

VIRTUAL ROUTER REDUNDANCY PROTOCOL AND HOT STANDBY
ROUTER PROTOCOL

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VIRTUAL ROUTER REDUNDANCY PROTOCOL AND HOT STANDBY
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MD. SAZZAD HOSSAIN

A report submitted
in partial fulfilment of the requirements
for the degree of
Bachelor of Science in Computer Science and Engineering

UNIVERSITY OF LIBERAL ARTS BANGLADESH
Dhaka, Bangladesh

January 2020

DECLARATION

I declare that this report/ project entitled “Virtual router redundancy protocol and Hot standby router protocol” is the result of my own research except as cited in the references. The report /project has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

Signature :

Name : Md. Sazzad Hossain

ID : 152014045

Date : January 16, 2020

CERTIFICATE OF APPROVAL

The project report/ project entitled “Virtual redundancy router protocol and Hot Standby router protocol” is submitted to the Department of Computer Science and Engineering at University of Liberal Arts Bangladesh (ULAB) in partial fulfillment of the requirements for the degree of Bachelor of Science.

Dated: January 2020

Prof. Md. Abdul Mottalib, PhD

Designation & Head of Department
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Signature & Date

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Lecturer
Computer Science and Engineering
University of Liberal Arts Bangladesh

Signature & Date

DEDICATION

To my lovely parents, who gave me endless love, trust, constant encouragement over the years, and for their prayers.

To my mentors and peers for their patience, support, love, and for enduring the ups and downs during the completion of this thesis.

This report is dedicated to them.

ACKNOWLEDGEMENT

I wish to express my deepest appreciation to all those who helped me, in one way or another, to complete this project. First and foremost, I thank Almighty who provided me with strength, direction and purpose throughout the project.

Special thanks to my project supervisor Satyoki Das all his patience, guidance and support during the execution of this project. Through his expert guidance, I was able to overcome all the obstacles that I encountered in these enduring three months of my project. In fact, he always gave me immense hope every time I consulted with him over problems relating to my project.

Besides I want to thank to ADN Eduservices Ltd to give me opportunity to work with them. Specially thanks my industrial supervisor Firoz Kabir. He always guides me. Without his help it wasn't possible or me to do this project.

My friends, relatives and family...

SUMMARY

This report **Depends** on my Cooperation to ADN EduServices Ltd. as an assistant and this internship programs accomplishments. It gives subtle elements of my exercises at this company, specialized and proficient **victory** which I learned from seeing the other IT experts. This three month of internship program at ADN EduServices Ltd. I was given obligation of learning and analyzing the comes about of the advancement of increased reality amusement. 

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 **LIST OF ABBREVIATIONS**

CSE	Computer Science and Engineering
ULAB	University of Liberal Arts Bangladesh
VRRP	Virtual redundancy router protocol
HSRP	Hot standby router protocol
GNS3	Graphical network Simulator-3
FHRP	First Hop redundancy protocol
CARP	Common Address redundancy protocol
GLBP	Gateway Load balancing protocol

CHAPTER 1

INTRODUCTION

1.1: Overview

Any association that an individual gets as working is a clear field. I had been interested in networking since college life. In my point of view, in this particular area I was so much interested to working with such a networking-based company. In this way, I get the chance to working with AND Group. That's why I choose an Organization related works at AND eduservices Ltd. They are dealing with this kind of networking related project. I'm so grateful to them for having a chance to work with them.

Among other companies in Bangladesh, ADN Eduservices Ltd. is great for Networking related Development. I felt that I may will be utilized to find out how to create and how they work together. I was recommended to see the projects of company and their circumstances and work strategy to watch how they usually working together.

I have found the chances to works with the educational group for the Networking development. Admit my transitory work time, I tried to develop my networking related knowledge. I concentrated my report basically on my errand region and sub-branch of ADN networking Ltd. education and developing range.

1.2: Objective

The report fundamental objective is to distinguish the interaction between client and company, to get it how in an Organization how their stuffs works together. How to test the item on authorities, how a representative can work with new technology and really show an intelligently ADN EduServices Ltd. overview utilizing innovation. In expansion, the ponder contains a few particular destinations separated from the essential or common destinations:

- ✓ Knowing the constant premise of the company, its fundamental targets, vision, area and system.
- ✓ To urge the genuine execution to the elixir of network upgrade.
- ✓ To get it how they clarify these issues.
- ✓ Clarification of my duty as consider and depiction of recognizing work.
- ✓ Tried to learn amid ADN eduservices Ltd's internship.

1.3: Scope of Report

This report is basically for thoughtful purpose and is the foremost critical portion of the CSE program from the school of Computer Science and Engineering, ULAB (University of liberal Arts Bangladesh). This document highlighted the suitable and uncommon components as well as improvement of troubles. In expansion, the thinking about making strides in Network developments.

1.4: Methodology

Information from both critical as well as discretionary sources have been accumulated for the creation of this report. Those sources are clarified how:

For Basic data, I facilitated with the going with Specialists:

- I. Rubana Tasmin Tithi
- II. Firoz Kabir

An expansive sum of the information was collected from staff part and they help me a lot and involvement amid my internship at this organization.

Secondly, I collected data from the web and different article and within the references the distributions were provided. Those are the imperative sources of optional information.

1.5: Limitation

I have confronted certain issue in analyzing as well as talking about the data. Within the last stages of the advancement of the conspire, the typical issue for me is the nonappearance of transparency of necessary data. In addition, some of their devices are expensive, so they do not allow anyone to use them. This is often a result of the affiliate's security course. In ADN EduServices Ltd. an assortment of necessities and conditions are not totally self-evident to me.

Whatever it was, I would know the terms later. This time is important, this is one of the real limitations I have taken at this level of work internally. The execution of this investigate moreover was subject to a few unmistakable limits. These restrictions have hindered my work. However, despite these obstacles, I have tried my best to produce a strong, and more, interesting report. The following are the overall limitations:

- I. I could not devote enough time to perform the task to ensure the highest quality at ADN EduServices Ltd.
- II. I can't completely get a few subjective and quantifiable information since the Person concerned was so active in other activities.
- III. A few of our fellow have given up transitory business without fulfill their obligations.
- IV. Their devices are expensive, so they do not allow anyone to use them. It would have been better if I get the opportunity to use the devices.

CHAPTER 2

COMPANY REVIEW

2.1: Company Overview

In Bangladesh, ISP, MPLS, IPLC and IP communication facility ADN Telecom Limited started their journey back in 2003. It is one of the affiliates of "ADN Group" with ADN Technology Limited, Tech Valley Network Limited, Ingen Technologies Limited and ADN EduServices. ADN telecom was propelled as a private constrained company and assigned as the 'Advanced Data network System Ltd'. They claim a different get to arrange over the entire nation through Remote, fiber and satellite infrastructure. Exceptionally noted, ADN Telecom Limited has been working to fulfill this proverb with human excellence. BTRC has granted ADN various regard licenses, and authorizations as the across the country Web benefit supplier, across the country IP communication Benefit supplier, VSAT supplier with center and worldwide MPLS administrations are to title a few. BTRC has allotted a few radio frequencies in numerous groups in favor of ADN telecom for it get to and transmission systems that have fortified the company to convey most recent remote advances, like as fixed WiMAX. As the driving telecom administrator within the locale, ADN Telecom has some of the heaviest heavyweight partners in Singtel, Tata Communications and many more. ADN telecom Ltd is an ISO certified company. Utilizing the most recent innovation, ADN Telecom is always working towards the client's highest level of service and is committed to providing world-class service. Since ADN Telecom has given utmost importance to the client's service, it has given it a great position among others company. [Who we are: <https://adntel.com.bd/who-we-are/>]

2.2: Company Information

Company Name	ADN EduServices
Address	Malancha Green, House# 58, Road# 3/A, Dhanmondi, Dhaka-1205, Bangladesh
Phone	+88029635200
E-mail	info@adnedu.com
Website	www.adnedu.com

2.3: Their Mission

To know about company and innovation issues of their clients and to unravel this with their information and exertion in an assortment of stage and products and to keep up to date with solid and demonstrated arrangements to:

- I. Increase Customers quality off benefit.
- II. Makes people Skillful.
- III. Strong client and corporate organization construct up.

2.4: Services

- I. Animation
- II. Game Development
- III. Graphic Art design
- IV. CCNA
- V. Software Development

CHAPTER THREE

TOOLS

3.1: Overview

We use either packet tracer or GNS3 to do network related projects. Both of these are effective. Packet tracer is a cross- platform visual reenactment apparatus that designed by Cisco Frameworks that permits clients to make arrange topologies and copy present day computer system. The software allows clients to reenact the arrangement of Cisco switches and switches employing a recreated command line interface. Bundle tracer makes utilize of a drag and drop client interface, permitting clients to include and evacuate recreated arrange gadgets as they see fit. The computer program is primarily used to train the Cisco Network Collaborative Institute as an educational device for acquiring critical CCNA concepts. Students who are enrolled in the CCNA Academy program can download and use the free tool for educational purpose. Packet tracer moreover be run on Microsoft windows and Linux conjointly with macOS.

3.2: GNS3

GNS3 is a Simulator that use to design complex network. Its much efficient than packet tracer. Graphical Network Simulator-3 may be a organize program emulator to begin with discharged in 2008. It permits the combination of Virtual and genuine gadgets, utilized to mimic complex system. Its employments dynamic imitating computer program to reenact Cisco. GNS3 is utilized by numerous huge companies including Exxon, Walmart, NASA, AT&T and is additionally well known for planning of arrange proficient certification exams. [2018, Why Use the GNS3 Virtual Network Simulator]

3.3: Advantages

- I. Reenacted topology can be associate to genuine World.
- II. You will be able take packet capture between gadgets on your lab.
- III. GNS3 employs emulators and genuine IOS program so bugs can be replicated.
- IV. All kinds of gadgets and vendors also supported.
- V. Free software
- VI. Downloadable

3.4: Disadvantages

- I. User have to install Cisco image
- II. During runtime user's pc could be slow

CHAPTER FOUR

PROJECT DESIGN

4.1: Overview

A First hop redundancy protocol is a computer based networking protocol which outlined to secure the default gateway utilized on a sub network by permitting two or more routers to supply reinforcement for that address within the occasion of failure of a dynamic switch, the reinforcement switch will take over the address, as a rule inside a number of seconds. not just routers, this Protocol can be used to protect other services operating on a single IP address. [First hop redundancy protocol: Wikipedia]

Example of several kinds of First hop redundancy protocols:

- I. HSRP
- II. VRRP
- III. GLBP
- IV. CARP

4.2: Virtual Router Redundancy Protocol

VRRP disposes of the single point of disappointment inalienable within the inactive default steered environment. VRRP indicates a decision convention that powerfully allots obligation for a virtual switch to one of the VPN concentrators on LAN. The VRRP concentrator that controls the Internet protocol address related with a virtual switch is called Master, and when master become unavailable a reinforcement takes the place of Master. [2011, VRRP – Virtual Router Redundancy Protocol provides Network failover/redundancy, *exclTingIPcom*], [2018, What Is VRRP, *Cisco*]

4.3: Application

- I. Virtual router redundancy protocol gives fail-over at the network gateway.
- II. In VRRP not a single point of disappointment as back-up device is designed to require over once the essential gadget fails.
- III. This fail-over occur within a second
- IV. There can lots of backup gadget for essential gateway. In the event that required

4.4: Codes

CODE	USAGE
Conf t	Interface configuration terminal
Int	Interface
IP Address	Configure IP address for interface
VRRP [group] preempt	Set priority for every switch
VRRP Group IP	Secondary IP Address
Show VRRP brief	Show VRRP total connection
Do wr	Save

Figure: 1

Table of VRRP configure code

4.5: Configure

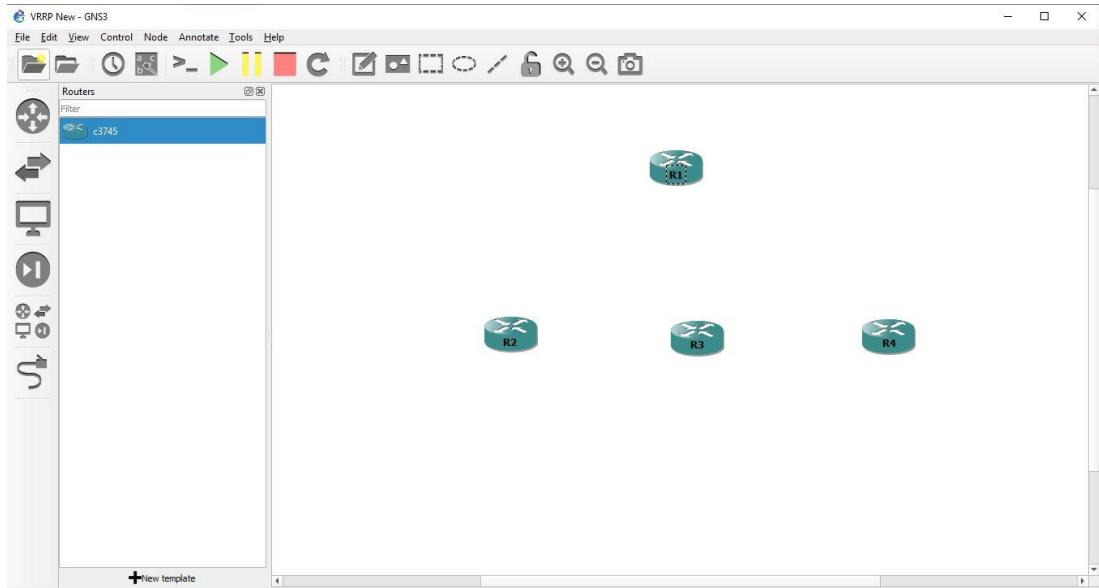


Figure 2

At first, we take four routers. R1 assume as IIG. Rest of three R2, R3 and R4 taken as Switch.

In GNS3 User must install router image.

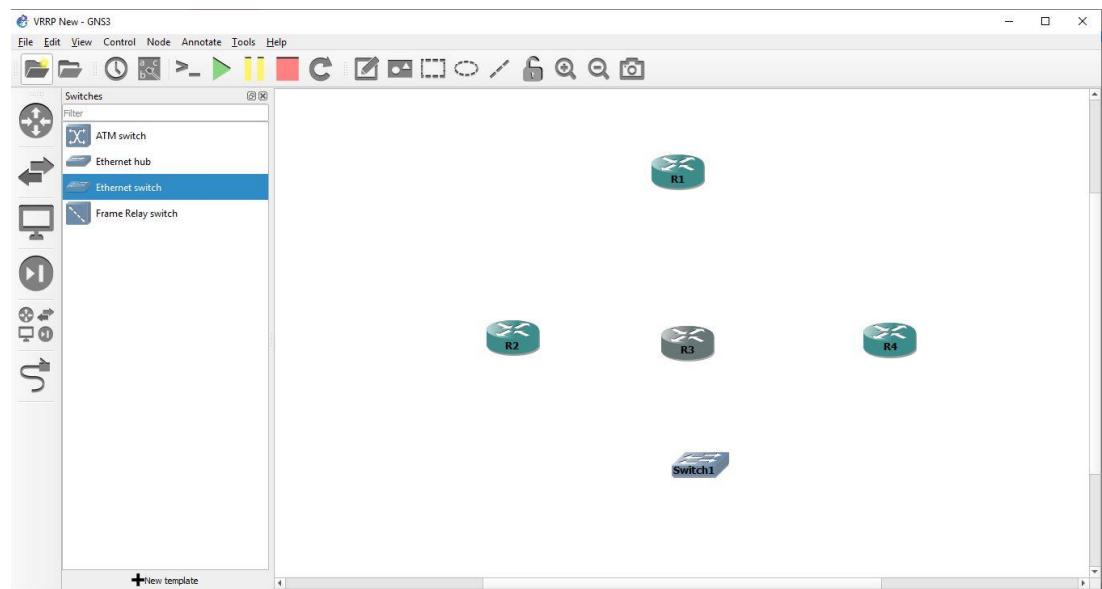


Figure 3

Now we take a Switch. Through this switch user will connected with IIG. It's the gateway.

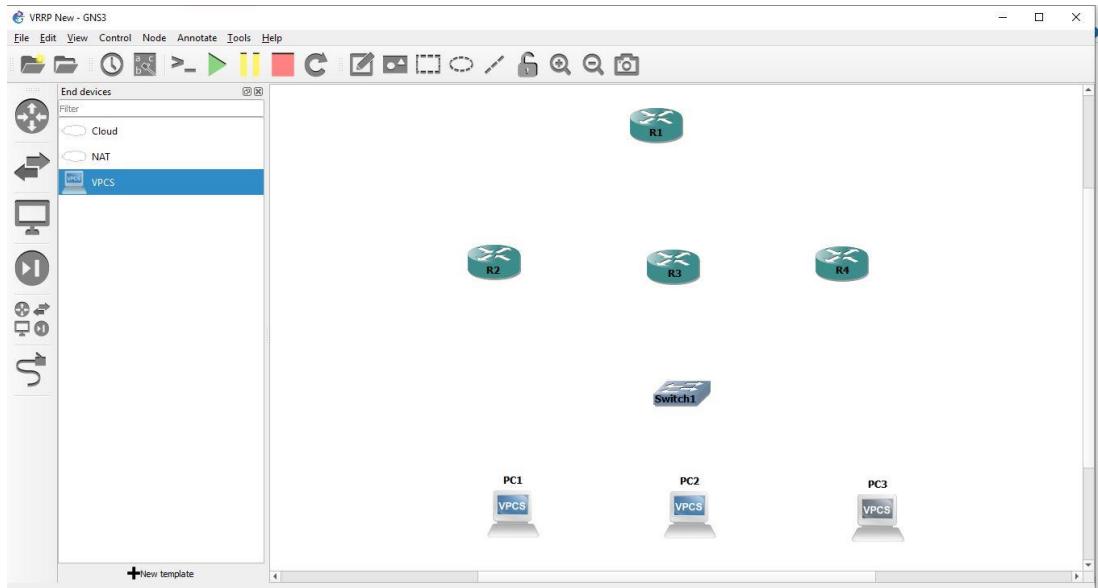


Figure 4

Now we taking Three user. We assume that one lakh user connected through every user.

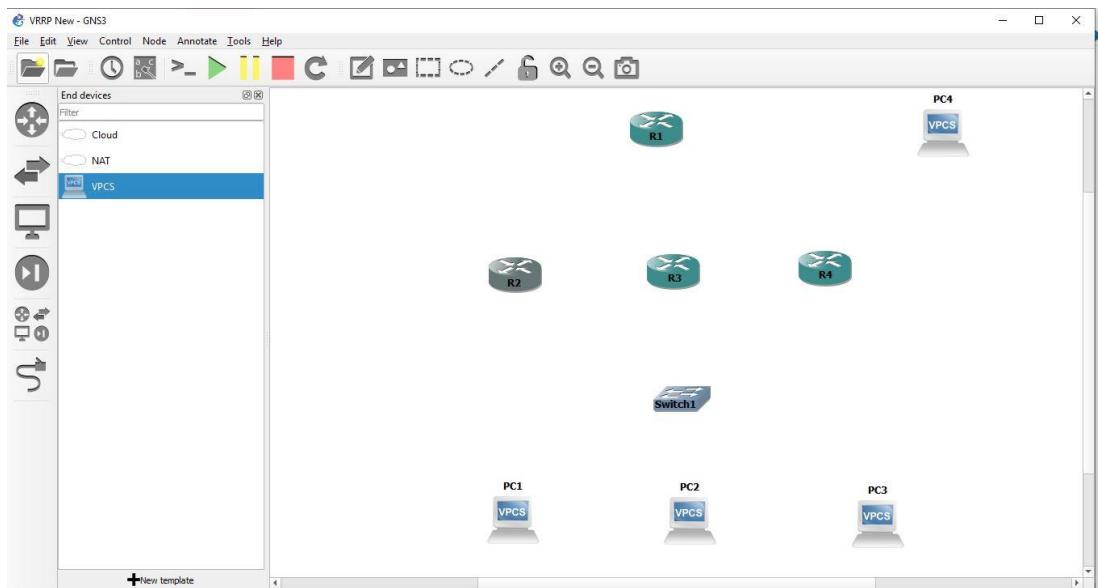


Figure 5

Now we take another PC 4. Assume that this PC will communicate with those three PC through switch and network layer device.

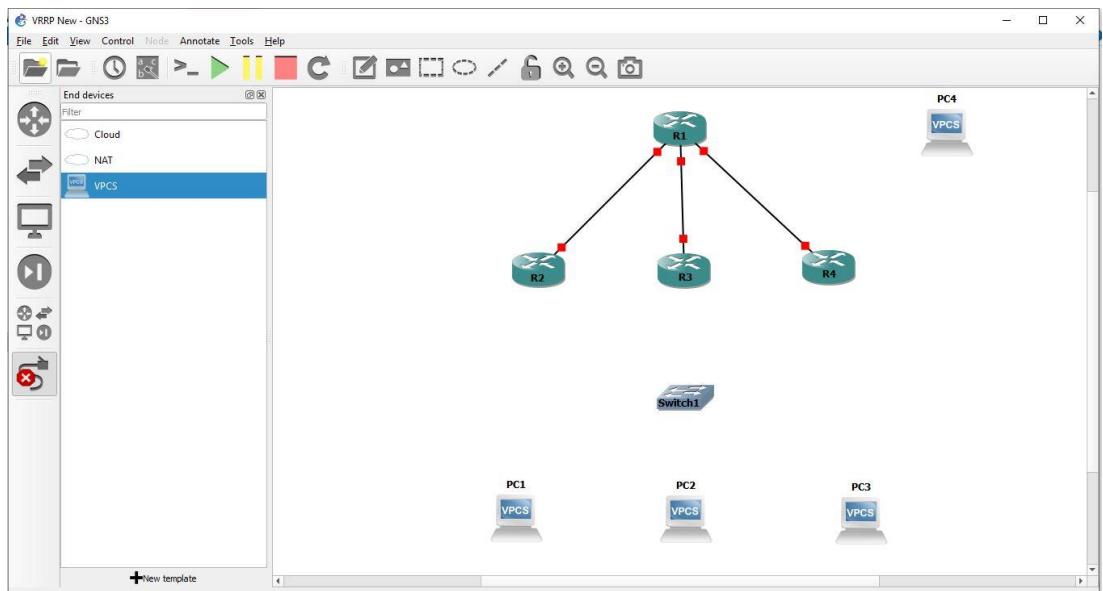


Figure 6

Now we will be connected three router R2, R3, R4 with R1 through Fast ethernet cable

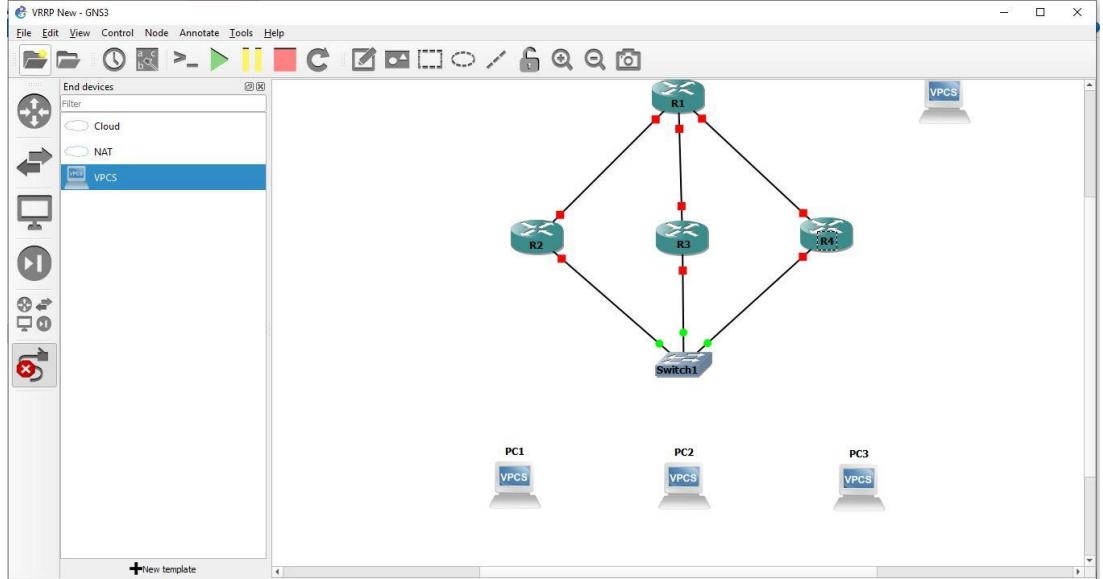


Figure 7

Like before R2, R3, R4 will be connected with switch

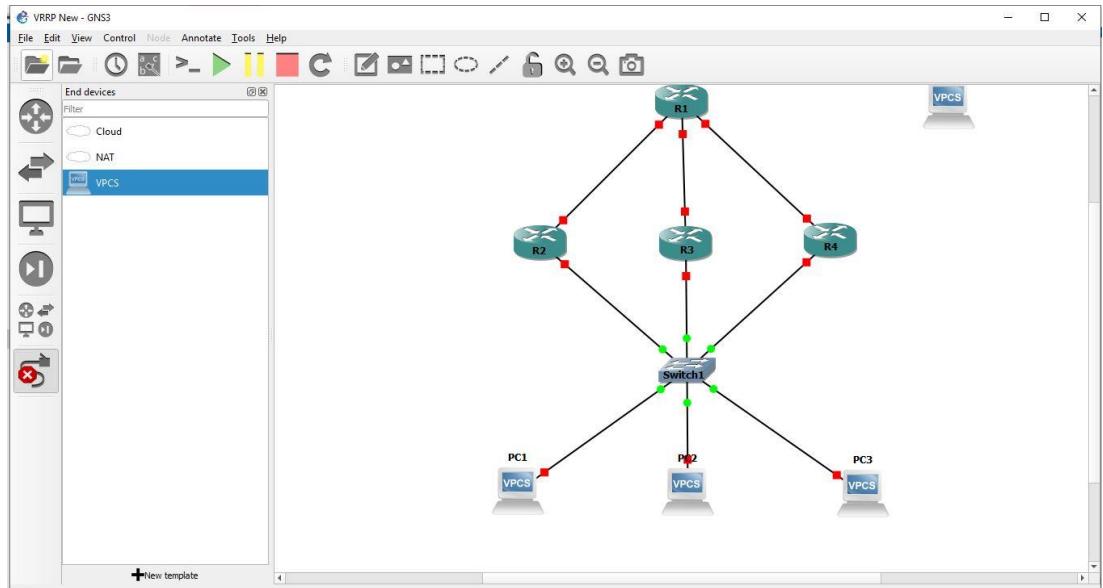


Figure 8

Without PC4 All nodes are connected through fast ethernet cable

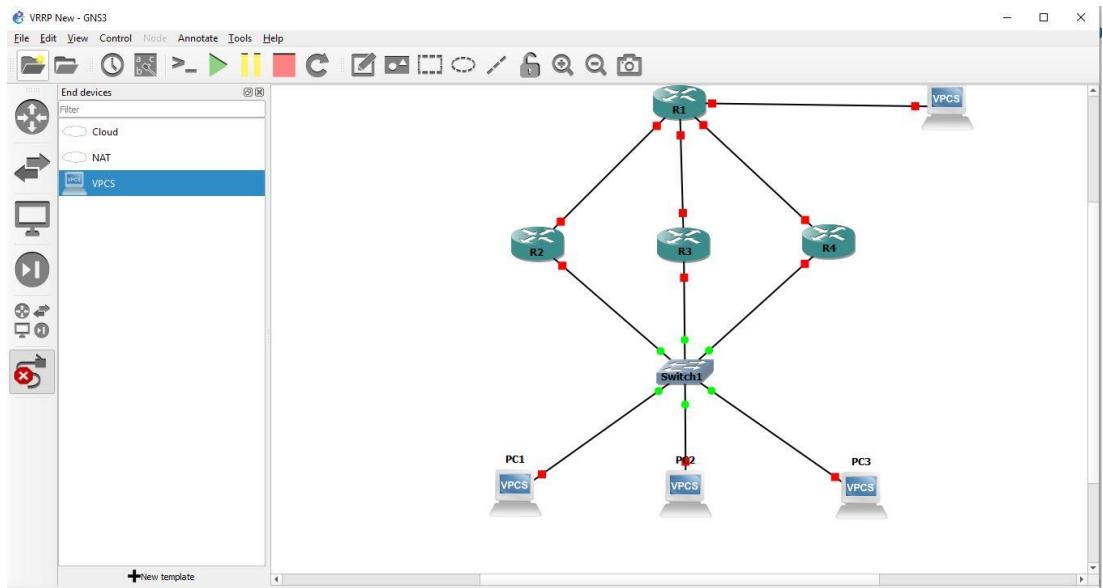


Figure 9

Now PC 4 also connected with VRRP topology

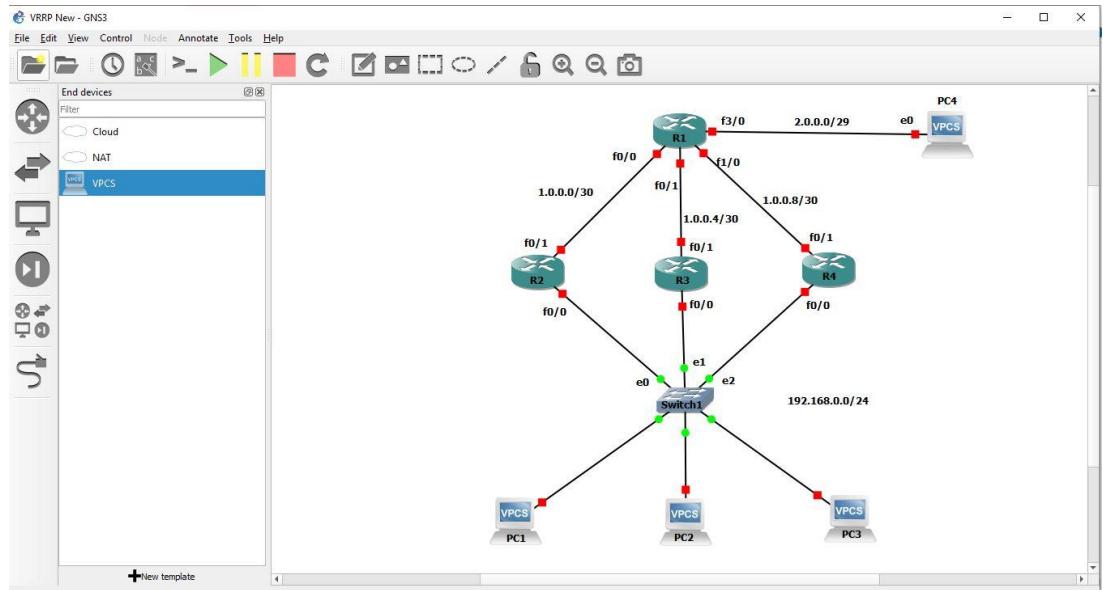


Figure 10

Now we will set IP address

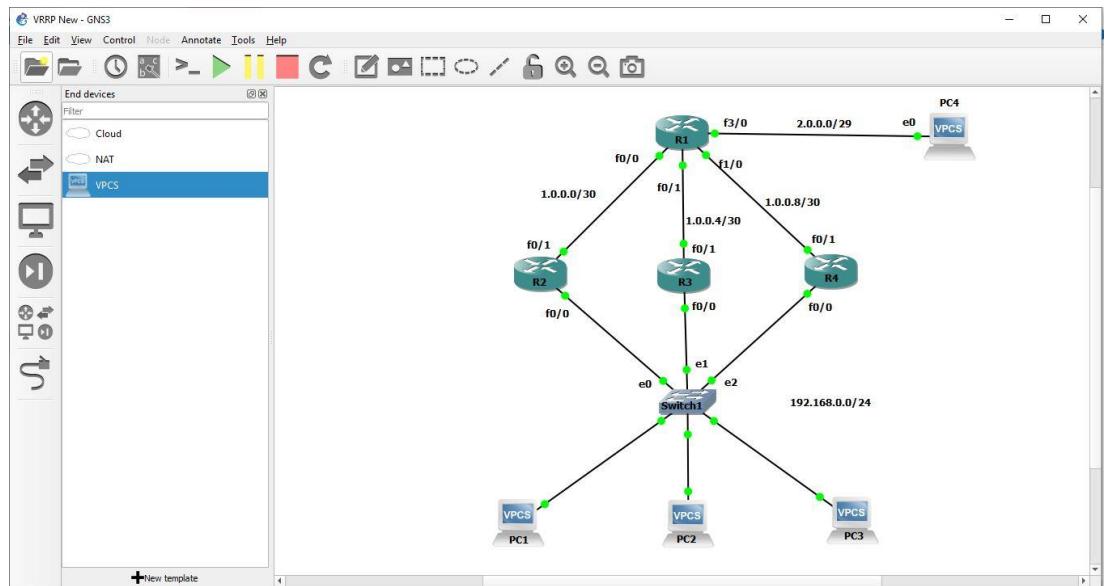


Figure 11

Now we will run the project. It may take some time. So, we have to set Idle PC.

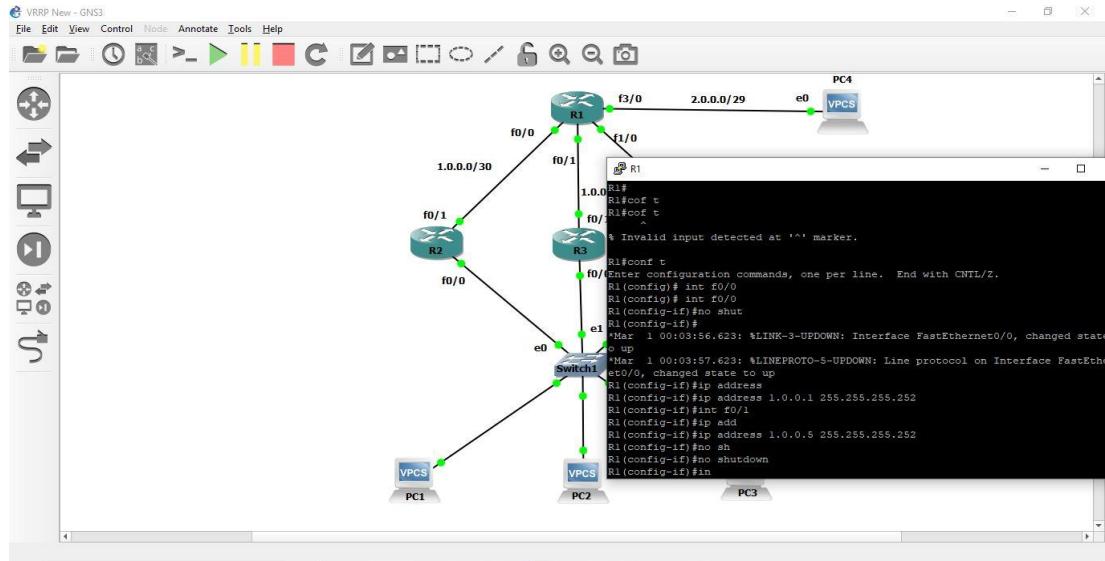


Figure 12

Now we configure R1. We set it IP address. Then we will build connection with PC4, R2, R3, R4. Here R1 is IIG (International internet gateway). And R2, R3 and R4 is router which objective is to connect various network simultaneously. Here is a switch named switch1 and its main objective to connect various devices simultaneously.

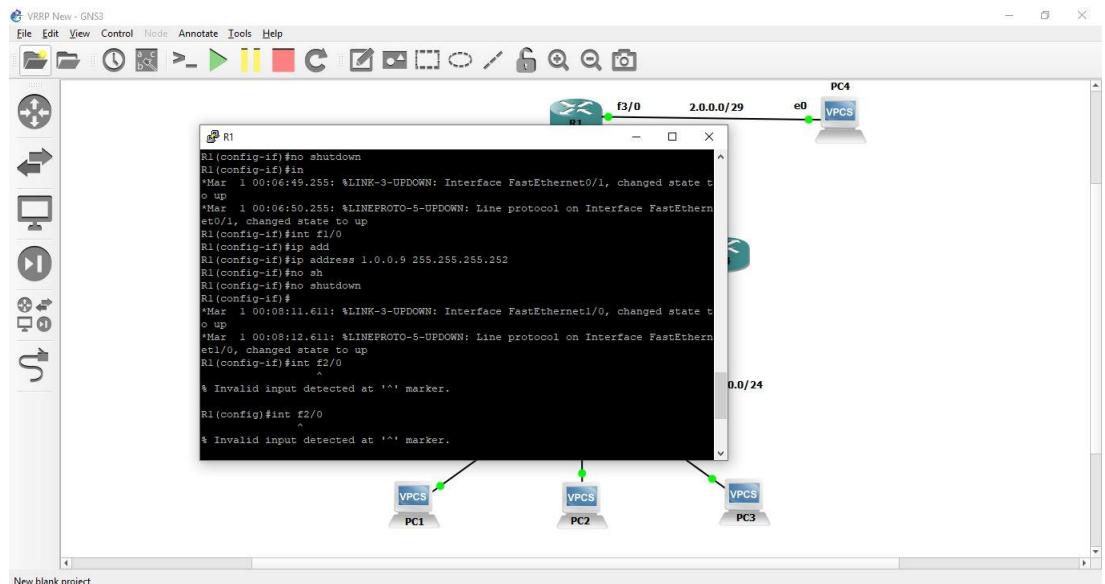


Figure 13

There are three IP addresses of those three routers 1.0.0.1 which is for R2 router, 1.0.0.5 for R3 router and 1.0.0.9 for R4 router. To set connection Between those three routers we have to set their IP on R1.

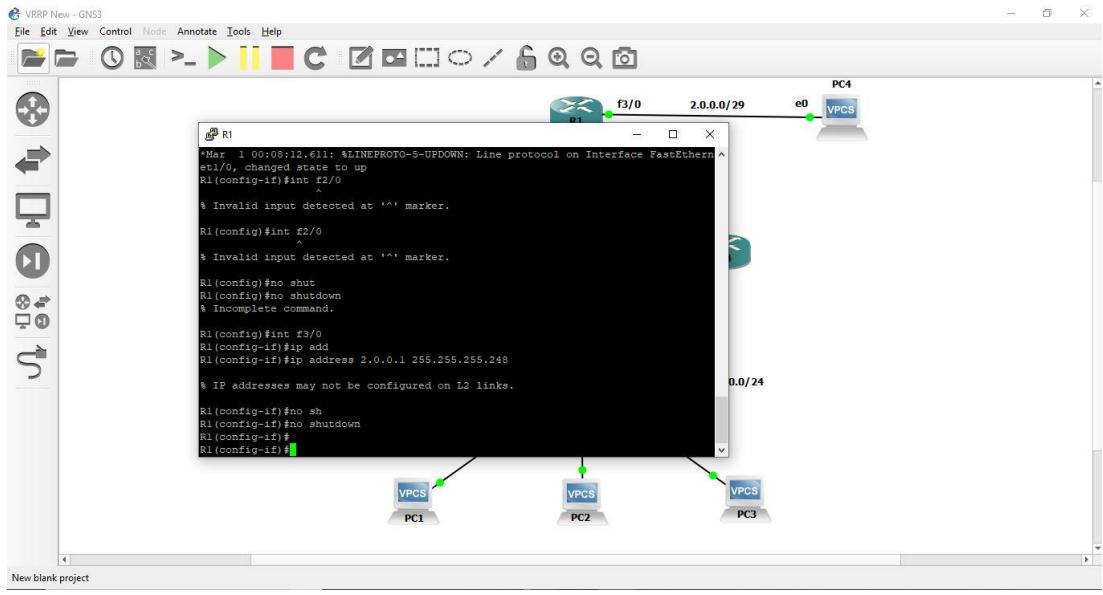


Figure 14

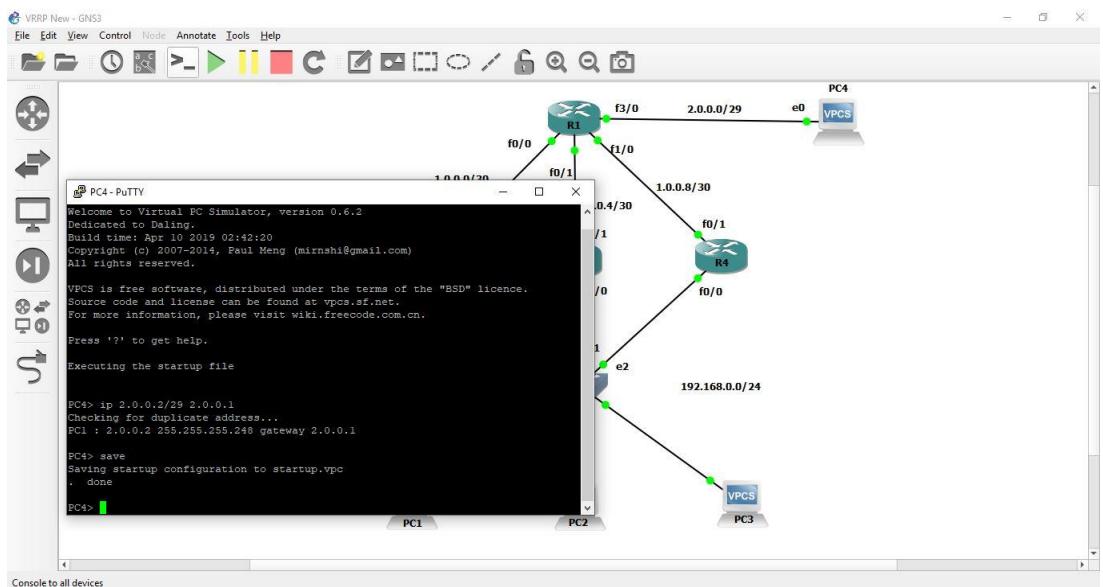


Figure 15

Now PC 4 connect with R1. Remind, we have to build connection from both side.

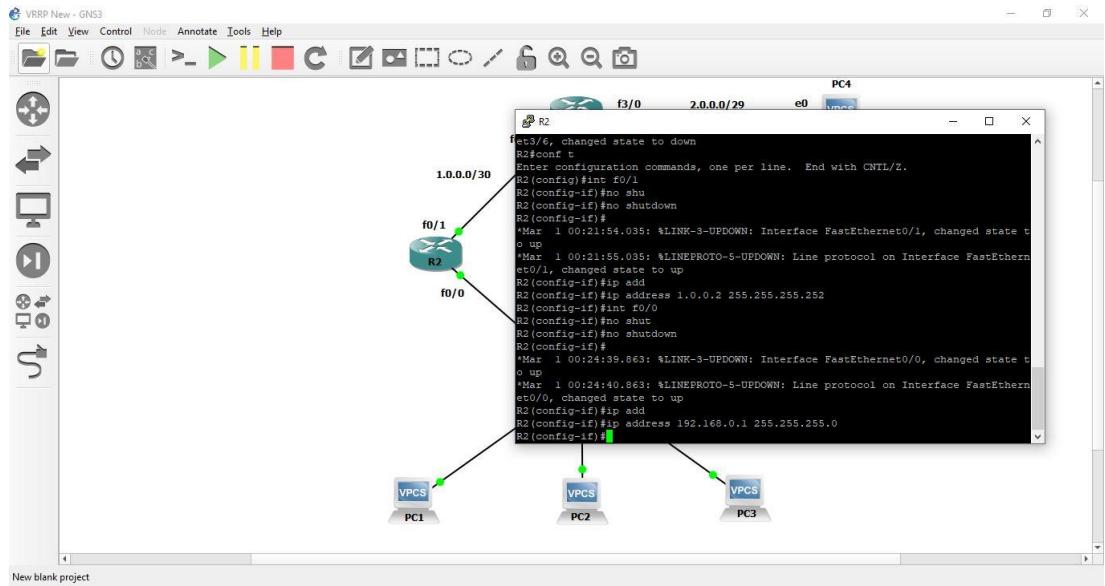


Figure 16

Now R2 configured with R1 and Switch. Before we set R2 routers IP address on R1 now this time 1.0.0.2 IP set from R1 to R2 router. Besides R2 router connected with Switch1 through default gateway 192.168.0.1

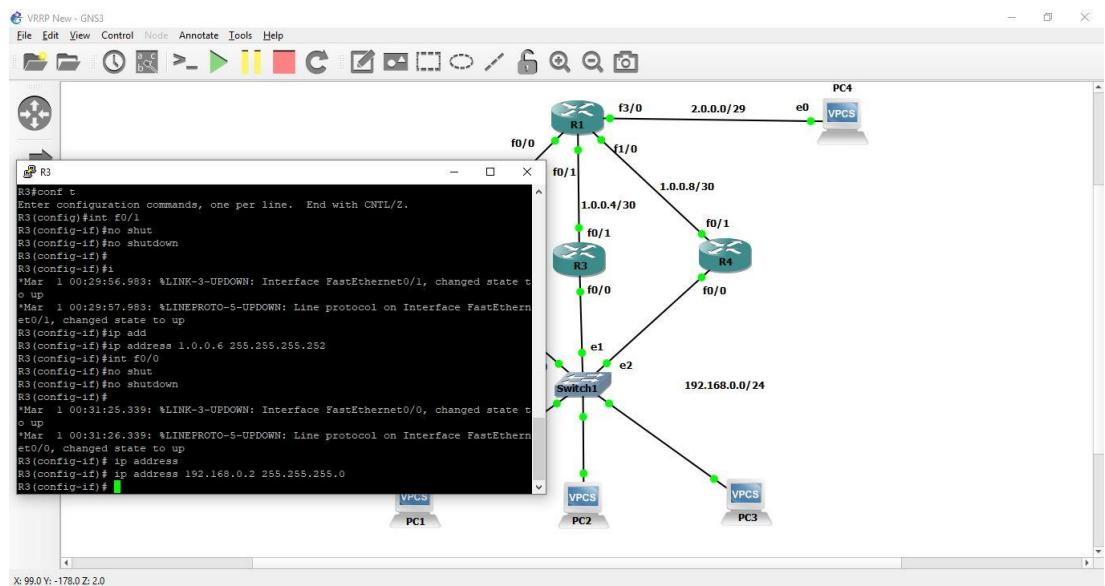


Figure 17

R3 configured with R1 and Switch. Similarly, R3 configured with R1 and Switch. Before we set R3 routers IP address on R1 now this time 1.0.0.6 IP set from R1 to R3 router. Besides R3 router connected with Switch1 through default gateway 192.168.0.1

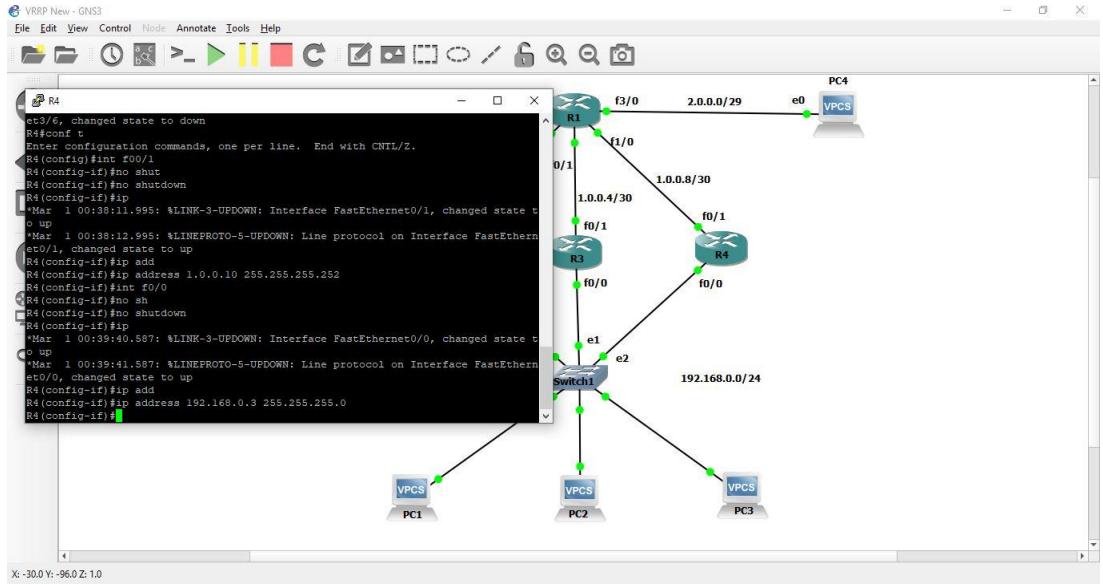


Figure 18

Similarly, R4 configured with R1 and switch. Now R4 configured with R1 and Switch. Before we set R4 routers IP address on R1 now this time 1.0.0.9 IP set from R1 to R4 router. Besides R4 router connected with Switch1 through default gateway 192.168.0.3

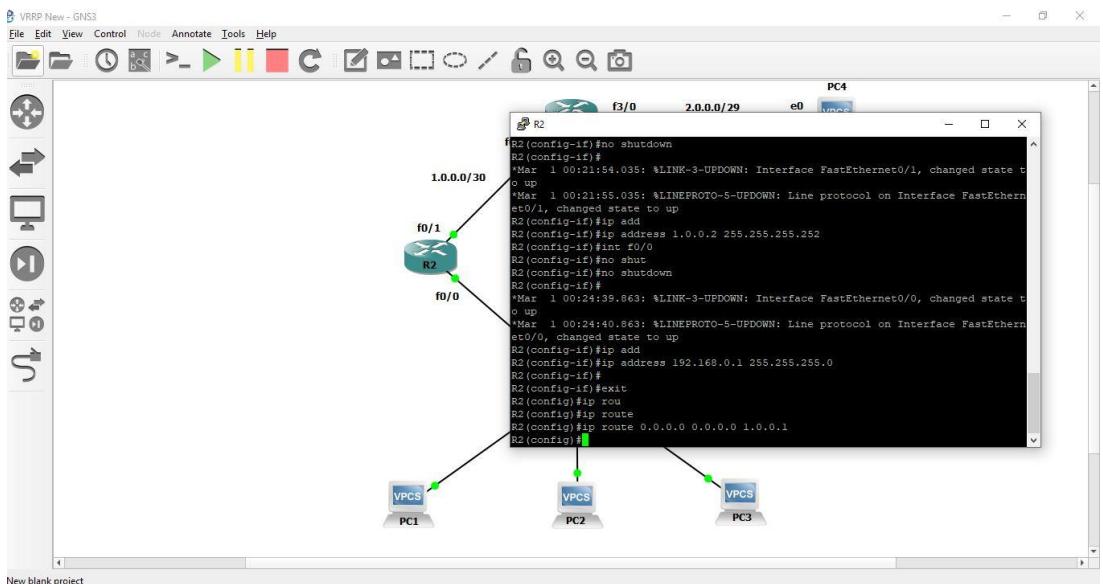


Figure 19

Now we set Route on R2 and set its gateway 192.168.0.1

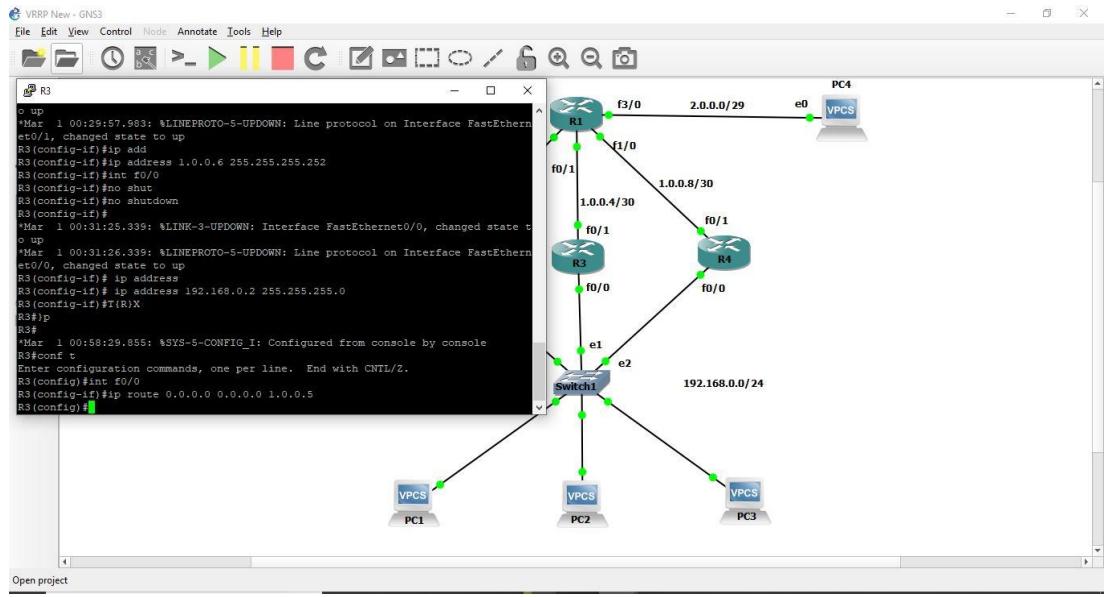


Figure 20

We set route on R3 and its gateway is 192.168.0.2

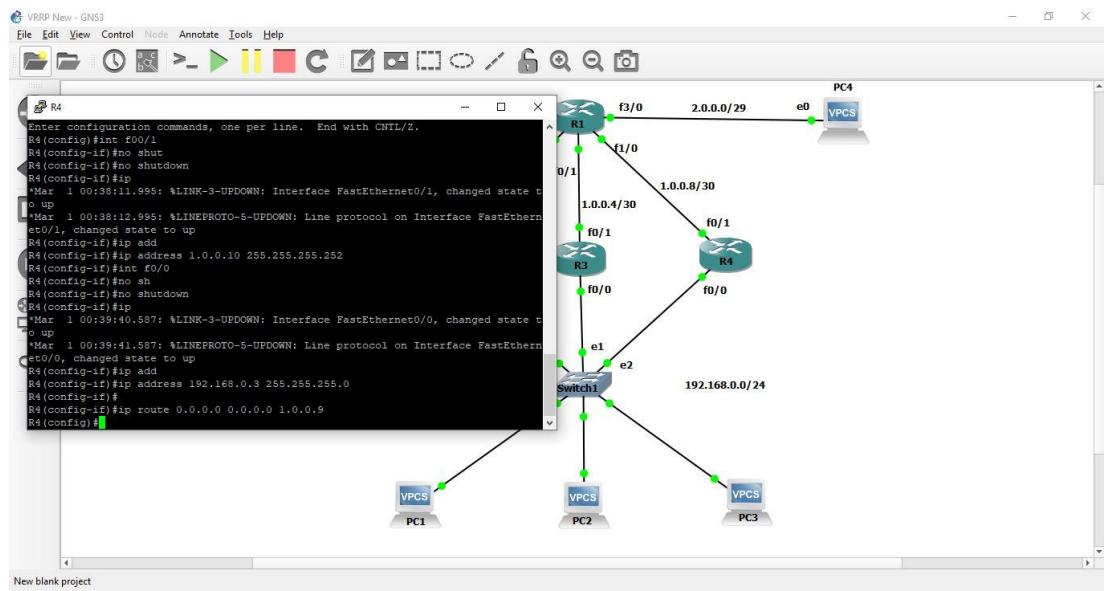


Figure 21

We Set R4 route. Its gateway is 192.168.0.3

Through gateway Each and every node are connected

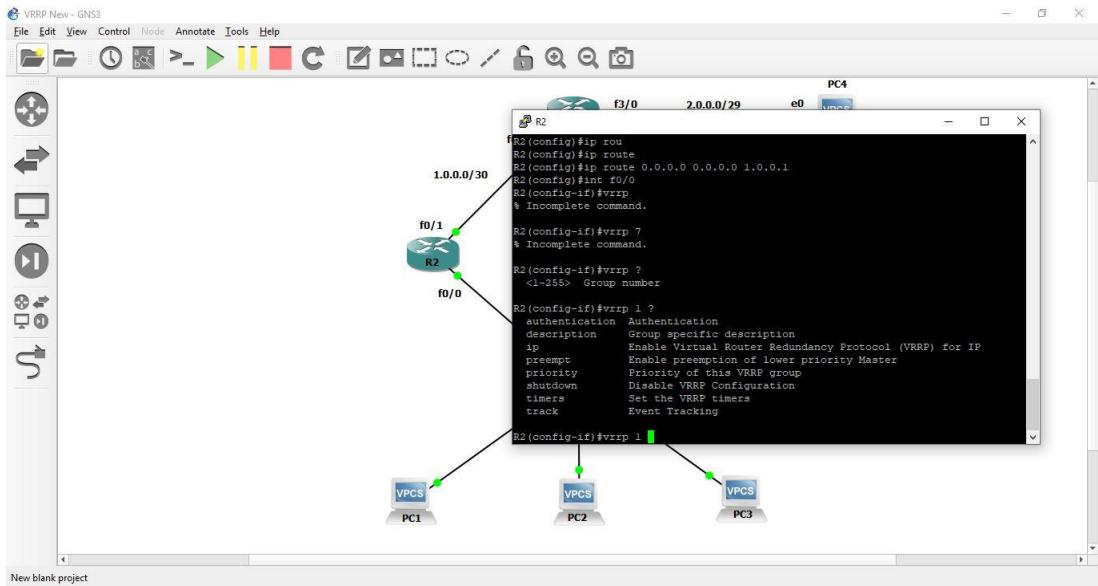


Figure 22

Enable VRRP on R2. And set its group. To use VRRP we have to enable VRRP first.

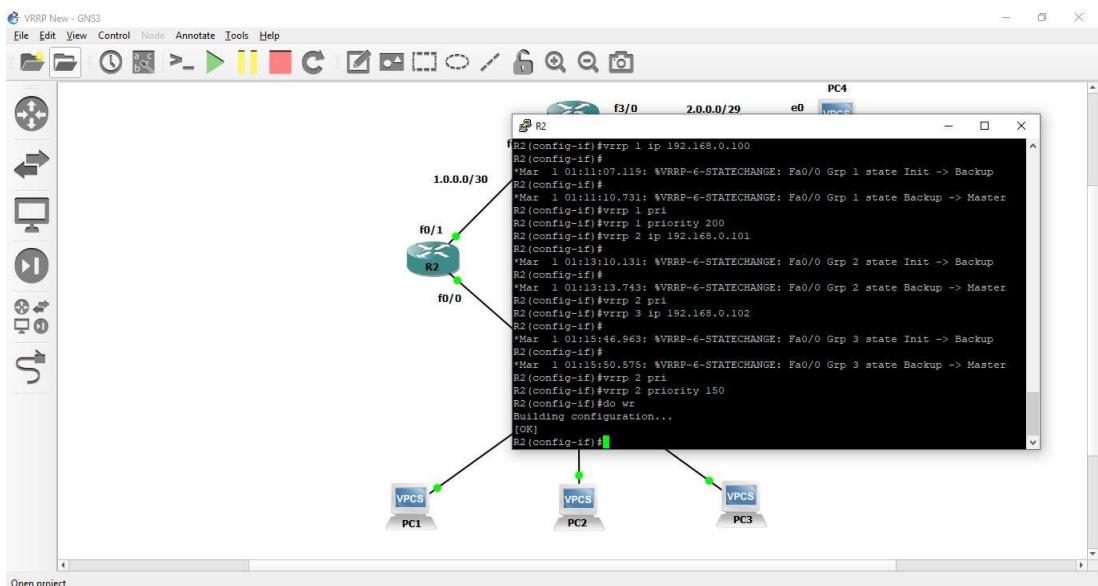


Figure 23

Here we set group priority on R2 router. Here we have three group for R2 router.

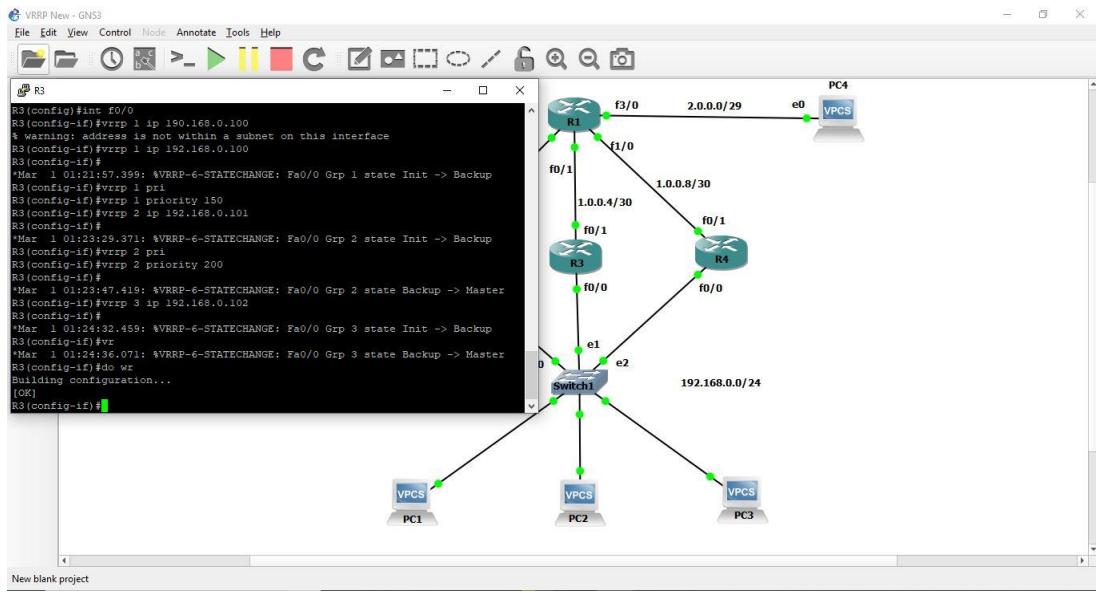


Figure 24

Enable VRRP on R3, set group and then we giving group Priority

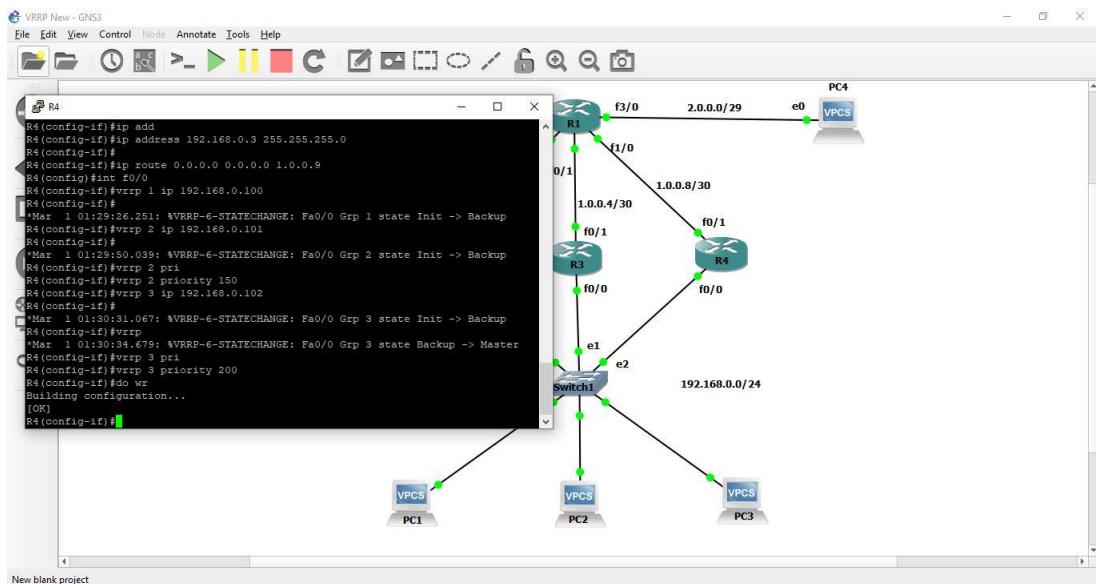


Figure 25

Similarly, we enable VRRP on R4 and set group priority

Priority	R2	R3	R4
200 = Master	200	150	100/0
150 = Backup	100/0	200	150
100/nil = Backup	150	100/0	200

Figure 26
Priority table

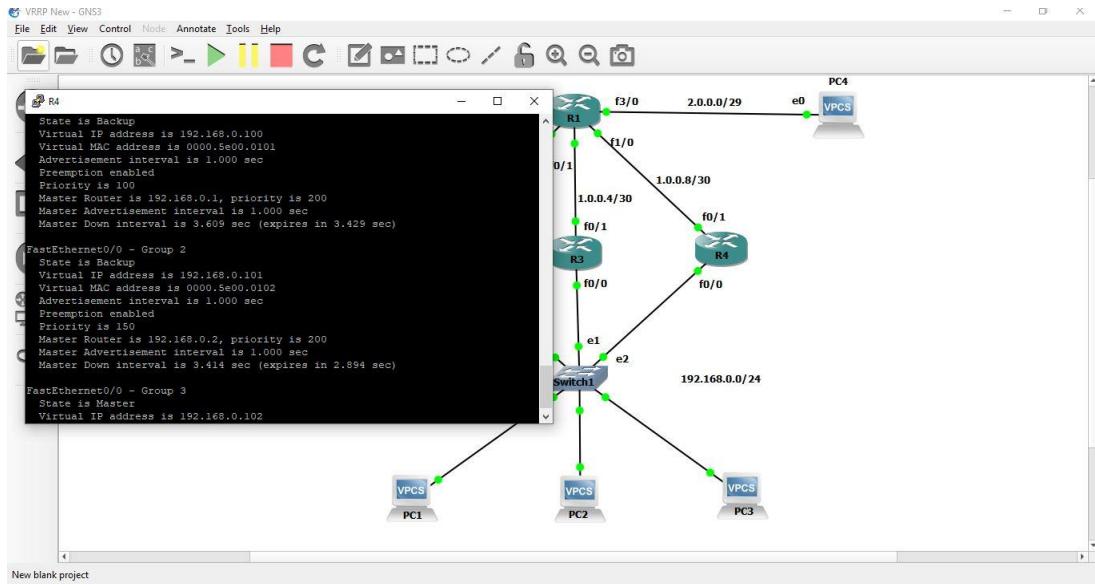


Figure 27

For VRRP we don't need Preemption. In HSRP we have preempt after set group priority but in VRRP we don't have to preempt. It is automatically enabled in VRRP.

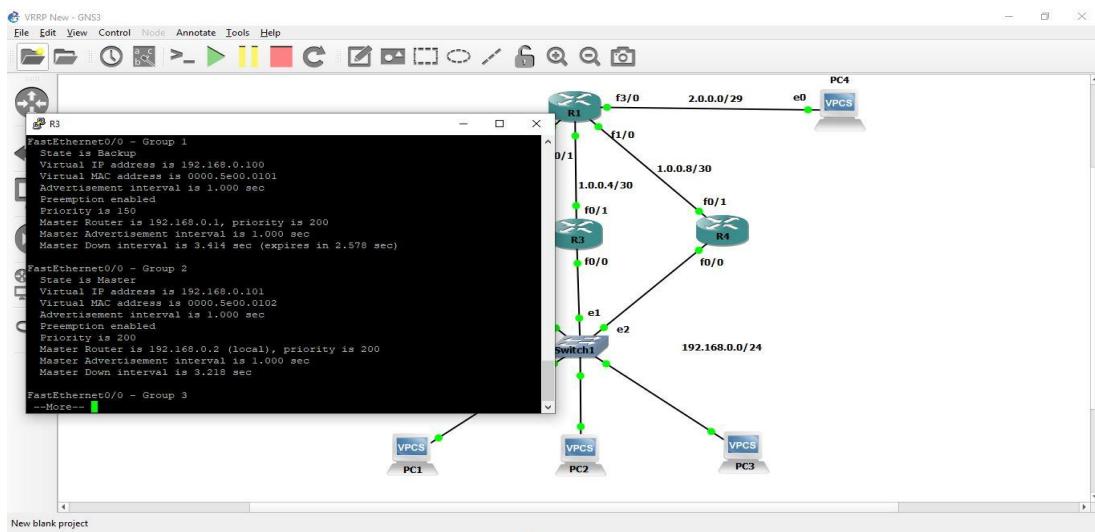


Figure 28

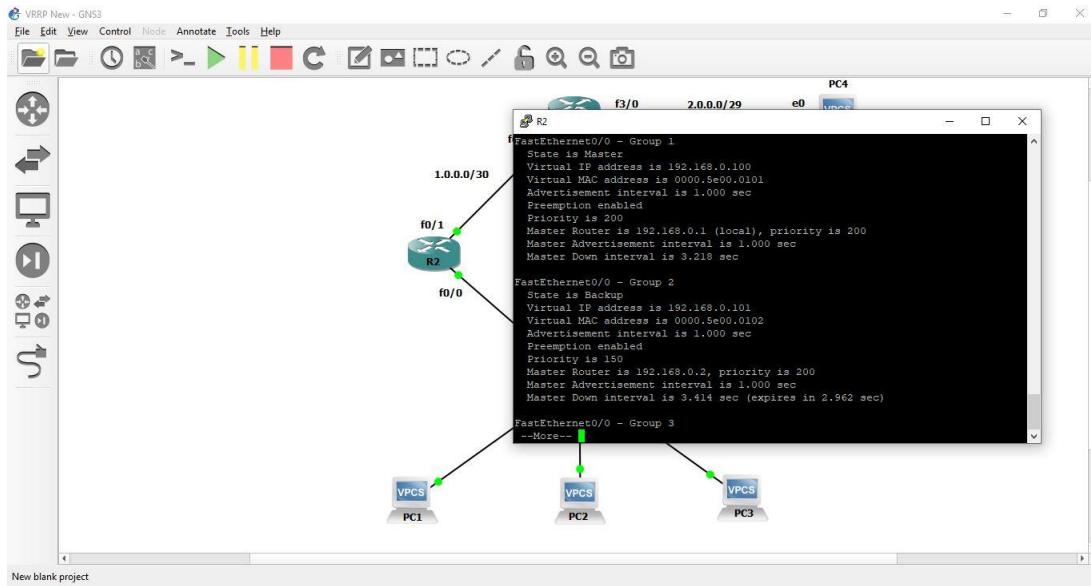


Figure 29

Showing group status of R2 router

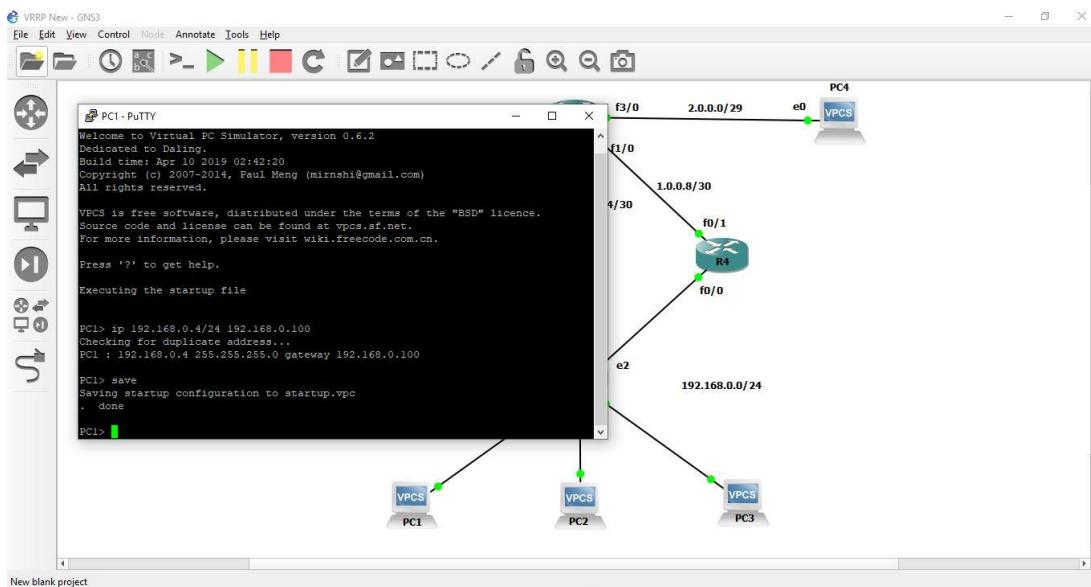


Figure 30

Set IP on PC1 and Save it. To trace our network from PC1 which was assuming as client node. Have set IP address so that we can ping PC1 to PC4.

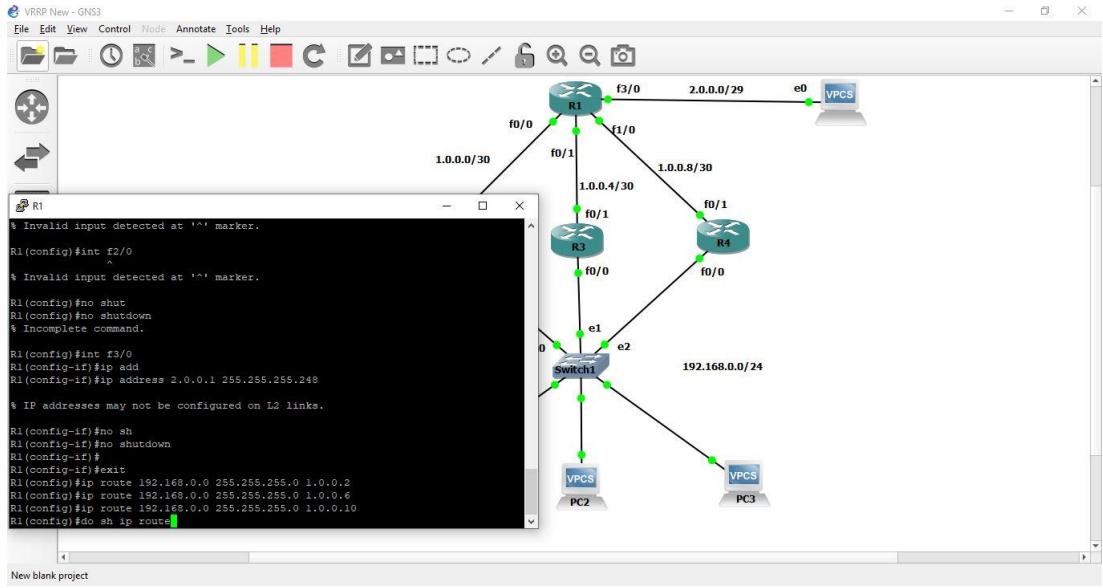


Figure 31

Now We set Route on R1 so that it can get access to PC1, PC2, PC3 through those three R2, R3, R4. Before R1 had only R2,R3 and R4 IP addresses now R1 also connected with all three user nodes.

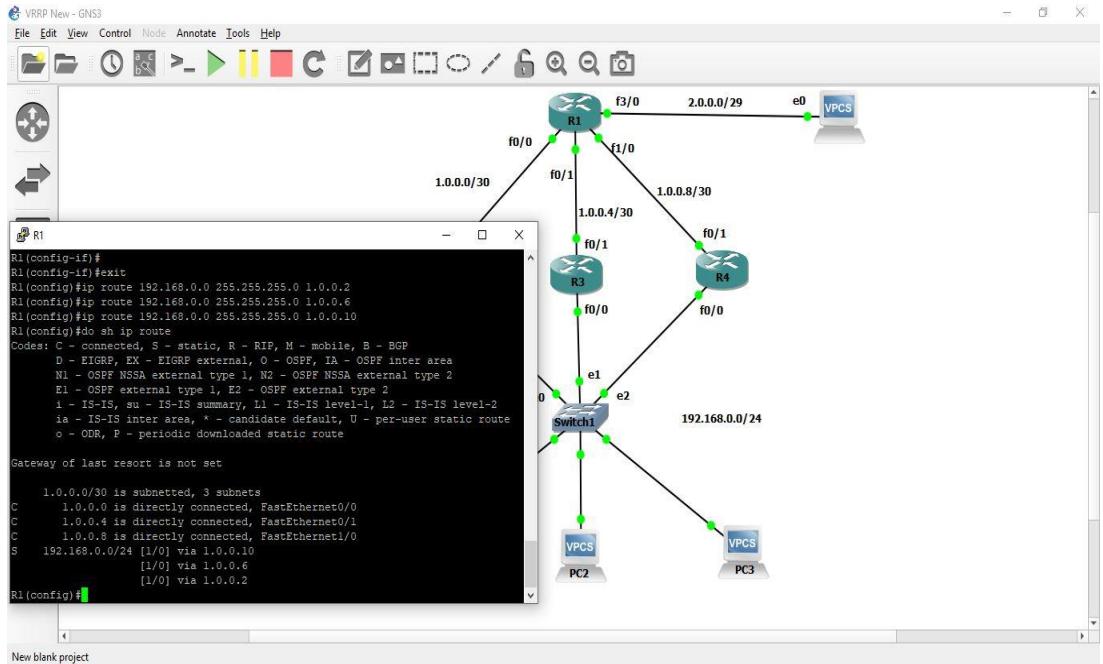


Figure 32

Now we can see IP route of R1

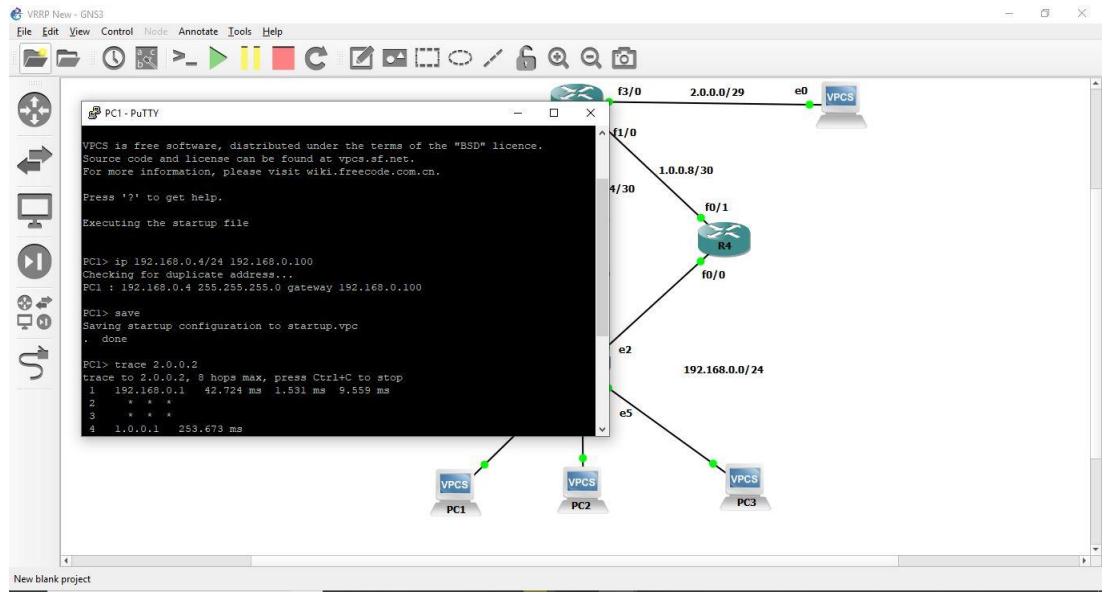


Figure 33

Trace on PC 1

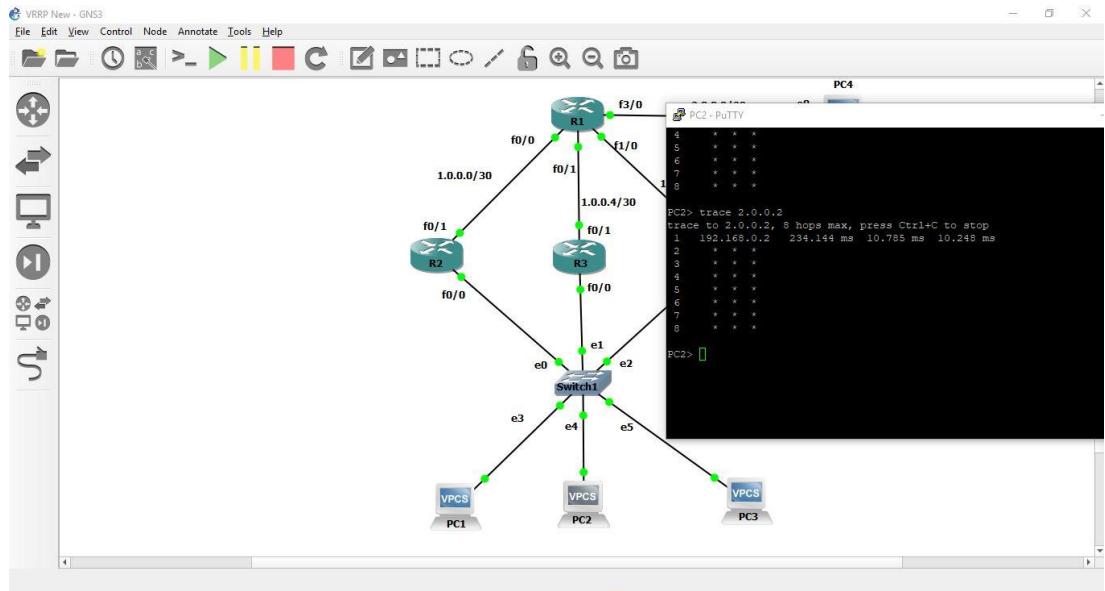


Figure 34

Trace on PC 2

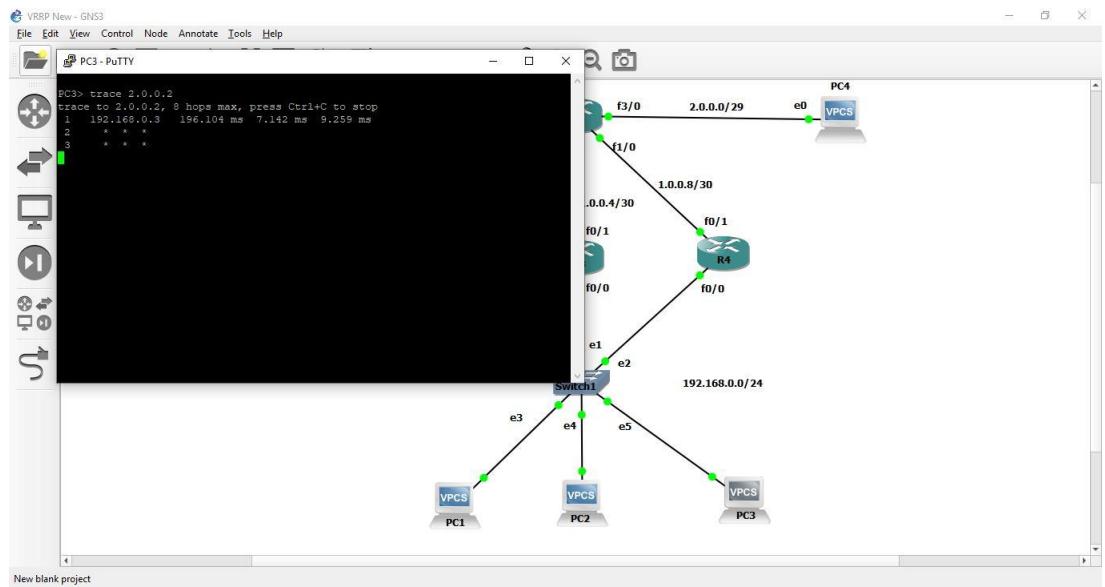


Figure 35

Trace on PC 3

4.6: Project Hot Standby Router protocol

In Computer network Hot standby router protocol maybe a Cisco restrictive repetition convention for setting up a fault tolerant default gateway. There are 2 Version. In version one there is 0- 255 grope and in version 2 this grope is between 0- 4095. In HSRP one is Master, one is in standby mode and another one is on listening mode. [2020, Hot Standby Router Protocol, Tech]

4.7: Application

- I. Hot Standby Protocol provide redundancy for IP Address.
- II. Hot Standby router protocol bolsters configurable MAC Address.
- III. MAC address is generated automatically by HSRP. The first 24 bits will be default CISCO address (i.e. 0000.0c). The next 16 bits are HSRP ID (i.e. 07.ac).
- IV. Peer to peer networking application essentially utilized the Hot standby Router protocol convention
- V. If the active router fails then the standby router will become the active router.

4.8: Codes

CODE	USAGE
Conf t	Interface configuration terminal
Int	Interface
IP Address	Configure IP address for interface
HSRP [group] preempt	Set priority for every switch
HSRP Group IP	Secondary IP Address
Show HSRP brief	Show HSRP total connection
Do wr	Save

[2017, Catalyst 3560 Software Configuration Guide]

Figure 36

4.9: Configuration

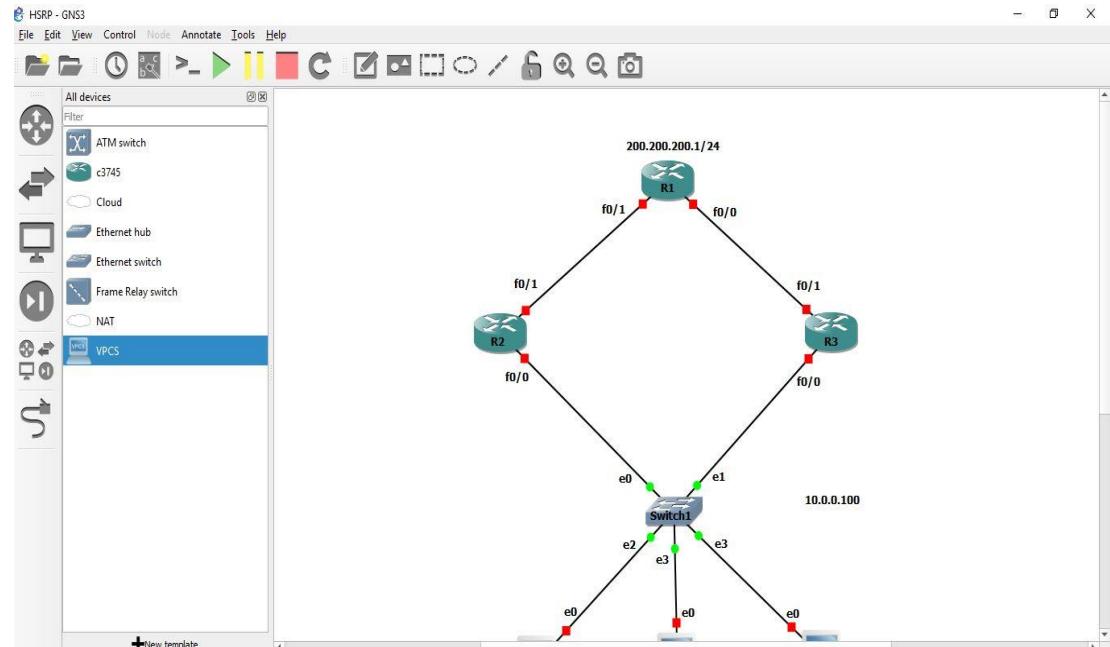


Figure 37

There we take R1 which we are considering IIG and R2 and R3 is router

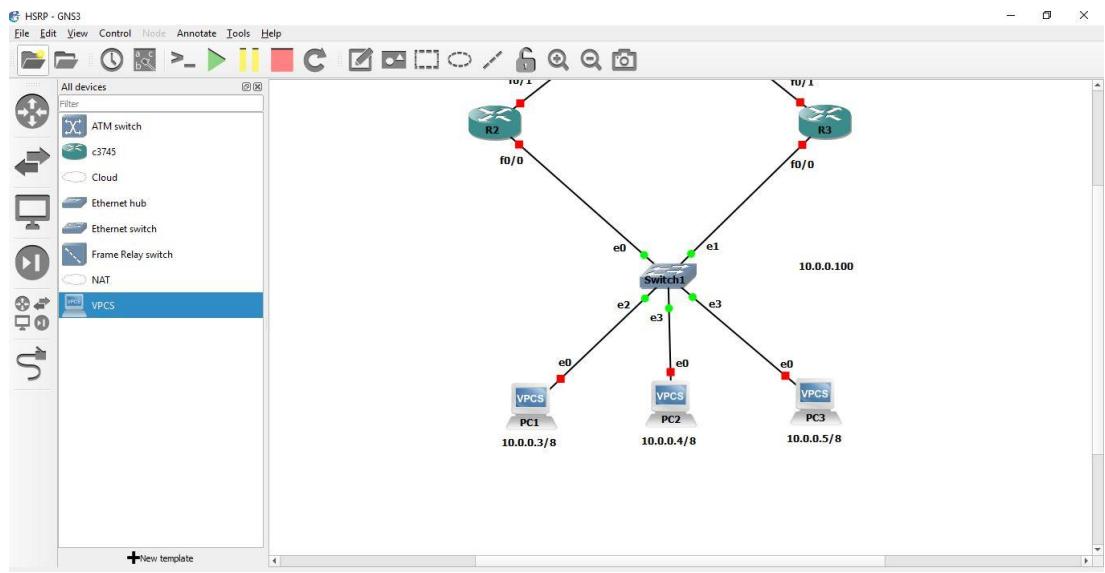


Figure 38

Those two routers are connected with 3 PC and they are connected through Fast Ethernet Cable.

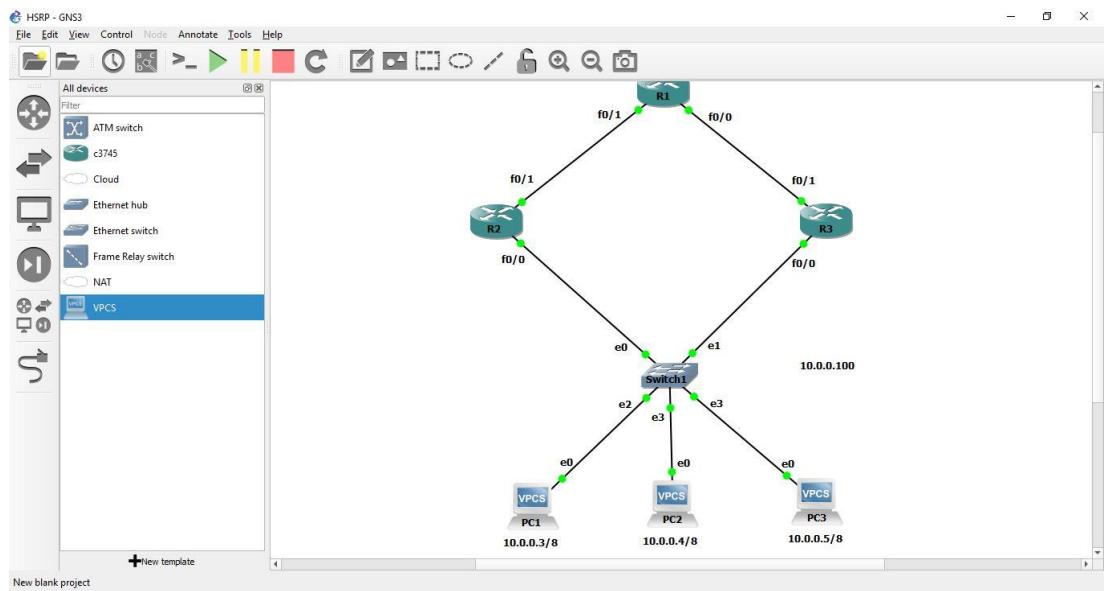


Figure 39

We start the project

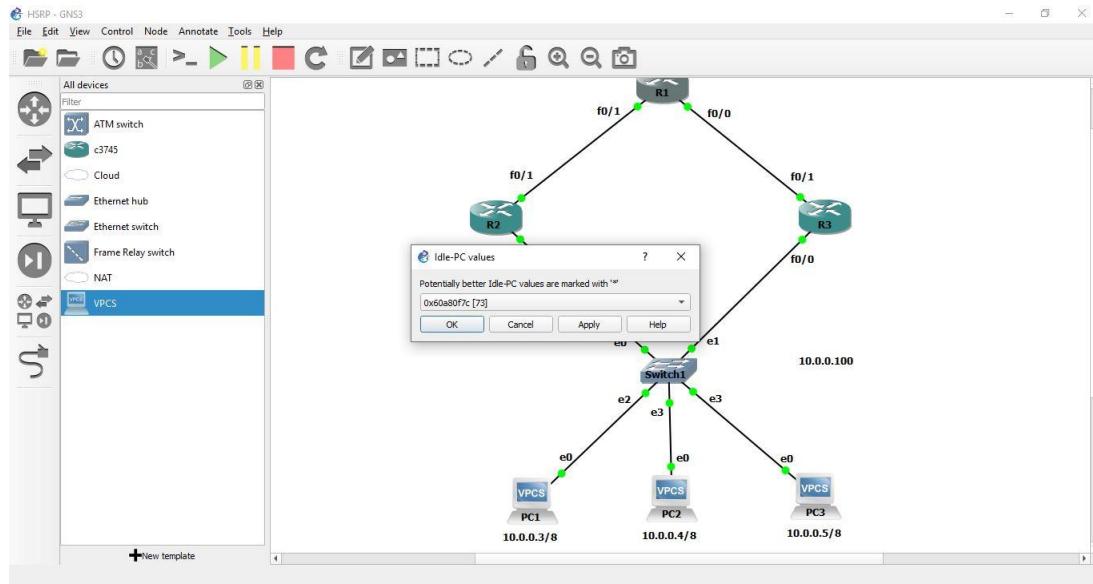


Figure 40

We now idle the pc it will make your project fast. GN-3 will makes RAM slow.

The screenshot shows a Cisco Packet Tracer interface. On the left, a terminal window displays the configuration of Router R1. The configuration includes setting up FastEthernet interfaces (fo/0 and fo/1) with IP addresses 12.0.0.2 and 13.0.0.2 respectively, and connecting them to a central Switch1. On the right, the network diagram illustrates the physical connections between R1, R3, and Switch1, along with three Virtual PC hosts (PC1, PC2, and PC3) connected to the switch.

```
* Mar 1 00:00:13.695: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to down
R1>
R1#conf t
R1<-->Configuration commands, one per line. End with CNTL/Z.
R1(config)#int fo/1
R1(config-if)#ip addre
R1(config-if)#ip address 12.0.0.2 255.0.0.0
R1(config-if)#no shut
R1(config-if)#
*Mar 1 00:04:13.691: %LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to up
R1<-->*Mar 1 00:04:14.691: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
R1(config-if)exit
R1(config)#int fo/0
R1(config-if)#ip addre
R1(config-if)#ip address 13.0.0.2 255.0.0.0
R1(config-if)exit
^
% Invalid input detected at '^' marker.

R1(config-if)exit
R1(config)#

```

Figure 41

We now configure R1 set its IP and build connection with R2 and R3. Here R1 is IIG (international internet gateway). And H2 and R3 are routers. Their main objective to connect various network simultaneously. Here is also a Switch named switch. Its main objective to connect various devices simultaneously. R2 router IP address is 12.0.0.2 and R3 router IP address is 13.0.0.2

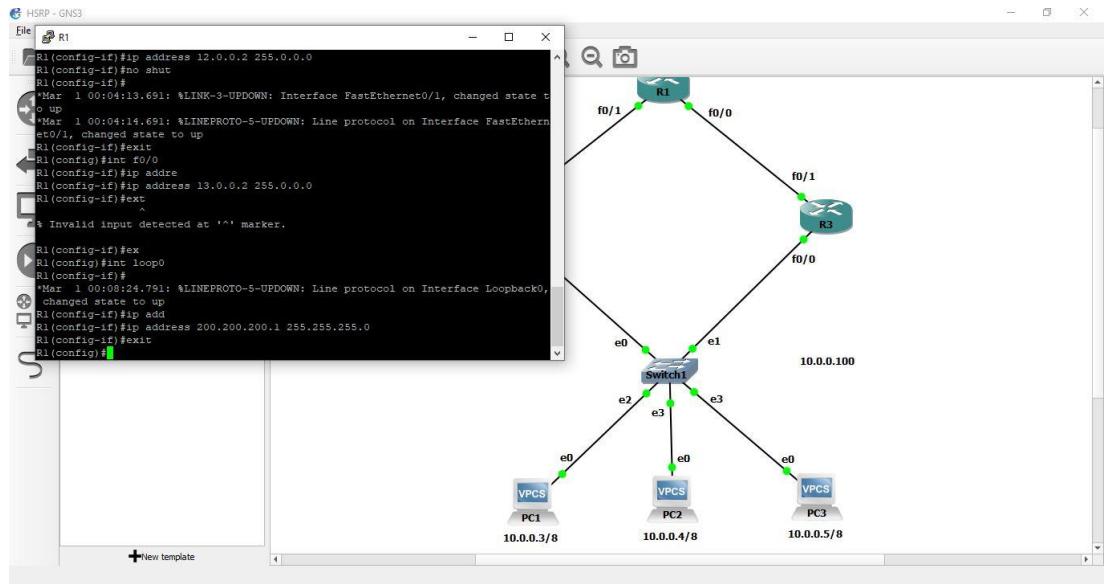


Figure 42

Connection build up with R1 loopback.

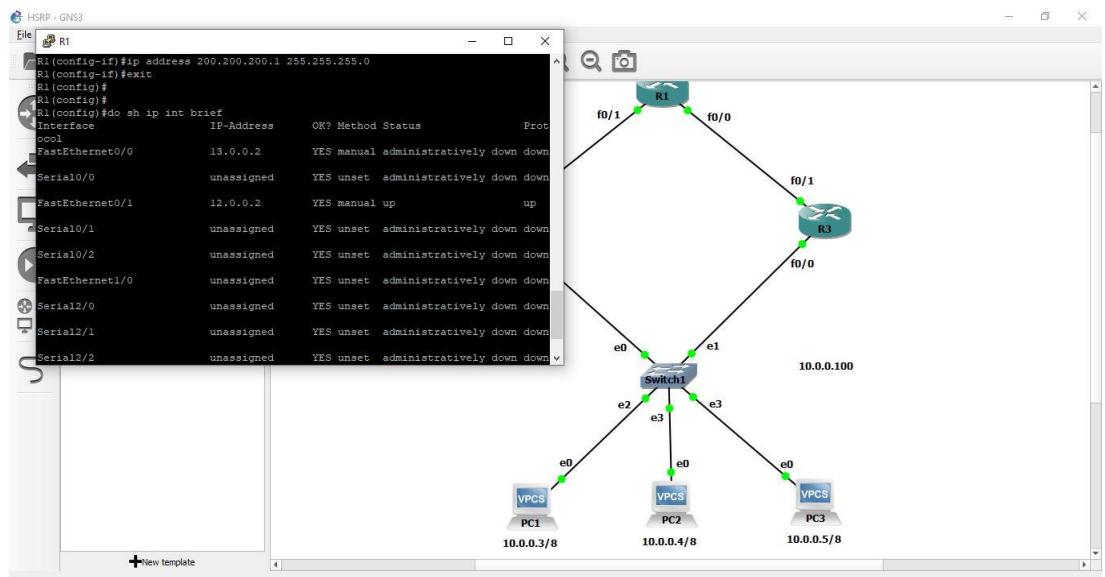


Figure 43

Showing its Interface in detail

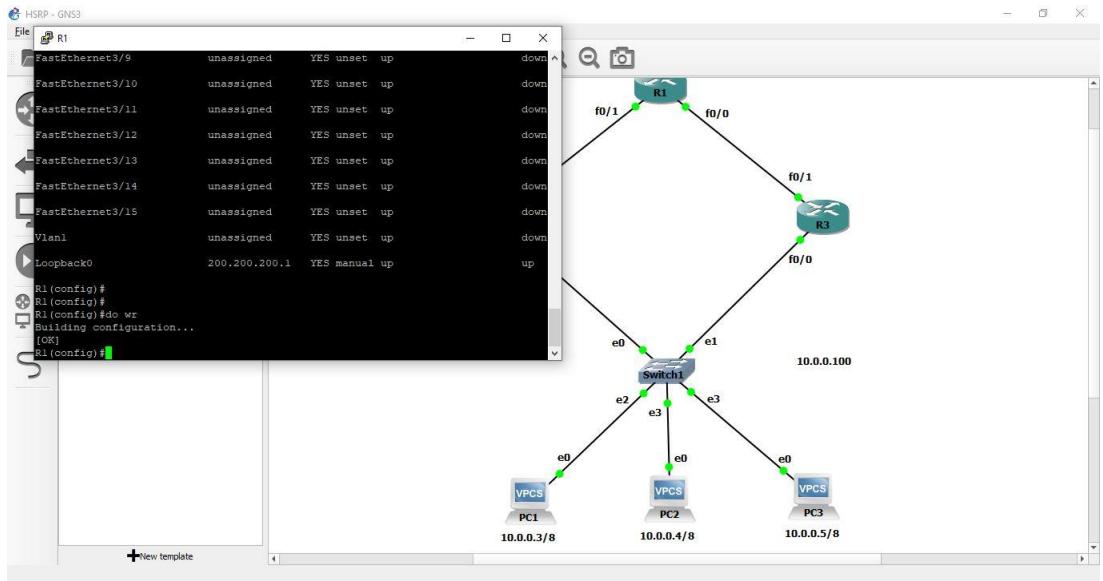


Figure 44

Configure is done now Save it

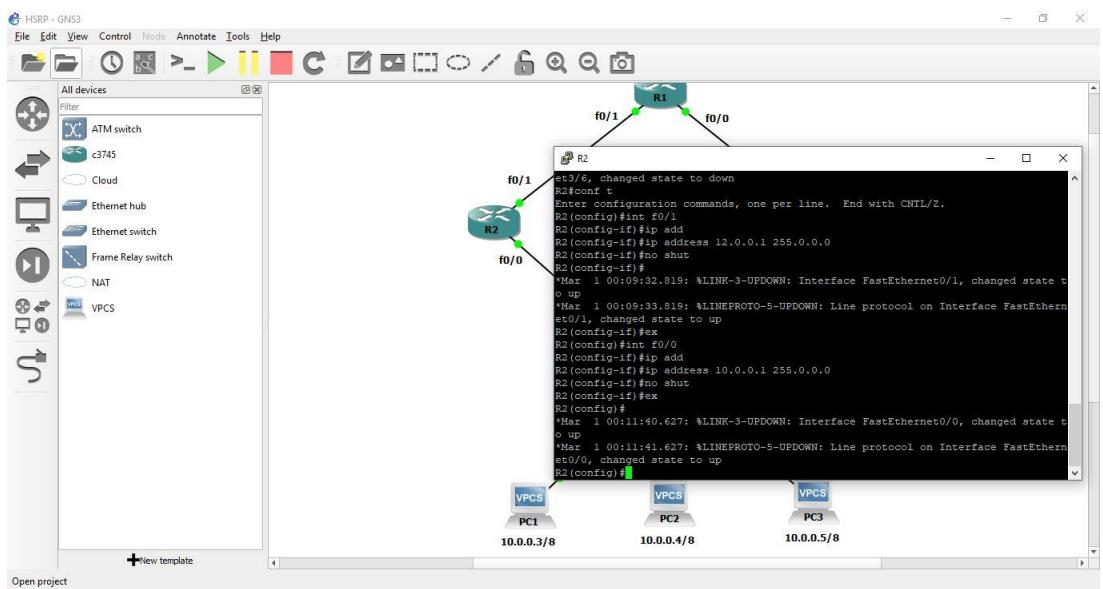


Figure 45

Now we configure R2 router with R1 and Switch. We before set R2 router IP address on R1 now we set from R2 router node. Its IP address is 12.0.0.1. Besides this we connect R2 router with Switch1 which IP or default gateway is 10.0.0.1

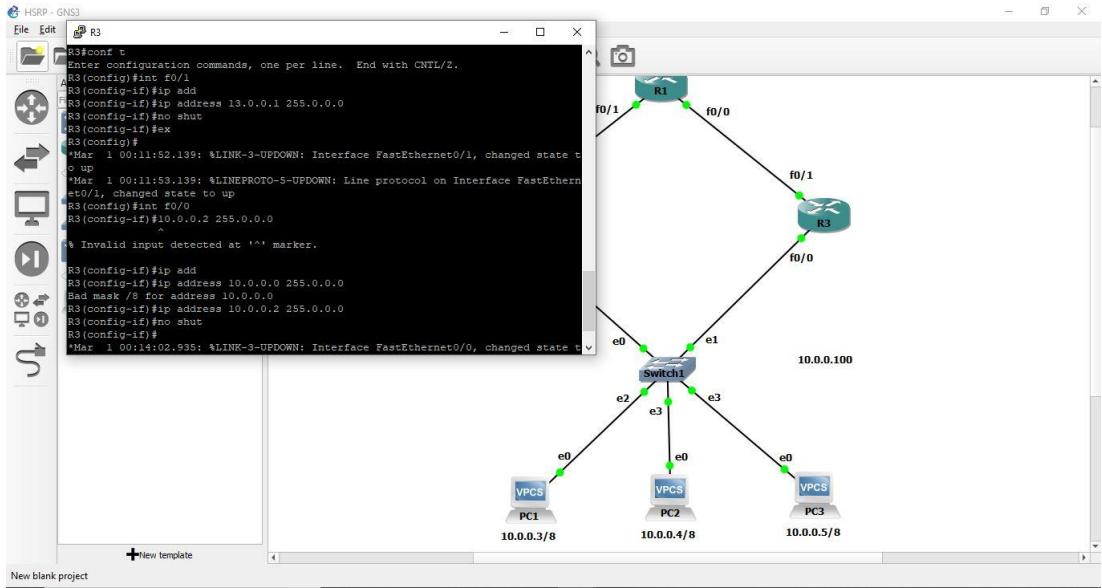


Figure 46

Similarly, we configured R3 with R1 and Switch ad save. We before set R3 router IP address on R1 now we set from R3 router node. Its IP address is 13.0.0.1. Besides this we connect R3 router with Switch1 which IP or default gateway is 10.0.0.2

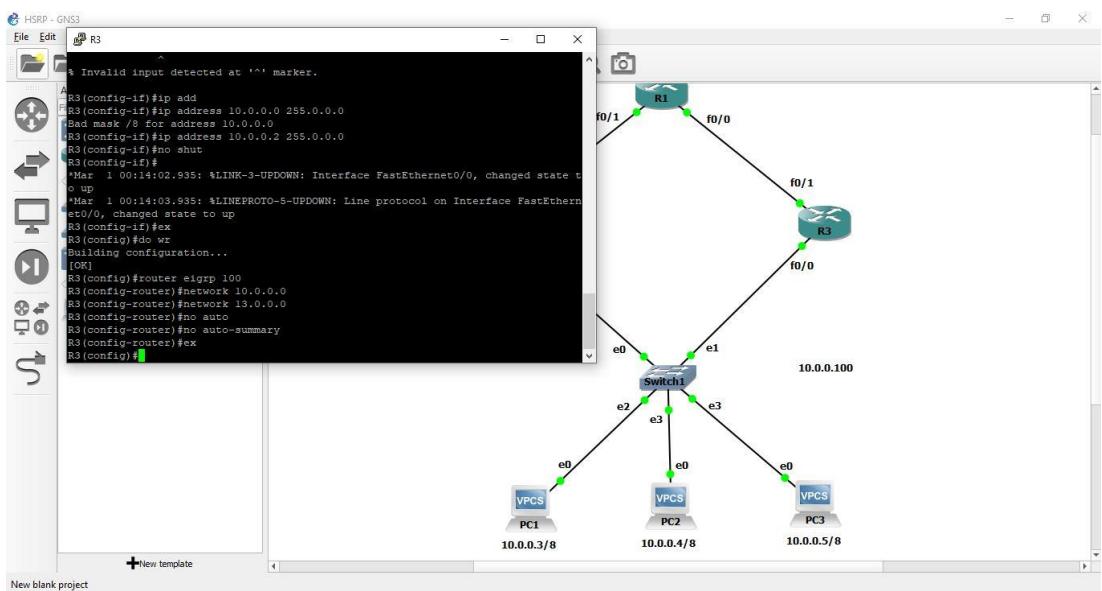


Figure 47

Here we route with different type route EIGRP (Enhanced interior gateway routing protocol) with R3. It is dynamic routing Protocol which is used to find the best path between any two layer-3 devices to deliver the packet.

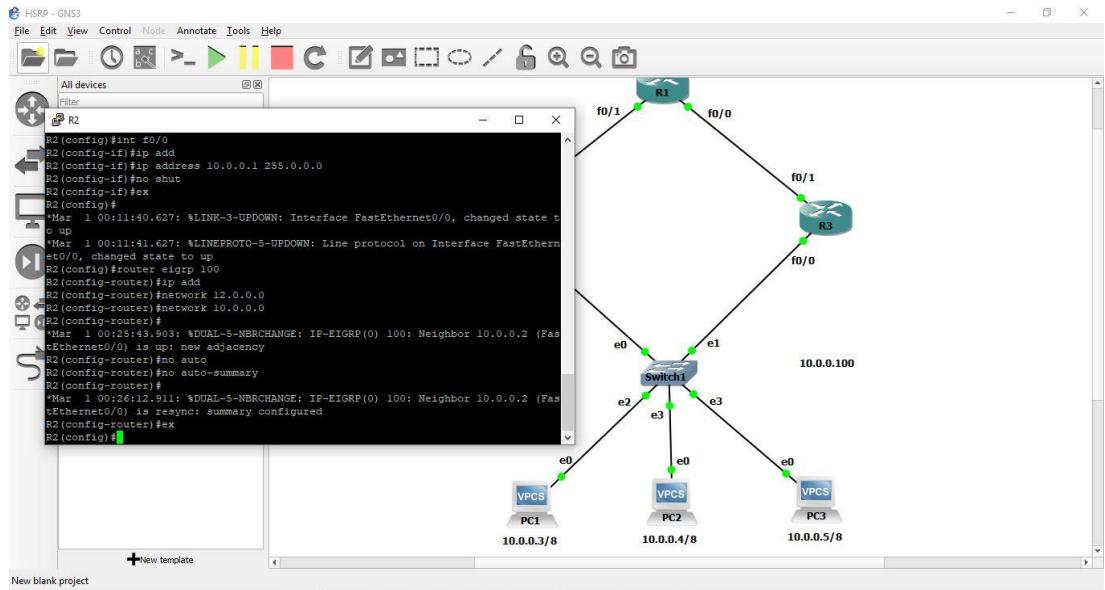


Figure 48

Similarly, EIGRP router connected with R2. EIGRP is a dynamic routing Protocol which is used to find the best path between any two layer-3 devices to deliver the packet. Its works on network layer.

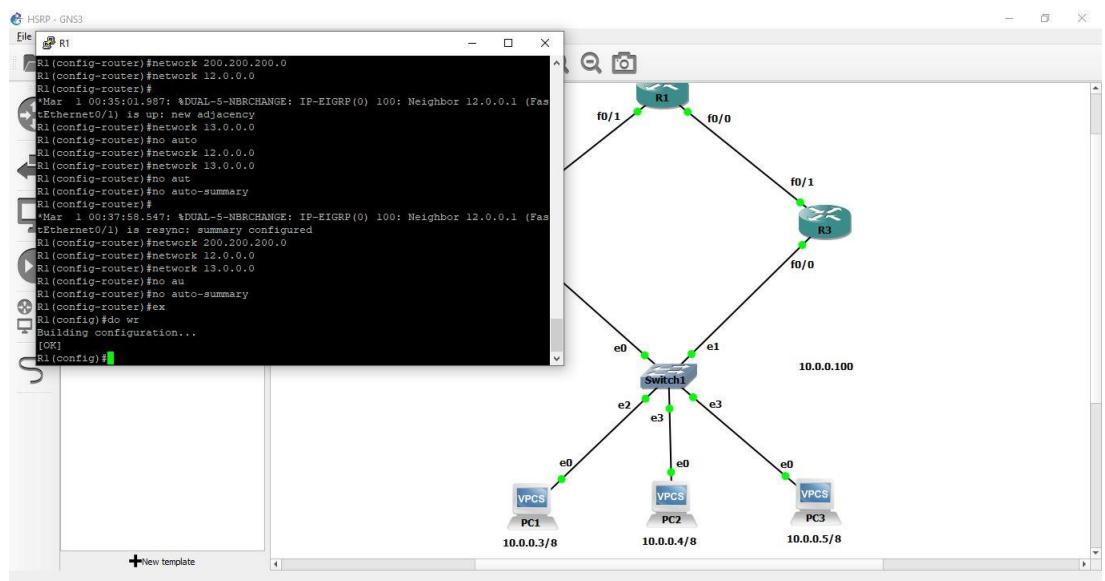


Figure 49

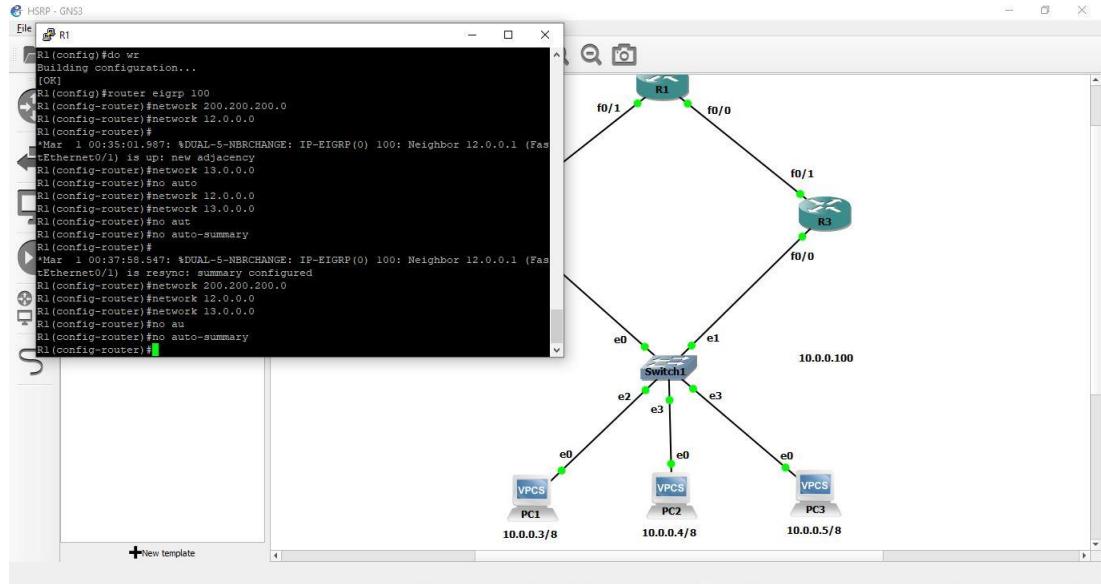


Figure 50

Now we Connected R1 with those R2 and R3 routers and their IP is now known to R1. We routing R1 network to reach user nodes

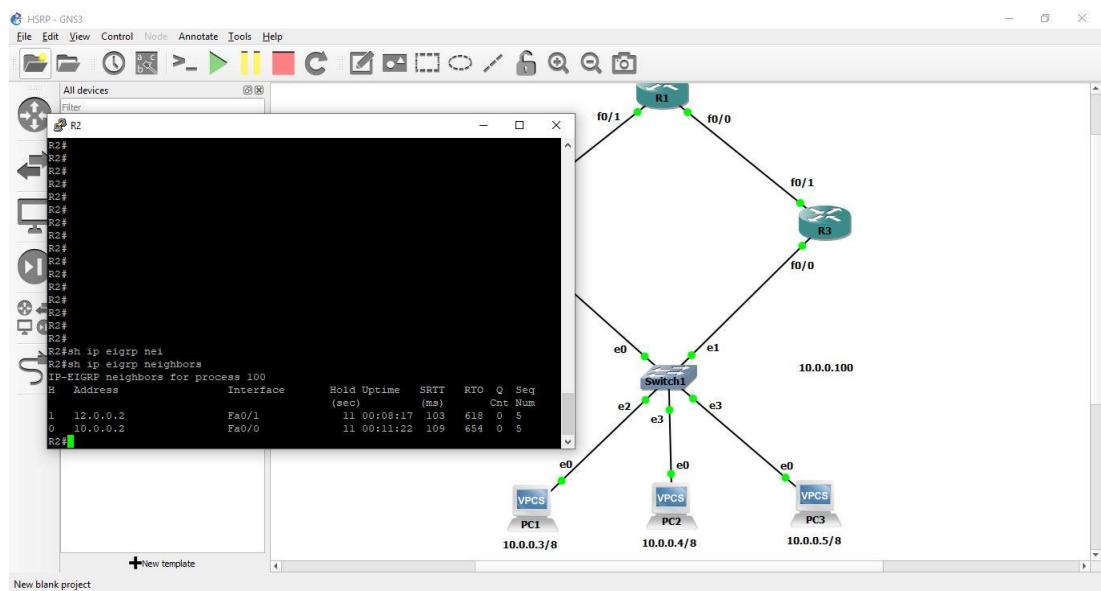


Figure 51

Showing which network are connected to EIGRP network

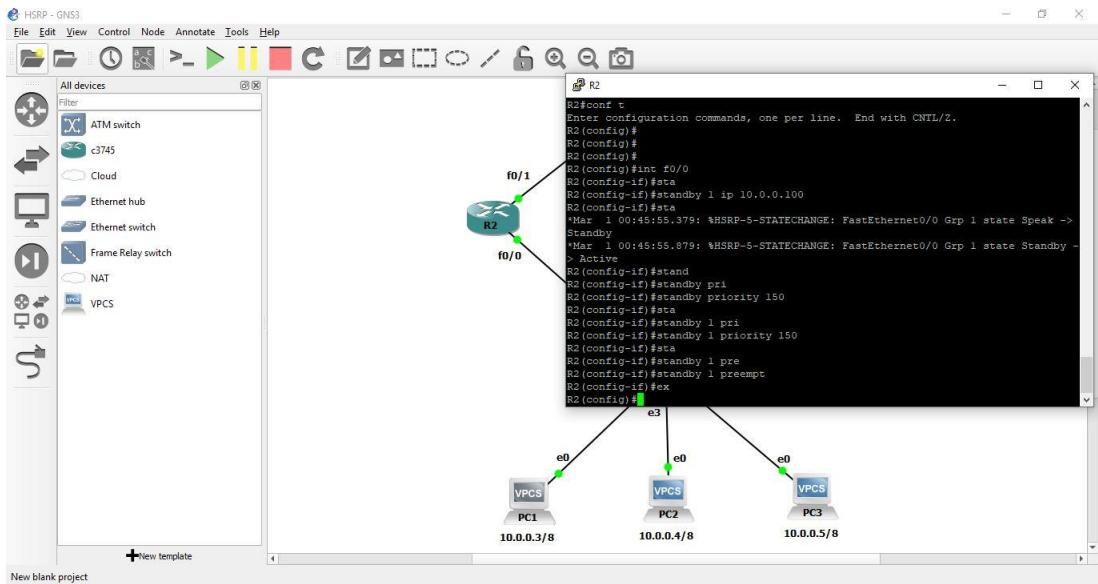


Figure 52

Priority set on R2 and preempt

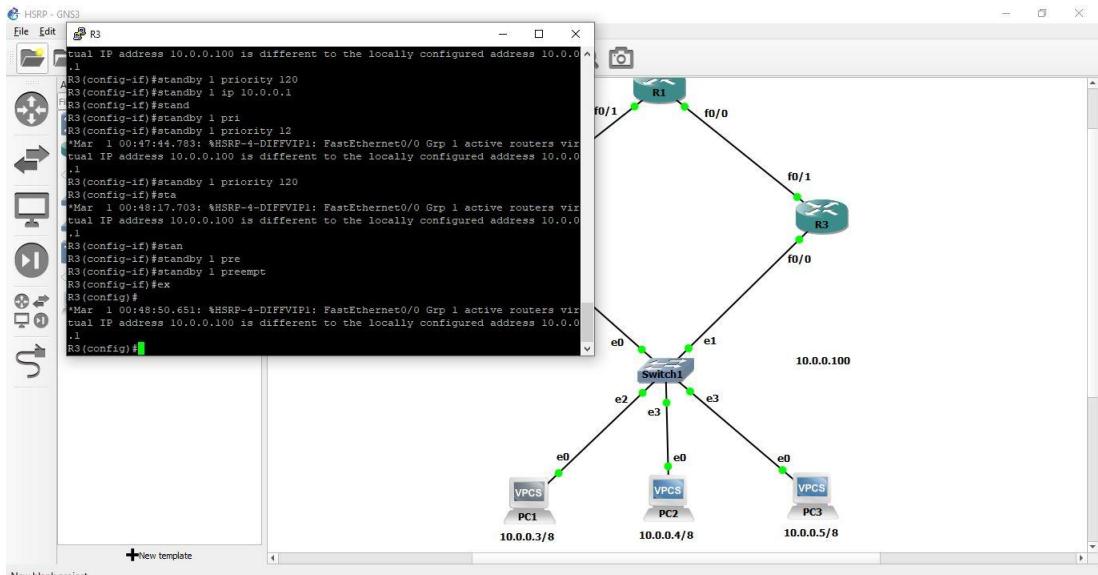


Figure 53

Priority set on R3 and preempt. In VRRP we don't have to preempt to enable priority but in HSRP we must have to enable preempt manually.

```

R3#
*Mar 1 00:59:57.603: %HSRP-4-DIFFV1PI: FastEthernet0/0 Grp 1 active routers virtual IP address 10.0.0.100 is different to the locally configured address 10.0.0.1
R3#h sta
R3#sh Standby brief
      P indicates configured to preempt.
      |
Interface  Grp Prio P State Active   Standby   Virtual IP
Fa0/0       1 120  P Standby 10.0.0.1 local    10.0.0.1
R3#
*Mar 1 01:00:28.779: %HSRP-4-DIFFV1PI: FastEthernet0/0 Grp 1 active routers virtual IP address 10.0.0.100 is different to the locally configured address 10.0.0.1
R3#
*Mar 1 01:00:58.819: %HSRP-4-DIFFV1PI: FastEthernet0/0 Grp 1 active routers virtual IP address 10.0.0.100 is different to the locally configured address 10.0.0.1
R3#
*Mar 1 01:01:30.699: %HSRP-4-DIFFV1PI: FastEthernet0/0 Grp 1 active routers virtual IP address 10.0.0.100 is different to the locally configured address 10.0.0.1
R3#
R3#sh standby brief
      P indicates configured to preempt.
      |
Interface  Grp Prio P State Active   Standby   Virtual IP
Fa0/0       1 150  P Active   local    10.0.0.2          10.0.0.100
R3#

```

Figure 54

Here for both R2 and R3 routers showing their group priority status

```

R2#
R2#
R2#
R2#
R2#
R2#
R2#
R2#sh standby ?
      Bridge-Group Virtual Interface
      BVI
      FastEthernet
      Port-channel
      Ethernet Channel of interfaces
      Vlan
      all
      brief
      capability
      delay
      internal
      redirect
      |
      <cr>
R2#sh standby
      |
      R2#sh standby 1
      Bridge-Group Virtual Interface
      BVI
      FastEthernet IEEE 802.3
      Port-channel
      Ethernet Channel of interfaces
      Vlan
      all
      brief
      capability
      delay
      internal
      redirect
      |
      <cr>

```

Figure 55

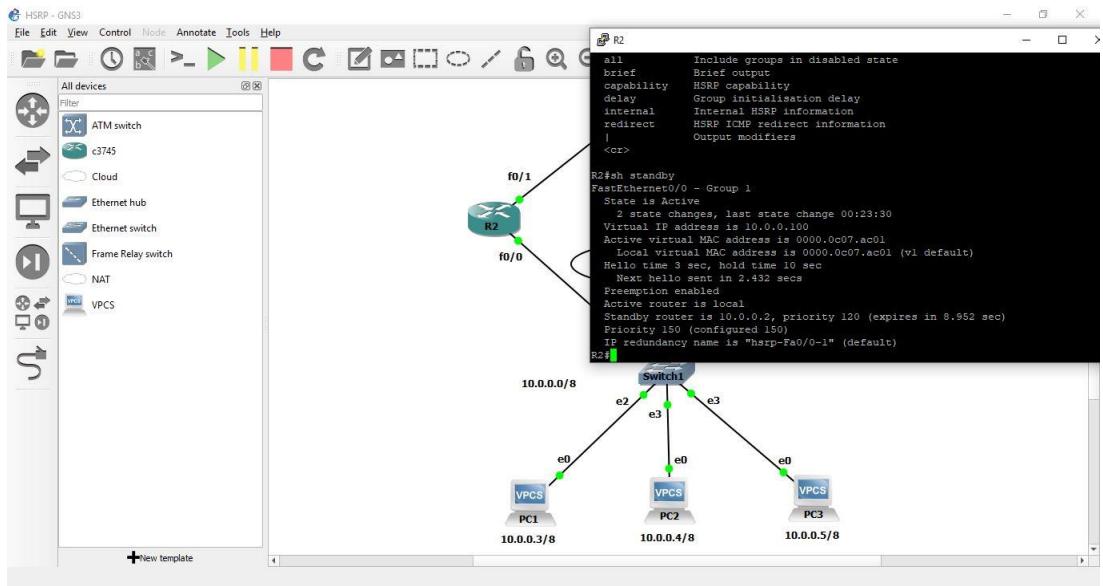


Figure 56

Showing Standby route

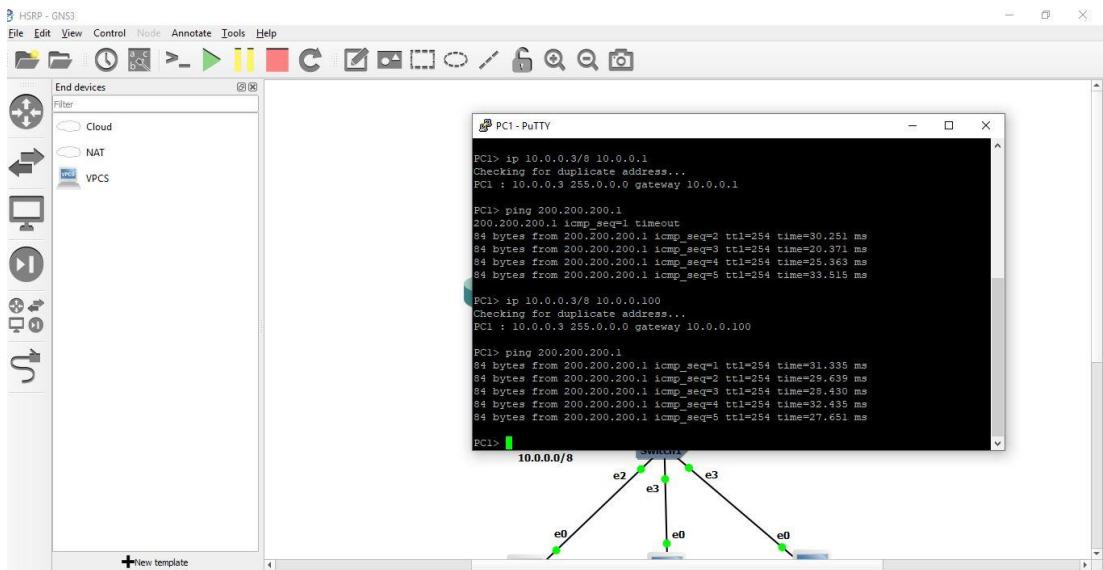


Figure 57

HSRP Ping

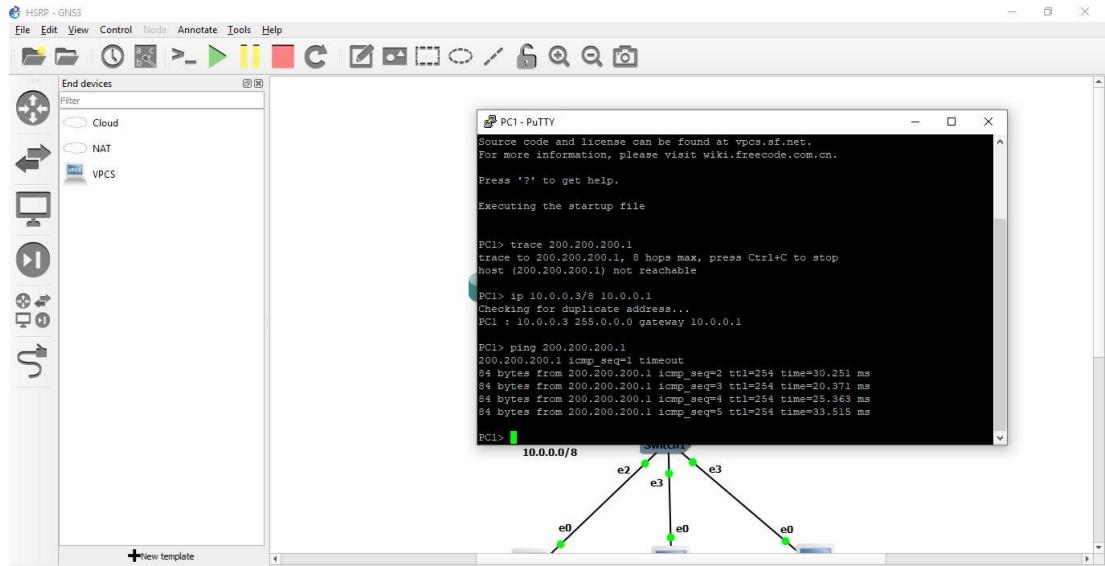


Figure 58

HSRP Tracing

4.10: Difference between VRRP and HSRP

VRRP	HSRP
1. Open Standard	Cisco property
2. Can use Physical or virtual address	Separate IP address needed for Virtual address
3. One Master and others are Backup	One Active, one standby and others listening mode
4. All virtual router must use 00-00-5E-00-01-XX as its MAC address	All virtual must use 0000.0C07.ACXX where XX is group Id
5. Real IP and Virtual IP both are useable as it's gateway	Virtual IP add as gateway
6. Preempt is enable	Preempt manually
7. Hello 1sec and hold down timer is 3 sec.	Hello 3 sec and hold down timer 10 sec
8. It's a network layer protocol	Application layer protocol

Figure 59

4.11: Which One is Better

Both protocols are good. It depends in which network we are using. If devices are Cisco based than HSRP is efficient. If various types of devices using than VRRP is only option. According to different sources VRRP is better because when Master router fail to connect with IIG the backup router will take its position within a second. So, it's faster than HSRP though HSRP also fast. Besides in VRRP don't have to preempt, its automatically enable but in HSRP have to enable preempt after set its priority. VRRP is open standard on the other hand HSRP is Cisco proprietary.

CHAPTER FIVE

CONCLUSION

5.1: Conclusion

This internship was grateful experience to me. After finishing my 4 years graduation now I know how people do work in industries. How industries deal with their clients, how they manage it, their goals. Moreover, I tried to learn about their motto. I have learned a lot from this three-month internship. These three months I have been following the rules of my organization. I hope this helps me in my professional life in the future. At last I couldn't do my job if I didn't get support from them. All the staff helped me a lot. I'm thankful to them. Also, if my supervisor hadn't guide me then it would have been impossible for me to complete this project. So, I'm grateful to him.

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