

Отчёт по практической работе 27

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Цель работы:

Настроить динамическую маршрутизацию с использованием EIGRP для распределения нагрузки между маршрутизаторами и обеспечения отказоустойчивости сети.

Ход выполнения работы:

- Построил сеть из четырёх маршрутизаторов: router0, router1, router2 и router3, а также двух ПК.
- Подключил pc0 к router0 через порт Fa0/0, pc1 к router2 через порт Fa0/0.
- Соединил маршрутизаторы между собой:
 - Router0 Fa4/0 → Router1 Fa4/0
 - Router1 Fa5/0 → Router3 Fa4/0
 - Router2 Fa5/0 → Router3 Fa5/0
 - Router2 Fa4/0 → Router1 Fa5/0
- Настроил ip адреса на всех интерфейсах маршрутизаторов в соответствующих подсетях.
- На всех маршрутизаторах настроил протокол маршрутизации EIGRP с номером автономной системы 100.
- Объявил сети через команды network на каждом маршрутизаторе.
- Проверил соседство EIGRP командой show ip eigrp neighbors соседства установились.
- Проверил таблицы маршрутизации show ip route маршруты через EIGRP успешно появились.
- Настроил ip адреса на ПК:
 - pc0: 192.168.1.2 / шлюз 192.168.1.1
 - pc1: 192.168.2.2 / шлюз 192.168.2.100
- Отправил пакет с pc0 на pc1 в режиме симуляции.

router0 распределил пакеты по разным маршрутам через router1 и router2, как и требовалось по заданию. Победа!

Скрины:

Cisco Packet Tracer - C:\Users\yakyz\Downloads\Telegram Desktop\27.pkt

File Edit Options View Tools Extensions Window Help

Logical Physical x 1536 y 238

Simulation Panel

Event List

Vis	Time(sec)	Last Device
	0.000	-
	0.000	-
	0.001	PC0
	0.001	PC0
	0.002	Router0
	0.003	Router0
	0.003	Router3
	0.004	Router1
	0.004	Router2
	0.005	Router2
	0.005	PC1
	0.006	PC1

Reset Simulation ☒ Constant Delay Captured to: 0.007 s

Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPSec, ISAKMP, Iot, Iot TCP, LACP, LLDP, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAP, POP3, PPP, PPPoE, PTP, RADIUS, RFP, RFPing, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Scenario 0

New Delete

Toggle PDU List Window

Time: 00:01:27.530 PLAY CONTROLS

2620KM

Cisco Packet Tracer - C:\Users\yakyz\Downloads\Telegram Desktop\27.pkt

File Edit Options View Tools Extensions Window Help

Logical Physical x 1536 y 498

Simulation Panel

Event List

Vis	Time(sec)	Last Device
	0.000	-
	0.000	-
	0.001	PC0
	0.001	PC0
	0.002	Router0
	0.003	Router0
	0.003	Router3
	0.004	Router1
	0.004	Router2
	0.005	Router2
	0.005	PC1
	0.006	PC1

Reset Simulation ☒ Constant Delay Captured to: 0.007 s

Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPSec, ISAKMP, Iot, Iot TCP, LACP, LLDP, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAP, POP3, PPP, PPPoE, PTP, RADIUS, RFP, RFPing, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Scenario 0

New Delete

Toggle PDU List Window

Time: 00:01:27.530 PLAY CONTROLS

CGR1240

If last event, capture then forward (Alt + C)

13:57 27.04.2025

Cisco Packet Tracer - C:\Users\yakyl\Downloads\Telegram Desktop\l27.pkt

File Edit Options View Tools Extensions Window Help

Logical Physical x 100% y 240

Simulation Panel

Event List

Vis.	Time(sec)	Last Device
	0.000	--
	0.000	--
	0.001	PC0
	0.001	--
	0.002	PC0
	0.002	Router0
	0.003	Router0
	0.003	Router3
	0.004	Router1
	0.004	Router2
	0.005	Router2
	0.005	PC1
	0.006	PC1

Reset Simulation Constant Delay Captured to: 0.007 s

Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, Icmp, Icmpv6, LACP, LLDP, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RFP, RFPing, RTP, SCOP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Scenario 0

New Delete

Toggle PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	In Progress	PC0	PC1	ICMP	Green	0.000	N	0	(edit)	(delete)
	In Progress	PC0	PC1	ICMP	Green	0.000	N	1	(edit)	(delete)

CGR1240

13:58 27.04.2025

Cisco Packet Tracer - C:\Users\yakyl\Downloads\Telegram Desktop\l27.pkt

File Edit Options View Tools Extensions Window Help

Logical Physical x 100% y 380

Simulation Panel

Event List

Vis.	Time(sec)	Last Device
	0.000	--
	0.000	--
	0.001	PC0
	0.001	--
	0.002	PC0
	0.002	Router0
	0.003	Router0
	0.003	Router3
	0.004	Router1
	0.004	Router2
	0.005	Router2
	0.005	PC1
	0.006	PC1

Reset Simulation Constant Delay Captured to: 0.007 s

Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, Icmp, Icmpv6, LACP, LLDP, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RFP, RFPing, RTP, SCOP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Scenario 0

New Delete

Toggle PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	In Progress	PC0	PC1	ICMP	Green	0.000	N	0	(edit)	(delete)
	In Progress	PC0	PC1	ICMP	Green	0.000	N	1	(edit)	(delete)

CGR1240

13:58 27.04.2025