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**Lesson 6 Demo 5**

**Set up Hyperledger Test Network**

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| **Objective:** To set up the Hyperledger Fabric test network in our machine  **Tools required:** Ubuntu, Terminal, Hyperledger  **Prerequisites:** None |

Steps to be followed:

1. Setting up the standard Hyperledger test network (Optional)
2. Setting up a test network with CA containers (Optional)
3. Setting up a test network with CouchDB containers (Optional)
4. Setting up a test network with all the above parameters

**Step 1: Setting up the standard Hyperledger test network**

1. Navigate to the **test-network** folder by using the following command:

***cd fabric-samples/test-network***

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1. We may start the test network by executing the following command:

***sudo ./network.sh up***

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1. We can also check the Docker images running the peers in our test network by executing the following command:

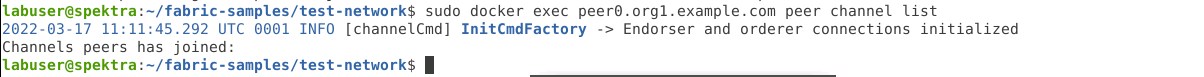
***sudo docker ps***

Text

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1. We can check the communication channel for this test network by executing the following command:

***sudo docker exec peer0.org1.example.com peer channel list***



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| **Note:** Since there are no active channels, an empty list is displayed. |

1. We will create a communication channel for the peers in the test network using the following command:

***sudo ./network.sh createChannel -c testchannel***

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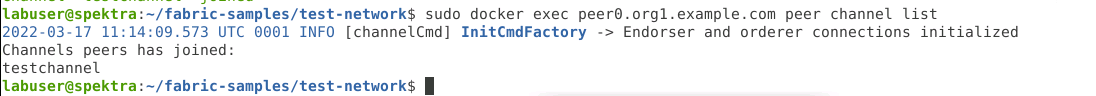
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| **Note:** The **-c** parameter allows us to name the channel. In this case, it is **testchannel**. |

1. Now if we check for the communication channel again, we will see the channel created

***sudo docker exec peer0.org1.example.com peer channel list***



1. After we are done experimenting with the test network, we must turn it off using the following command:

***sudo ./network.sh down***

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**Step 2: Setting up a test network with CA containers**

1. We may start a test network with CA containers using the following command:

***sudo ./network.sh up -ca***

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1. We can create a communication channel for this network by executing the following command:

***sudo ./network.sh createChannel -c testchannel1***

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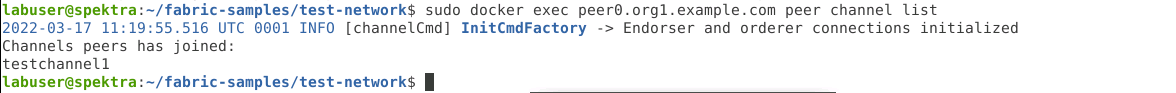
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1. We may confirm the creation of a test channel using the following command:

***sudo docker exec peer0.org1.example.com peer channel list***



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| **Note:** The commands to check Docker containers, create a communication channel, and turn off the network remain the same (as shown in **Step 1**) across all the other steps. |

**Step 3: Setting up a test network with CouchDB containers**

1. We may start a test network with CouchDB containers using the following command:

***sudo ./network.sh up -s couchdb***

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1. We can create a communication channel for this network by executing the following command:

***sudo ./network.sh createChannel -c testchannel2***

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1. We can turn off the network after our testing using the following command:

***sudo ./network.sh down***

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**Step 4: Setting up a test network with all the above parameters**

1. We may start a test network with all the above parameters and containers using the following command:

***sudo ./network.sh up -ca -s couchdb***

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1. We can create a communication channel for this network by executing the following command:

***sudo ./network.sh createChannel -c testchannel3***

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Run the below command to provide required access to the folder structure:

sudo chmod -R 777 .



1. We can turn off the network after our testing using the following command:

***sudo ./network.sh down***

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| The setup of the Hyperledger Fabric test network on the machine is complete. |