



The time to elect a new President has arrived.

After a successful reign of 8 years by President Mr. Barack Obama, the fight to see who will be crowned the next President of the United States of America (POTUS) has already begun. As the weaker candidates start to get eliminated, the action is heating up. The race has started, and it remains to be seen who will utter these golden words on the 8<sup>th</sup> of November, 2016:

"I do solemnly swear (or affirm) that I will faithfully execute the Office of President of the United States, and will to the best of my Ability, preserve, protect and defend the Constitution of the United States."

Your task is to follow the action, as it spans the entire US of A. Observe the Democrats and the Republicans closely, for you need to elect the right candidate. Choose wisely, for the future of this country, for the next 4 years at least, lies in your hands. The complete electoral campaign is spread across the entire USA including the two main parties - the Democrats and the Republicans.

The Democrats stand by with a Liberal philosophical approach whereas the Republicans follow a more Conservative philosophy. Hilary Clinton and Bernie Sanders are contesting from the Democrats, whereas Donald Trump stands from the Republicans. Along with these parties, we have an Electoral College who would be taking the final decision, and are observing everything from the beginning.

Florida, Ohio and Colorado are all swinging states, wherein they have not yet pledged support for any one party. The Republicans and the Democrats each have their campaign offices. Texas provides full support to the Republicans, whereas California votes in majority for the Democrats. People have to cast their votes in the Ballot.

There is a wireless 1800 at Florida, and one MLS each at Colorado, the Republicans and the Democrats. The Ohio and Ballot are switches incapable of routing. Texas and California are routing devices. You have to name all of your devices as Rack\_X\_{Device Name} where X = Rack number.

The first step for both the parties is to gather as much information about public opinion as possible. The Republicans and the Democrats have positioned their party members at Colorado and Ohio, who are sending back all the information to their respective head offices. Florida, being a highly indecisive state, has decided to just observe all the events happening around, without divulging any details about itself. It maintains a personal record of all these events.

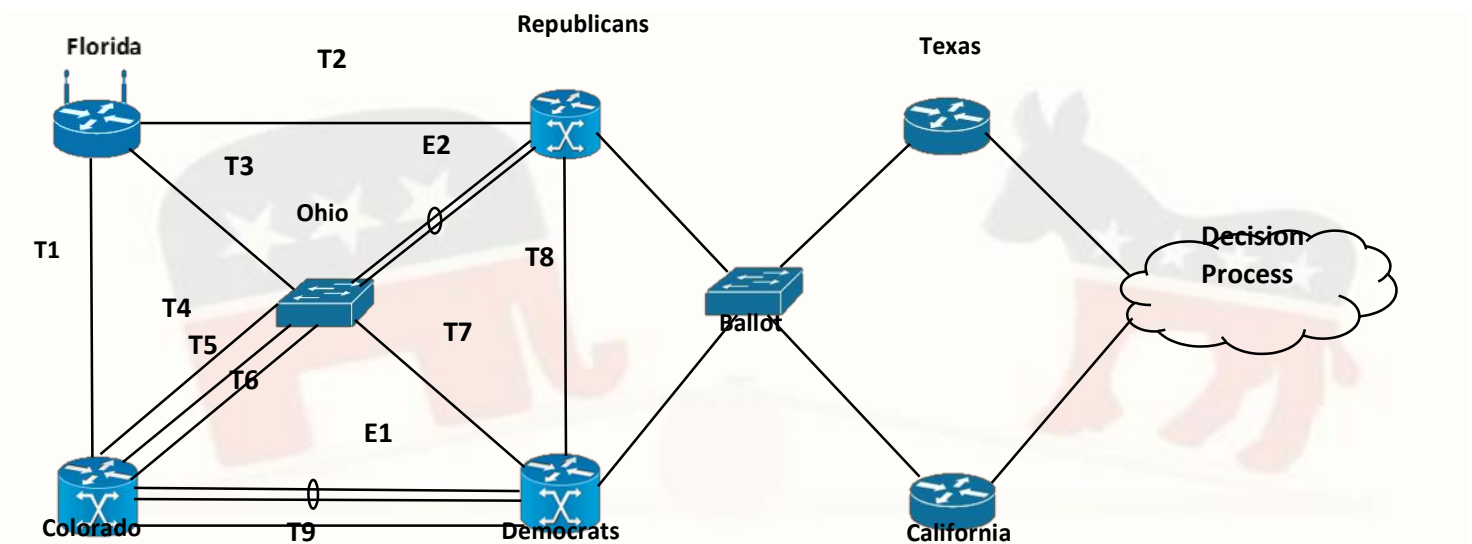
Before proceeding, you need to make an estimate of the number of employees needed in each office.

You have been assigned the space of 175.1X.230.240/20 where X is your rack number.

Donald Trump requires 1010 staff members in his campaign. Bernie Sanders and Hilary Clinton both have requested for 254 staff members. The Electoral College wants select best candidates, and hence require only 250 members.

However, be careful not to allocate any addresses in the ranges of 175.1X.228.20/22, 175.1X.236.16/23, 175.1X.238.10/24.

You are to use 192.168.4X 0/24 for your routed links.



Bernie Sanders is conducting a talk event at the University of Colorado Boulder in Colorado, and hence has set up a high bandwidth link from Colorado to his headquarters. He has invested in 700 Mbps for this link for an IEEE standard protocol, with Colorado initiating the broadcast of this event which is received at the Democrat's headquarters. Donald Trump heard about this event and hence planned a similar event in Ohio State University to compete with Sanders. He invested in an 1250 Mbps link from Ohio to the Republican headquarters. In lieu with the conservative principles of his party, Trump uses a proprietary protocol where Ohio initiates the transmission of the event feed which is being received by the Republican headquarters.

One port on the Republicans does not allow any other user, but only Trump's secretary to connect to it. This port is secured to shut down in case any anyone else tries to access it. However, it recovers in 40 seconds. This secured port is aware of the identity of Trump's secretary beforehand. One port on the Democrats allows Sanders' two secretaries to connect to it. However, if any anyone else tries to connect to this port, this port

restricts them from connecting. Both these ports on Republicans and Democrats do not participate in the spanning tree.(no s

The layer 2 links are shared by all parties unless mentioned otherwise. E1 in constructed so that only Sanders' traffic passes through it. The same is with E2; it only allows Trump's content to be on it. People from Florida are requesting information from Colorado regarding their opinion on the election, and hence listen on T1. The Democrats are trying to influence the people in Ohio from their headquarters. These people are listening to their propositions on T7.

The Electoral College have their wireless VLAN hidden at Florida as they are silently observing all the events of these two parties. They have secured it with WPA2 security and configured it such that only their two chief executives can access it. Trump also has his VLAN in Florida, which is open to all. The format of SSIDs is X\_NAME where X is your rack number. Trump gets his IP address from Florida and uses the Republican headquarters to communicate anywhere. Bernie Sanders acquires his IP Address from Colorado whereas Clinton gets her IP Address from the headquarters itself. They both, too, use the Democrat's headquarters to carry out all the communications. The Electoral College acquires its IP address from Texas. The Electoral College has decided to talk to both the parties first before heading over to Texas and California to take the final decision.

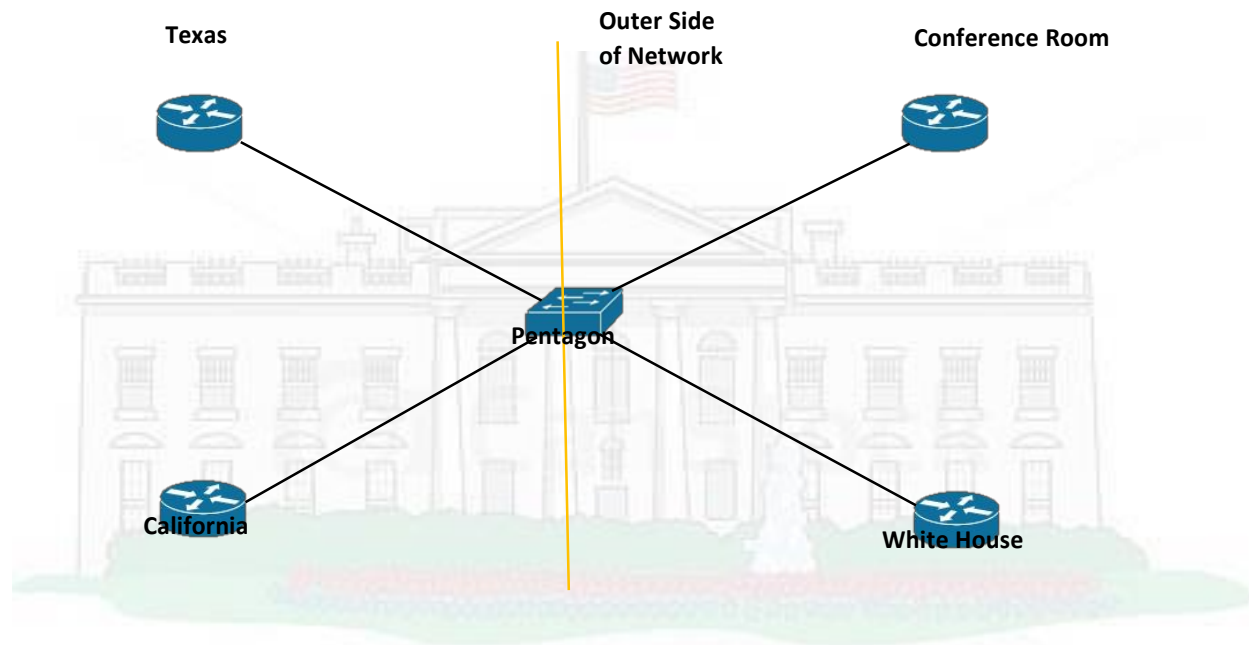
The Electoral College are a long standing institution and hence do not believe in any routing protocol for propagating the information. The Republicans, abiding by their principles, use a proprietary protocol with AS 1 to route its information. Democrats, being the liberal party they are, use an open standardized link state protocol. They all use the same process id of 1. The Republicans and Democrats do not communicate with each other throughout the election process. The people from the wired and the wireless domains of a given party should talk to each other.

The Democrats use their headquarters as the active gateway for the Ballot election, and the Republicans do likewise using their headquarters. In case their headquarters are shut down due to a storm, they seek temporary accommodation in the opponent's headquarters to reach the Ballot Election process. Once their headquarters are functional again, they move back. The Electoral College chooses the Democrat's headquarters as a transit point before heading out. But, if this headquarter shuts down, they need to change their transit point to the other headquarter.

The candidate selection process for the respective parties has started and the Electoral College needs to cast its vote in the Ballot. The Democrats start their journey from any one of the states and reach the Headquarters. Upon reaching the headquarters, they then start their journey to the Ballot to monitor the election process. The Republicans too start from any one of the states and reach their headquarters before going out to the Ballot. The Electoral College goes to the Ballot to monitor the election. After the votes are cast, it is observed that there is a tie! The Republicans then hurry off to Texas to garner people's vote. The Democrats move to

California for gathering support for the party. The Electoral College decides to stay in California before heading out for the White house. But, if any of them cannot reach these decided states, they go ahead and visit the other state.

### Decision Process:



While connecting to the Pentagon, Rack 1 public uses the first two ports on the switch, Rack 2 uses the next two ports, and so on.

To reach the Conference Room, the Democrats use  $192.168.(12+X).0/29$  whereas the Republicans use  $192.168.(12+X).0/29$ . Democrats have been given a batch of  $10X$  to enter the Conference room where the meeting would be conducted. Republicans get a batch of  $20X$ . The conference room would be situated on the 1<sup>st</sup> floor and hence has been configured with the address of  $192.168.1X.1$  and  $192.168.2X.1$ . Thus, carefully allot the addresses provided to you.

The Electoral College uses  $192.168.(12+3X).0/29$  to reach the Pentagon. They require a batch of  $30X$ . The White House has a security post situated at  $192.168.(12+3X).1$ . While leaving the White House to go back to the states, the Electoral College needs to exit from a different security post that should be at  $192.168.(12+3X).4$ . If they go anywhere else, they would not be able to exit. Carefully assign the address space provided to you. The Electoral College has decided to maintain same translations in both Texas and California before heading to the White House as a redundancy measure. The Electoral College wants to access [www.whitehouse.gov](http://www.whitehouse.gov) in the White house and hence need to change its identity to  $128.138.X.0/24$ .

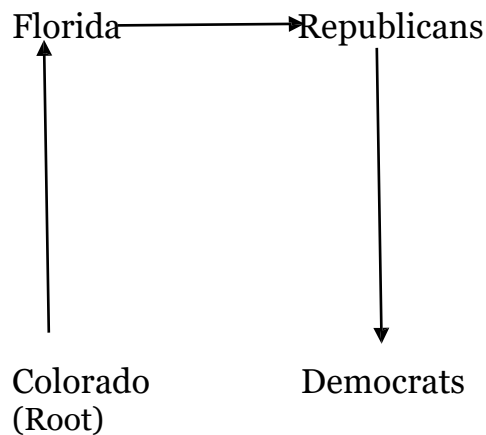
Upon reaching these states, the parties realize that they need to meet each other and discuss matters to reach a consensus. Hence they decide to conduct a meeting and exchange all their database with each other. In all this commotion, ensure that you only accept discussions meant for your election network. After a long series of meetings, the Democrats mark upon a return journey and head to Texas to try and influence people to vote for them.

They then go back to the Ballot office and then head to their headquarters. The Republicans too decide to visit California and carry out campaigns. After reaching the Ballot, they head to their headquarters.

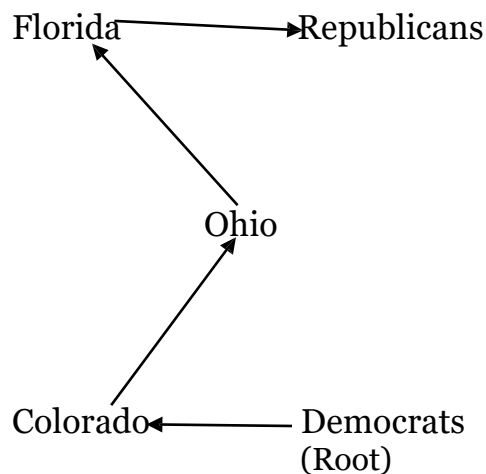
The Electoral College had interacted with both the parties in their headquarters before going out to California and Texas. They then head to White House and wait for the parties to discuss among themselves. As the parties return for their campaign, the Electoral College heads back to the Texas before going back to the Democrat's headquarters to meet both the parties. And if they cannot reach Texas, they decide to visit California first.

### Spanning Tree:

#### **Electoral College**

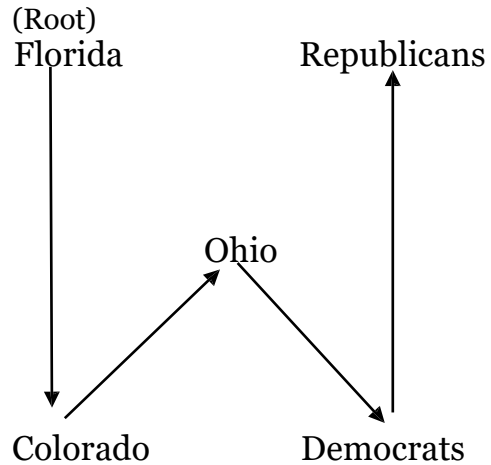


#### **Bernie Sanders**



**Hilary Clinton**

Link T5 should be up first, if it fails link T6 should come up and if that also fails link T4 should come up

**Donald Trump**