new bandwidth profile.				bandwidth profile can be attached to a traffic
Advanced Network D	Save Settings	Don't Save Setting	s			selector for bandwidth management on the router.
Routing ►						More
Certificates	Bandwidth Profile Co	nfiguration				
Users 🕨	Name:	Bar	ndwidth			
IP/MAC Binding	Profile Type:	Ra	te 👻			
IPv6	Priority:	Me	dium 👻			
Radius Settings	Minimum Bandwidt	h Rate: 1				
Switch Settings				(1 - Max. B	andwidth Kbps)	
	Maximum Bandwid	th Rate: 100	00	(100 - 1000	000 Kbps)	
	WAN Interface:	De	dicated WAN	-		
UNIFIED SERV	ICES ROUTER					

4. After click Save Settings, you will see the profiles has been created as figure.

Product Page: DSR-1000				Hardware Version: A1 Firm	ware Version: 1.03B12_WW
D-Li	n <b>k</b>				
DSR-1000	SETUP	ADVANCED	TOOLS	STATUS	HELP
Application Rules		Operation	succeeded		Helpful Hints
Website Filter	BANDWIDTH PROFILE	S		LOGOUT	With bandwidth profiles
Firewall Settings					you can shape and regulate the LAN to WAN
Advanced Network	This page shows the list of selectors.	f configured bandwidth profile	es. These profiles then can be	e used with the traffic	traffic. This is useful to ensure that low priority LAN users do not
Routing >	Save Settings	Don't Save Settings			monopolize the available WAN's bandwidth for cost-
Certificates					savings or bandwidth- priority-allocation
Users 🕨					purposes.
IP/MAC Binding	Enable Bandwidth	More			
IPv6	List of Bandwidth Pro	ofiles			
Radius Settings	Name Name		Bandwidth Rate / Prio	rity	
Switch Settings	Bandwidth		1-1000 Kbps		
		Edit De	Add		
UNIFIED SERV	ICES ROUTER				

5. Under the ADVANCED->Advanced Network-> Traffic Management ->Traffic Selector, double click it.



Product Page: DSR-100		nk			Hardware Version: A1 Firm	ware Version: 1.03812_WW
DSR-1000		SETUP	ADVANCED	TOOLS	STATUS	HELP
Application Rules	►		Operation	succeeded		Helpful Hints
Website Filter	►	BANDWIDTH PROFIL	ES		LOGOUT	With bandwidth profiles
Firewall Settings	►					you can shape and regulate the LAN to WAN
Advanced Network	⊳	UPnP	of configured bandwidth profile	es. These profiles then can be	e used with the traffic	traffic. This is useful to ensure that low priority LAN users do not
Routing	►	WAN Port Setup	Don't Save Settings	3		monopolize the available WAN's bandwidth for cost-
Certificates		IGMP Setup				savings or bandwidth- priority-allocation
Users	►	IPS				purposes.
IP/MAC Binding		Attack Checks	Profiles:			More
IPv6	►	Traffic Management 🕨	Bandwidth Profiles			
Radius Settings	_	Name	Traffic Selectors	Click the Traffic S	Selectors	
Switch Settings		Bandwidth		1-1000 Kbps		
			Edit Del	lete Add		

### UNIFIED SERVICES ROUTER

### 6.Under the Traffic Selectors, click Add button.

Product Page: DSR-1000				Hardware Version: A1 Firm	ware Version: 1.03B12_WW
D-Li	nk				
DSR-1000	SETUP	ADVANCED	TOOLS	STATUS	HELP
Application Rules					Helpful Hints
Website Filter 🕨	TRAFFIC SELECTORS			LOGOUT	Once a bandwidth profile
Firewall Settings	This page shows a list of t	raffic selectors. Traffic select	tors are service based rules t	to which user can attach	has been created it can then be associated with a
Advanced Network	bandwidth profiles.				traffic flow from the LAN to WAN. Traffic selectors are elements like IP
Routing •	List of Traffic Selecto	rs			addresses or services that require their outbound
Certificates	Service	Traffic Selector Ma	tch Type	Bandwidth Profile	traffic to be regulated.
Users ►		Edit De	lete Add	Type the Add E	More
IP/MAC Binding			Add	Type the Add E	Sutton
IPv6				-	
Radius Settings					
Switch Settings					
UNIFIED SERV	ICES ROUTER				

7. Specify the following fields and click Save Settings

**7a.Available Profiles:** Select from a list of configured bandwidth profiles upon which to apply the traffic selector criteria.

**7b.Service:** User can select from a list of pre-defined or custom defined services for the traffic selector rule. Custom services can be defined under Advanced->Firewall->Custom Services.

**7c.Traffic Selector Match Type:** The match type can be one of the following: IP, MAC address, Port name and Interface.

**IP Address:** If the traffic selector match type is IP, enter the IP address in this field.

**MAC Address:** If the traffic selector match type is MAC address, enter the MAC address in this field for the traffic selector rule.

**Port Name:** The LAN port number/name to apply the traffic selector rule if the match type is Port name.

**Interface:** If the match type is interface, select from the interface number provided in the drop down list. Only LAN and VLAN interfaces are applicable.



Product Page: DSR-1000				Hardware Version: A1 Firm	ware Version: 1.03B12_WW
D-Li	ik				
DSR-1000	SETUP	ADVANCED	TOOLS	STATUS	HELP
Application Rules					Helpful Hints
Website Filter 🕨 🕨	TRAFFIC SELECTORS			LOGOUT	Once a bandwidth profile
Firewall Settings	This page allows upor to s	opfouro vorious troffic rulos	, to which bandwidth profiles	ran ho attached	has been created it can then be associated with a
Advanced Network	Save Settings	Don't Save Setting		can be attached.	traffic flow from the LAN to WAN. Traffic selectors
Routing >	Save Settings	Don't Save Setting	5		are elements like IP addresses or services that
Certificates	Traffic Selector Confi	guration			require their outbound traffic to be regulated.
Users >	Available Profiles:	Ba	ndwidth 👻		More
IP/MAC Binding	Service:	AM	IY 👻		
IPv6	Traffic Selector Ma	tch Type:	-		
Radius Settings	IP Address:	193	2.168.10.100		
Switch Settings		0.0	10.01.15.15.10		
	MAC Address:	00:	1B:24:1E:4F:A8		
	Port Name:	Po	rt 1 👻		
	Interface:	1	-		

## 8.After Save setting, it will be looks like the following figure.

Product Page: DSR-1000				Hardware Version: A1 Firm	ware Version: 1.03B12_WW
D-Li	<b>nk</b>				
DSR-1000	SETUP	ADVANCED	TOOLS	STATUS	HELP
Application Rules		Operation	succeeded		Helpful Hints
Website Filter 🕨 🕨	TRAFFIC SELECTORS			LOGOUT	Once a bandwidth profile
Firewall Settings					has been created it can then be associated with a
Advanced Network	This page shows a list of tr bandwidth profiles.	affic selectors. Traffic select	ors are service based rules to	o which user can attach	traffic flow from the LAN to WAN. Traffic selectors are elements like IP
Routing >					addresses or services that require their outbound
Certificates	List of Traffic Selector				traffic to be regulated.
Users 🕨	Service		tor Match Type	Bandwidth Profile	More
IP/MAC Binding	Bandwith_Service	: N	IAC	Bandwidth	
IPv6 ►		Edit De	lete Add		
Radius Settings					
Switch Settings					
UNIFIED SERV	ICES ROUTER				



[Testing result and procedure]: 1.Use the iperf and to see if the maximum bandwidth is below 1000K

:\Users\admin\Desktop\TEST tool\iperf>iperf -c 1.1.1.2	
lient connecting to 1.1.1.2. TCP port 5001 CP window size: 8.00 KByte (default)	
108] local 127.0.0.1 port 52894 connected with 1.1.1.2 port 5001 ID] Interval Transfer Bandwidth 108] 0.0-10.6 sec 1.22 MBytes 967 Kbits/sec : Wsers\admin\Desktop\TEST tool\iperf>iperf -c 1.1.1.2	
CP window size: 8.00 KByte (default)	
108] local 127.0.0.1 port 52906 connected with 1.1.1.2 port 5001 ID] Interval Transfer Bandwidth 108] 0.0-10.9 sec 1.23 MBytes 944 Kbits/sec	
:\Users\admin\Desktop\TEST tool\iperf>iperf -c 1.1.1.2	
lient connecting to 1.1.1.2, TCP port 5001 CP window size: 8.00 KByte (default)	
108] local 127.0.0.1 port 52922 connected with 1.1.1.2 port 5001 ID] Interval Transfer Bandwidth 108] 0.0-10.8 sec 1.22 MBytes 944 Kbits/sec	
C:\Users\admin\Desktop\TEST_tool\iperf>_	