

ФЕДЕРАЛЬНОЕ АГЕНТСТВО СВЯЗИ  
ФЕДЕРАЛЬНОЕ ГОСУДАРСТВЕННОЕ БЮДЖЕТНОЕ ОБРАЗОВАТЕЛЬНОЕ  
УЧРЕЖДЕНИЕ ВЫСШЕГО ОБРАЗОВАНИЯ  
«САНКТ-ПЕТЕРБУРГСКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ  
ТЕЛЕКОММУНИКАЦИЙ ИМ. ПРОФ. М.А. БОНЧ-БРУЕВИЧА»  
(СПбГУТ)

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Факультет Инфокоммуникационных сетей и систем

Кафедра Защищенных систем связи

**Лабораторная работа №3**

Выполнили студенты группы ИКТЗ-83:

Громов А.А., Миколаени М.С., Мазеин Д.С.

\_\_\_\_\_  
(Ф.И.О., № группы)

(подпись)

Проверил:

Скорых М.А.

\_\_\_\_\_  
(уч. степень, уч. звание, Ф.И.О.)

(подпись)

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## Цель лабораторной работы: Поиск неисправностей в сети малого размера

### 1. Настройка маршрутизатора

```
1 username Admin1 secret Admin1pa55
2 interface g0/1
3 ip address 172.16.1.126 255.255.255.192
4 no sh
5 exit
6 line vty 0 15
7 transport input ssh
8 login local
9
```

### 2. Настройка ПК из IT

The screenshot shows a window titled "IT" with two tabs: "Desktop" (selected) and "Programming". The "IP Configuration" window is open, showing settings for the "FastEthernet0" interface. The "IP Configuration" section has two radio buttons: "DHCP" (unselected) and "Static" (selected). Below these are four text input fields: "IP Address" (172.16.1.1), "Subnet Mask" (255.255.255.192), "Default Gateway" (172.16.1.62), and "DNS Server" (64.100.0.2). The "IPv6 Configuration" section also has three radio buttons: "DHCP" (unselected), "Auto Config" (unselected), and "Static" (selected). Below these are four text input fields: "IPv6 Address" (2001:DB8:CAFE::2 / 64), "Link Local Address" (FE80::2), "IPv6 Gateway" (FE80::1), and "IPv6 DNS Server" (2001:DB8:ACAD::2).

Configuration Section	Option	Value
IP Configuration	Static	
	IP Address	172.16.1.1
	Subnet Mask	255.255.255.192
	Default Gateway	172.16.1.62
	DNS Server	64.100.0.2
IPv6 Configuration	Static	
	IPv6 Address	2001:DB8:CAFE::2 / 64
	Link Local Address	FE80::2
	IPv6 Gateway	FE80::1
	IPv6 DNS Server	2001:DB8:ACAD::2

### 3. Настройка ПК из R&D

The screenshot shows a window titled "R&D" with two tabs: "Desktop" (selected) and "Programming". Inside the "Desktop" tab, there is a sub-window titled "IP Configuration" with a close button (X). The "Interface" dropdown menu is set to "FastEthernet0". Below this, the "IP Configuration" section has two radio buttons: "DHCP" (unselected) and "Static" (selected). The "Static" configuration includes the following fields: "IP Address" (172.16.1.129), "Subnet Mask" (255.255.255.128), "Default Gateway" (172.16.1.254), and "DNS Server" (64.100.0.2). The "IPv6 Configuration" section has three radio buttons: "DHCP" (unselected), "Auto Config" (unselected), and "Static" (selected). The "Static" configuration includes the following fields: "IPv6 Address" (2001:DB8:CAFE:2::2 / 64), "Link Local Address" (FE80::2), "IPv6 Gateway" (FE80::1), and "IPv6 DNS Server" (2001:DB8:ACAD::2). At the bottom of the window, there is a "802.1X" section and a "Top" button.

### 4. Настройка коммутатора S2

```
1 enable
2 configure terminal
3 interface vlan 1
4 ip address 172.16.1.125 255.255.255.192
5 no shutdown
6 exit
7
```