**SETTING UP EIBP ON FABRIC**

1. Get the FABRIC-EIBP, it will be downloaded as a zip file from the drive. Extract the contents of the zip file using the unzip command in the terminal.

unzip FABRIC-EIBP

1. Navigate to FABRIC-EIBP/local\_books and open SliceBuilderGraphml.ipynb.

**SliceBuilderGraphml.ipynb**

1. This file builds a slice from a graphml file. This requires an input.   
     
   Copy paste the path to the graphml in the first cell.   
     
   How to get path ( open terminal cd FABRIC-Automation-main -> cd graphs-> pwd or realpath eibp\_small.graphml) *Replace the file name with whichever topology you wish to use and run the command.*  
   Execute the cells. Reserves the resources.  
     
   *Modify the following inputs needed by the slice as per your requirements:*



* 1. **SLICE\_NAME:** Give any name of your choice. Ensure that no other slices exist under the same name. You can check your slices by going to the Experiments tab in the FABRIC portal and clicking on MY SLICES on the left.
  2. **SITE\_NAME:** Give the name of the site where you plan to reserve resources. You can check the status of the sites at the FABRIC home page.

NOTE: If there is any error when trying to create the slice then try changing the site.

1. Run all of the cells in this notebook. This could take a while since the slice has to be created and resources need to be reserved.

**EIBPDeps.ipynb**

1. Change the SLICE\_NAME in the first cell to the name used when creating the slice.
2. Run all of the cells in EIBPDeps.ipynb. Installing Dependencies can take a while to execute.  
   *It will install dependencies like - chronyc, c compiler, tshark. It will also install gdb. Sets up IP address.Turns off IP routing. It creates a base for EIBP nodes.*

**EIBPStart.ipynb**If you have already created a slice and extended it then directly execute EIBPStart.ipynb. You don’t need to

1. Change the SLICE\_NAME in the first cell whichever name was used to set up slice.
2. Download the MNLR code from the drive and unzip it. Provide the path to this folder using realpath or pwd in the terminal.
3. Run all cells in the notebook.

**EIBPTest.ipynb**

1. Change the SLICE\_NAME to the name of the newly created slice.
2. To get the values of NODE\_TO\_FAIL and INTF\_TO\_FAIL, go to MY SLICES in the FABRIC portal under Experiments. Then click on the name of your slice. This gives a view of the slice and its nodes. Use this to determine which interface to fail.

For example, if I want to fail an interface on a1 that is connected to d1. Find the link connecting both nodes. Then note down the interface.

NODE\_TO\_FAIL = ‘a1’

INTF\_TO\_FAIL = ‘eth2’

A close-up of a computer screen

Description automatically generated

1. Next, we need to modify the config.txt file(small or large topology accordingly). The IP addresses and interfaces from the SliceBuilderGraphml.ipynb file are used here. Replace the IP addresses with the IP address of the corresponding ipnode connected to each a1 and a2. Replace the interface name with the interface of a1 and a2 connected to the ipnode. Once modified, save the file and close config.txt

A screenshot of a computer

Description automatically generated

1. Run the first few cells. The last cell you should run is EIBP Initial Convergence. Do not run EIBP Reconvergence Testing yet.
2. Wait for around 2 minutes to allow the network to stabilize and then run the next cell.
3. Wait for another 2 minutes to allow the network to reconverge and then run all of the cells in the notebook.

**EIBPAnalysis.ipynb**

1. Run all of the cells in the notebook. This will generate a result from the log files for convergence time, control overhead, churn rate.

A screenshot of a computer program

Description automatically generated

1. If you wish to view the log files, you can find them under FABRIC-Automation-main/logs.