

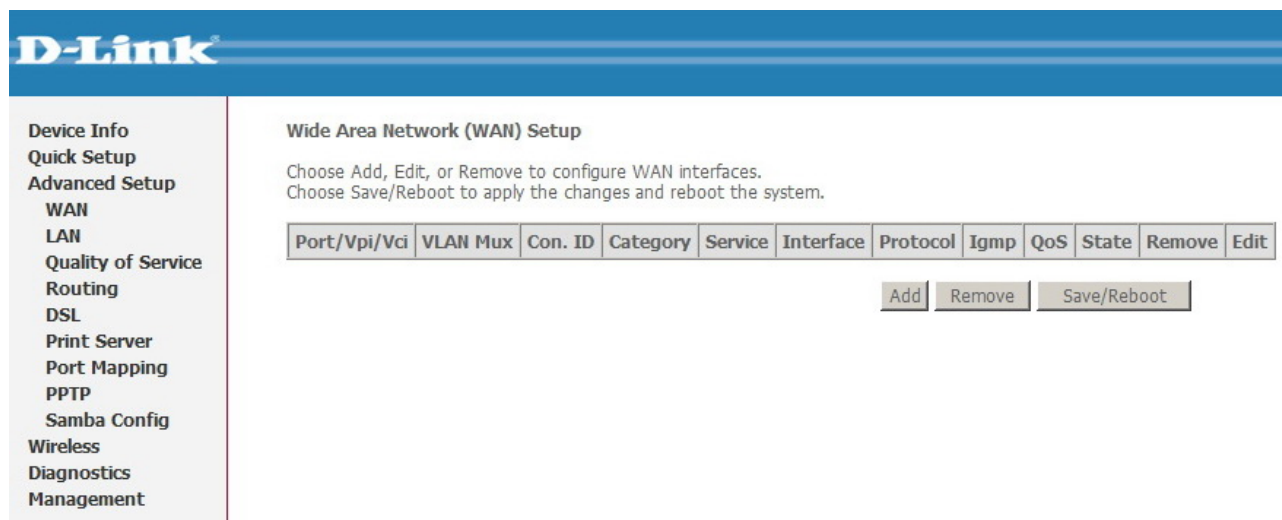
Настройка беспроводного маршрутизатора ADSL2+ со встроенным 4-портовым коммутатором **DSL-2650U/BRU/D** для работы с 3G модемом

1. Скачать с FTP-сайта прошивку версии не ниже RU_1.14
(http://ftp.dlink.ru/pub/ADSL/DSL-2650U_BRU_D/Firmware/).
2. Обновить прошивку маршрутизатора согласно его инструкции.
3. Подключить 3G-модем к USB-порту маршрутизатора и перезагрузить его
(**Management -> Save/Reboot**).

Поддерживаемые 3G-модемы (в прошивке RU_1.14): BandLuxe C100, D-Link DWM652, D-Link DWM152, Huawei E160G, Huawei E220, Huawei E270, ZTE MF626, ZTE MF636.



4. Создать новое ADSL-соединение (**Advanced Setup -> WAN -> Add**)



5. Ввести требуемые значения (уточнить у провайдера), нажать **Next**.

The screenshot shows the 'ATM PVC Configuration' page in the D-Link modem's web interface. On the left is a navigation menu with options: Device Info, Quick Setup, Advanced Setup, WAN, LAN, Quality of Service, Routing, DSL, Print Server, Port Mapping, PPTP, Samba Config, Wireless, Diagnostics, and Management. The 'Advanced Setup' section is expanded, showing 'WAN' as the selected option. The main content area is titled 'ATM PVC Configuration' and includes a description: 'This screen allows you to configure an ATM PVC identifier (PORT and VPI and VCI) and select a service category. Otherwise choose an existing interface by selecting the checkbox to enable it.' Below this are three input fields: 'PORT: [0-3]' with the value '0', 'VPI: [0-255]' with the value '0', and 'VCI: [32-65535]' with the value '35'. There is a checkbox for 'VLAN Mux - Enable Multiple Protocols Over a Single PVC' which is unchecked. A 'Service Category' dropdown menu is set to 'UBR Without PCR'. Below this is a section titled 'Enable Quality Of Service' with a description: 'Enabling packet level QoS for a PVC improves performance for selected classes of applications. QoS cannot be set for CBR and Realtime VBR. QoS consumes system resources; therefore the number of PVCs will be reduced. Use **Advanced Setup/Quality of Service** to assign priorities for the applications.' There is an unchecked checkbox for 'Enable Quality Of Service'. At the bottom right are 'Back' and 'Next' buttons.

6. Выбрать требуемый тип соединения (уточнить у провайдера), нажать **Next**.

В нашем примере рассмотрен тип соединения PPPoE.

The screenshot shows the 'Connection Type' page in the D-Link modem's web interface. The left navigation menu is the same as in the previous screenshot, with 'Advanced Setup' expanded and 'WAN' selected. The main content area is titled 'Connection Type' and includes a description: 'Select the type of network protocol for IP over Ethernet as WAN interface'. There are five radio button options: 'PPP over ATM (PPPoA)', 'PPP over Ethernet (PPPoE)' (which is selected), 'MAC Encapsulation Routing (MER)', 'IP over ATM (IPoA)', and 'Bridging'. Below these is a section titled 'Encapsulation Mode' with a dropdown menu set to 'LLC/SNAP-BRIDGING'. At the bottom right are 'Back' and 'Next' buttons.

7. Заполнить поля **Username** и **Password**, остальные параметры (уточнить у провайдера), отметить опцию **Bridge PPPoE Frames Between WAN and Local Ports**. Нажать **Next**.

The screenshot shows the D-Link web interface for configuring PPP settings. The left sidebar contains a menu with options: Device Info, Quick Setup, Advanced Setup, WAN, LAN, Quality of Service, Routing, DSL, Print Server, Port Mapping, PPTP, Samba Config, Wireless, Diagnostics, and Management. The main content area is titled "PPP Username and Password" and includes a descriptive text: "PPP usually requires that you have a user name and password to establish your connection. In the boxes below, enter the user name and password that your ISP has provided to you." The configuration fields include: PPP Username (text box), PPP Password (password box), PPPoE Service Name (text box), Authentication Method (dropdown menu set to AUTO), checkboxes for Enable NAT and Enable Firewall, radio buttons for "Obtain default gateway automatically" (selected) and "Use the following default gateway:", sub-radio buttons for "Use IP Address" and "Use WAN Interface" (selected), a text box for the WAN Interface (showing "pppoe_0_0_35_1/ppp_0_0_35_1"), checkboxes for PPP IP extension and Advanced DMZ, text boxes for Non DMZ IP Address and Non DMZ Net Mask, a checkbox for "Keep alive PPP connection", and a text box for LCP echo interval (seconds) set to 30. Below these are three text boxes for IP fragmentation settings: low threshold (1024), high threshold (4096), and time (5 seconds). There are also checkboxes for "Dial on demand (with idle timeout timer)", "Use Static IP Address", "Retry PPP password on authentication error", "Enable PPP Debug Mode", and "Bridge PPPoE Frames Between WAN and Local Ports (Default Enabled)" which is checked. At the bottom right are "Back" and "Next" buttons. The footer of the interface states "Recommend: 800x600 pixels, High Color (16 Bits)".

Device Info
Quick Setup
Advanced Setup
WAN
LAN
Quality of Service
Routing
DSL
Print Server
Port Mapping
PPTP
Samba Config
Wireless
Diagnostics
Management

PPP Username and Password

PPP usually requires that you have a user name and password to establish your connection. In the boxes below, enter the user name and password that your ISP has provided to you.

PPP Username:

PPP Password:

PPPoE Service Name:

Authentication Method: **AUTO**

☒ Enable NAT

☒ Enable Firewall

☒ Obtain default gateway automatically

☐ Use the following default gateway:

☐ Use IP Address:

☒ Use WAN Interface:

☐ PPP IP extension

☐ Advanced DMZ

Non DMZ IP Address:

Non DMZ Net Mask:

☒ Keep alive PPP connection

LCP echo interval (seconds):

IP fragmentation low threshold:

IP fragmentation high threshold:

IP fragmentation time (seconds):

☐ Dial on demand (with idle timeout timer)

☐ Use Static IP Address

☐ Retry PPP password on authentication error


☐ Enable PPP Debug Mode

☒ Bridge PPPoE Frames Between WAN and Local Ports (Default Enabled)

[Back](#) [Next](#)

Recommend: 800x600 pixels, High Color (16 Bits)

8. Отметить опцию **Enable WAN Service**. Нажать **Next**.



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Enable IGMP Multicast, and WAN Service

Enable IGMP Multicast ☐

Enable WAN Service ☒


Service Name

PPP Link Setting

MTU

Back Next

9. Сверить параметры в сводной таблице с предоставленными провайдером. Нажать **Back** для возврата и редактирования параметров или **Save** для их сохранения.



Device Info
 Quick Setup
 Advanced Setup
 WAN
 LAN
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WAN Setup - Summary

Make sure that the settings below match the settings provided by your ISP.

PORT / VPI / VCI:	0 / 0 / 35
Connection Type:	PPPoE
Service Name:	pppoe_0_0_35_1
Service Category:	UBR
IP Address:	Automatically Assigned
Service State:	Enabled
NAT:	Enabled
Firewall:	Enabled
IGMP Multicast:	Disabled
Quality Of Service:	Disabled
MTU:	1492

Click "Save" to save these settings. Click "Back" to make any modifications.
 NOTE: You need to reboot to activate this WAN interface and further configure services over this interface.

Back Save

10. Нажать **Save/Reboot**.11. После перезагрузки в меню **Advanced Setup** -> **WAN** появится пункт **3G Configuration**.
Отметить опцию **Enable 3G Backup Service**.

Выбрать основной интерфейс (**Select Main Interface**) – ранее созданное ADSL-соединение.

Выбрать механизм резервирования (**Select Backup Mechanism**):

Failover – переход на 3G-соединение при пропадании ADSL-соединения;

Failover and Fallback - переход на 3G-соединение при пропадании ADSL-соединения и обратно после его восстановления (**рекомендуемый**).

Задать критерий тестирования основного интерфейса (**Probe Criterion**): **Probing failed after __ consecutive times** (Неудачное тестирование __ раз подряд).

Задать цикл тестирования (**Probe Cycle**): **Every __ seconds** (Каждые __ секунд).

Задать минимум одно правило тестирования (**Probe Rule**):

ping gateway - опрос шлюза

ping DNS – опрос сервера имен доменов


ping host – опрос узла (IP-адреса).

В разделе **3G Connection Setting** выбрать модель Вашего модема (**Select 3G Device**).

См. список поддерживаемых модемов в п. 3.

Заполнить поля **User Name**, **Password**, **Dial Number**, **APN** (информация предоставляется провайдером услуг 3G).

Сохранить настройки - нажать **Save/Apply**.



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WAN
3G Configuration
LAN
NAT
Security
Quality of Service
Routing
DNS
DSL
Print Server
Port Mapping
PPTP
Samba Config
Wireless
Diagnostics
Management

Enable 3G Backup Service ☒

3G Backup Service Setting

Select Main Interface:

Select Backup Mechanism: ☐ Failover
☒ Failover and Fallback

Probe Criterion: Probing failed after consecutive times

Probe Cycle: Every seconds

Probe Rule: ☒ ping gateway
☒ ping DNS
☐ ping host

3G Connection Setting

Select 3G Device:

User Name:


Password:

Dial Number:

APN:

12. Перезагрузить маршрутизатор (**Management -> Save/Reboot**).

13. В меню **Device Info** отобразится тип соединения WAN (ADSL как основной), а также присвоенные маршрутизатору IP-адреса шлюза по умолчанию и сервера DNS.



Device Info
Advanced Setup
Wireless
Diagnostics
Management

Device Info


Board ID:	96358VW2
Software Version:	RU_1.14
Bootloader (CFE) Version:	1.0.37-10.1
Release Date:	Dec. 18, 2009
Wireless Driver Version:	4.100.27.0.cpe2.1

This information reflects the current status of your DSL connection.

WAN Type:	ADSL
Line Rate - Upstream (Kbps):	252
Line Rate - Downstream (Kbps):	510
LAN IP Address:	192.168.1.1
Default Gateway:	192.168.1.3
Primary DNS Server:	195.1.1.5
Secondary DNS Server:	194.1.2.40

14. В случае пропадания ADSL-соединения, через некоторое время (зависит от провайдера 3G, модема и настроек тестирования основного интерфейса, описанных в п. 11) произойдет переход на 3G-соединение.

Соответственно, изменится отображаемая в меню **Device Info** и **Device Info -> WAN** информация.




Device Info
 Summary
WAN
 Statistics
 Route
 ARP
 DHCP
 Advanced Setup
 Wireless
 Diagnostics
 Management

Device Info

Board ID:	96358VW2
Software Version:	RU_1.14
Bootloader (CFE) Version:	1.0.37-10.1
Release Date:	Dec. 18, 2009
Wireless Driver Version:	4.100.27.0.cpe2.1

This information reflects the current status of your DSL connection.

WAN Type:	3G
Line Rate - Upstream (Kbps):	
Line Rate - Downstream (Kbps):	
LAN IP Address:	192.168.1.1
Default Gateway:	10.0.0.1
Primary DNS Server:	213.139.133.133
Secondary DNS Server:	212.139.14.14
Date/Time:	Tue Feb 2 14:21:51 2010



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WAN Info

Port/VPI/VCI	VLAN Mux	Con. ID	Category	Service	Interface	Protocol	Icmp	QoS	State	Status	IP Address
0/0/35	Off	1	USER	pppoe_0_0_35_1	ppp_0_0_35_1	PPPoE	Disabled	Disabled	Enabled	ADSL Link Down	


PPTP Info

IP Address	Gateway

3G Info

IP Address	Gateway
178.159.10.159	10.0.0.1

15. После восстановления ADSL-соединения (при условии выбора механизма резервирования **Failover and Fallback**) произойдет обратный переход на ADSL-соединение.



Device Info

Summary

WAN

Statistics

Route

ARP

DHCP

Advanced Setup

Wireless

Diagnostics

Management

Device Info

Board ID:	96358VW2
Software Version:	RU_1.14
Bootloader (CFE) Version:	1.0.37-10.1
Release Date:	Dec. 18, 2009
Wireless Driver Version:	4.100.27.0.cpe2.1

This information reflects the current status of your DSL connection.

WAN Type:	ADSL
Line Rate - Upstream (Kbps):	252
Line Rate - Downstream (Kbps):	510
LAN IP Address:	192.168.1.1
Default Gateway:	192.168.1.3
Primary DNS Server:	195.168.1.5
Secondary DNS Server:	194.168.1.40
Date/Time:	Tue Feb 2 14:25:14 2010