SER 321 A Session

SI Session

Sunday October 1st 2023

6:00 - 7:00 pm MST

Agenda

Communication Deep Dive!

- Client and Server
- Threaded Client and Server
- Peer to Peer

SI Session Expectations

Thanks for coming to the **SER 321** SI session. We have a packed agenda and we are going to try to get through as many of our planned example problems as possible. This session will be recorded and shared with others.

- If after this you want to see additional examples, please visit the drop-in tutoring center.
- We will post the link in the chat now and at the end of the session.
  - tutoring.asu.edu
- Please keep in mind we are recording this session and it will be made available for you to review 24-48 hours after this session concludes.
- Finally, please be respectful to each other during the session.

Interact with us:

Zoom Features

Zoom Chat

- Use the chat feature to interact with the presenter and respond to presenter's questions.
- Annotations are encouraged

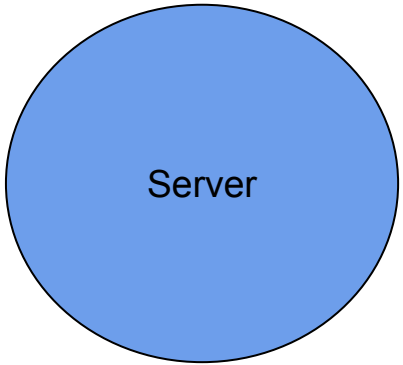
SER 321

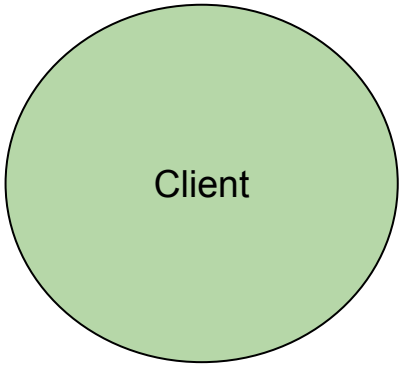
Client and Server

Can we diagram the client-server communication?

SER 321
Client and Server

Can we diagram the client-server communication?





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Client and Server

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Threaded Client and Server

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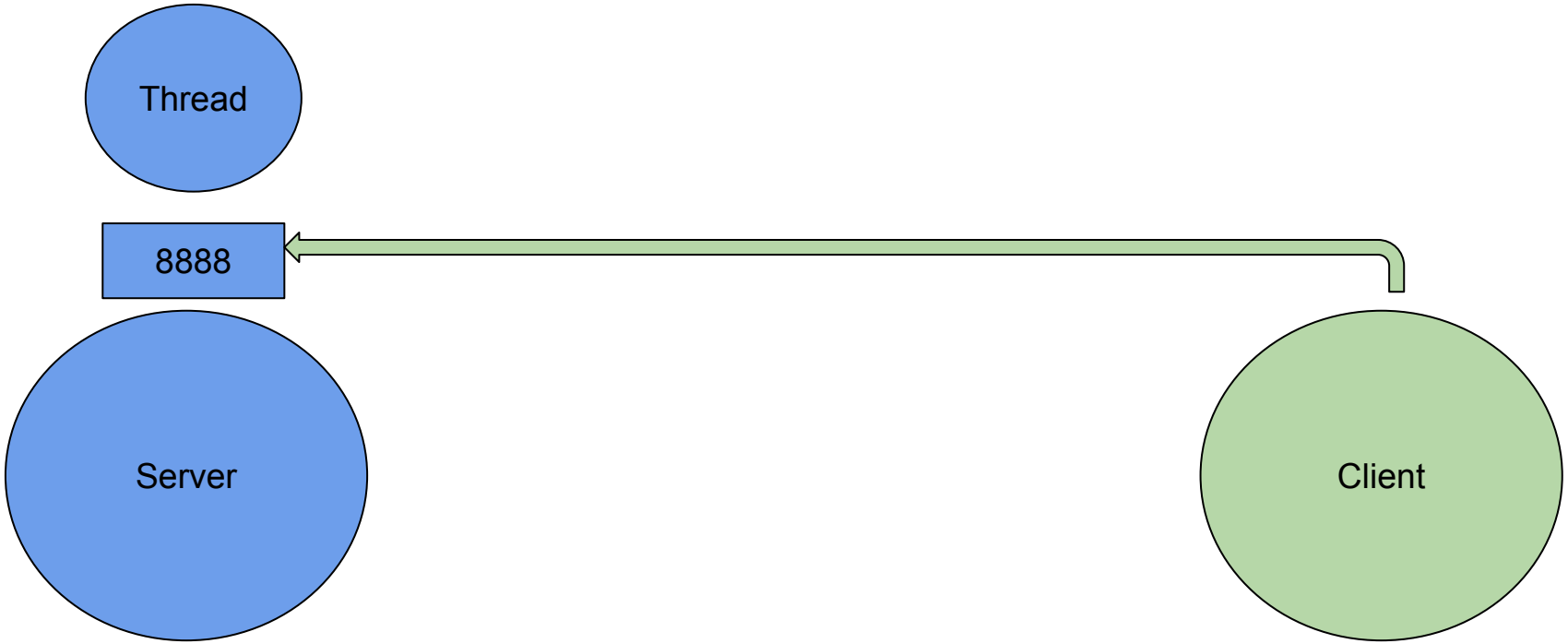
Threaded Client and Server



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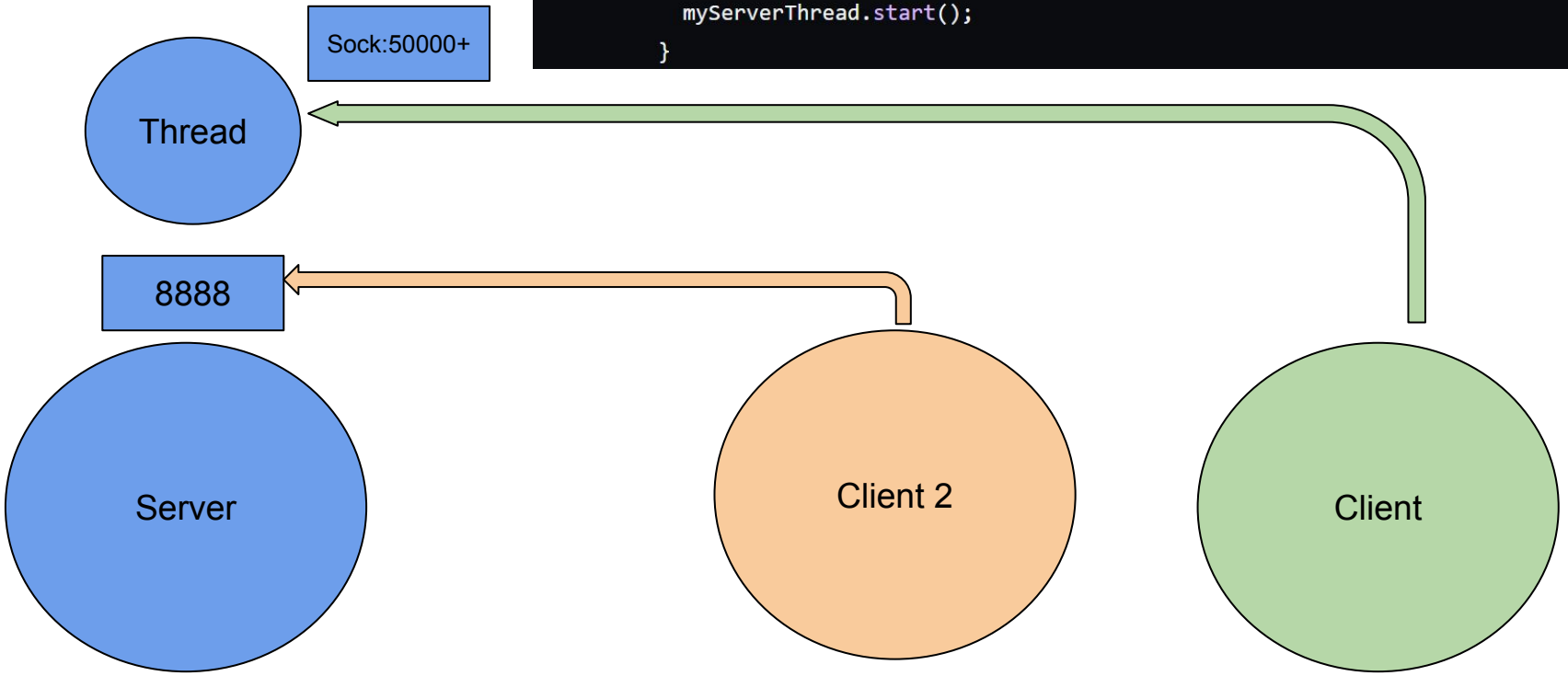
Threaded Client and Server

SER 321

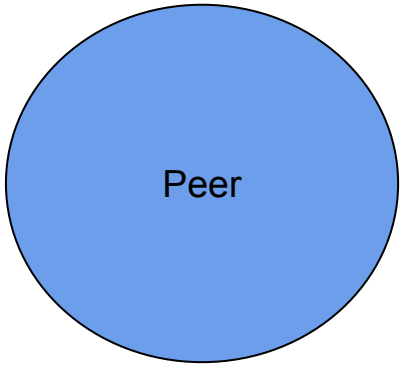
Threaded Client and Server

```
ServerSocket serv = new ServerSocket(portNo);
while (true) {
  System.out.println("Threaded server waiting for connects on port " + portNo);
  sock = serv.accept();
  System.out.println("Threaded server connected to client-" + id);
  // create thread
  ThreadedSockServer myServerThread = new ThreadedSockServer(sock, id++);
  // run thread and don't care about managing it
  myServerThread.start();
}
```



SER 321
Peer To Peer

Let’s look at some code first - Peer, ServerThread, ServerTask




```
if (args[3].equals("true")){
                System.out.println("Is leader");
                peer.setLeader(true, s);
        } else {
                System.out.println("Pawn");

                // add leader to list
                peer.addPeer(s);
                peer.setLeader(false, s);

                // send message to leader that we want to join
                peer.commLeader("{'type': 'join', 'username': '"+

        }
        serverThread.setPeer(peer);
        serverThread.start();
        peer.askForInput();

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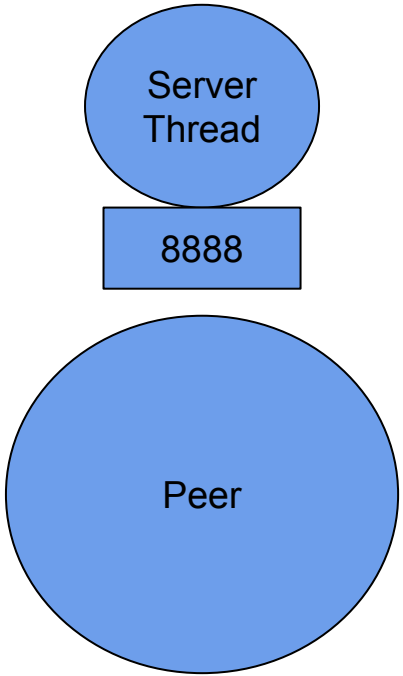


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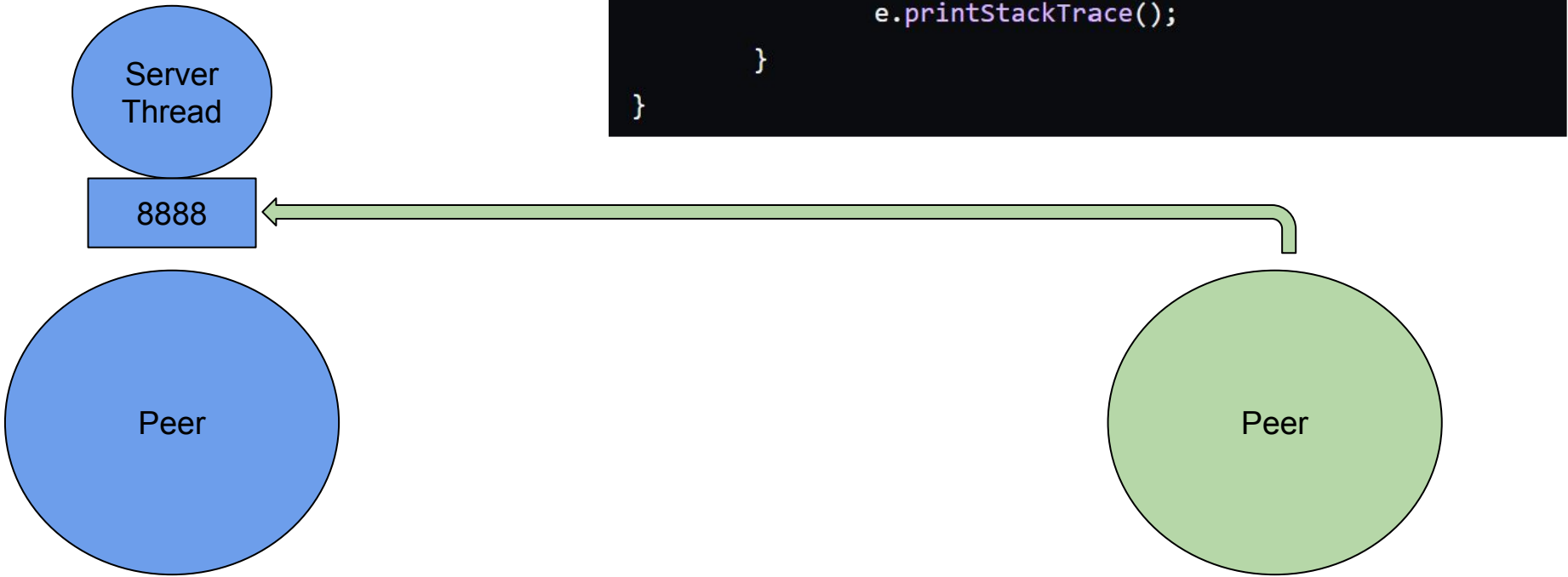
Peer To Peer

```
public void run() {
        try {
                while (true) {
                        Socket sock = serverSocket.accept();
                        new ServerTask(sock, peer).start();
                }
        } catch (Exception e) {
                e.printStackTrace();
        }
}
```



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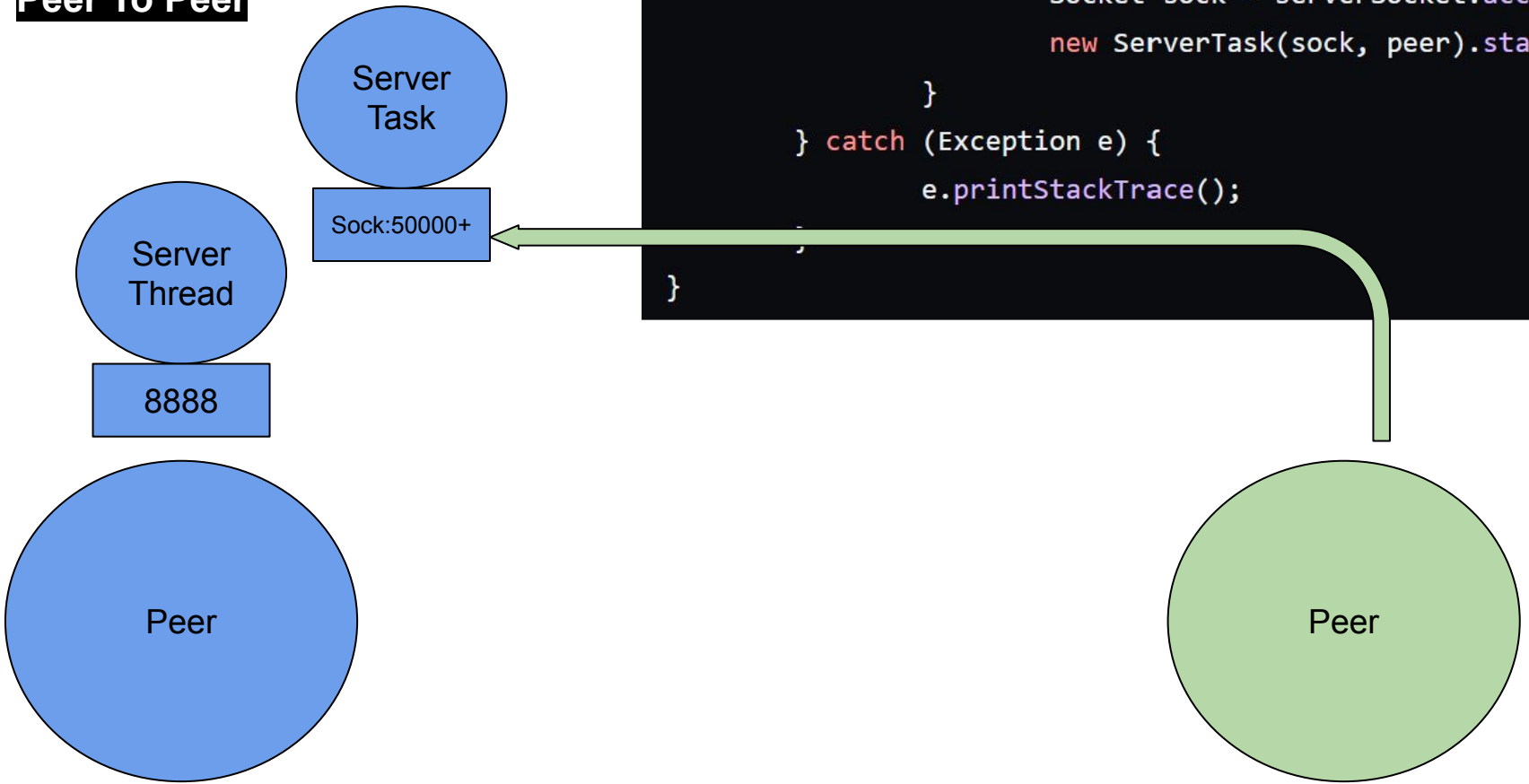
Peer To Peer

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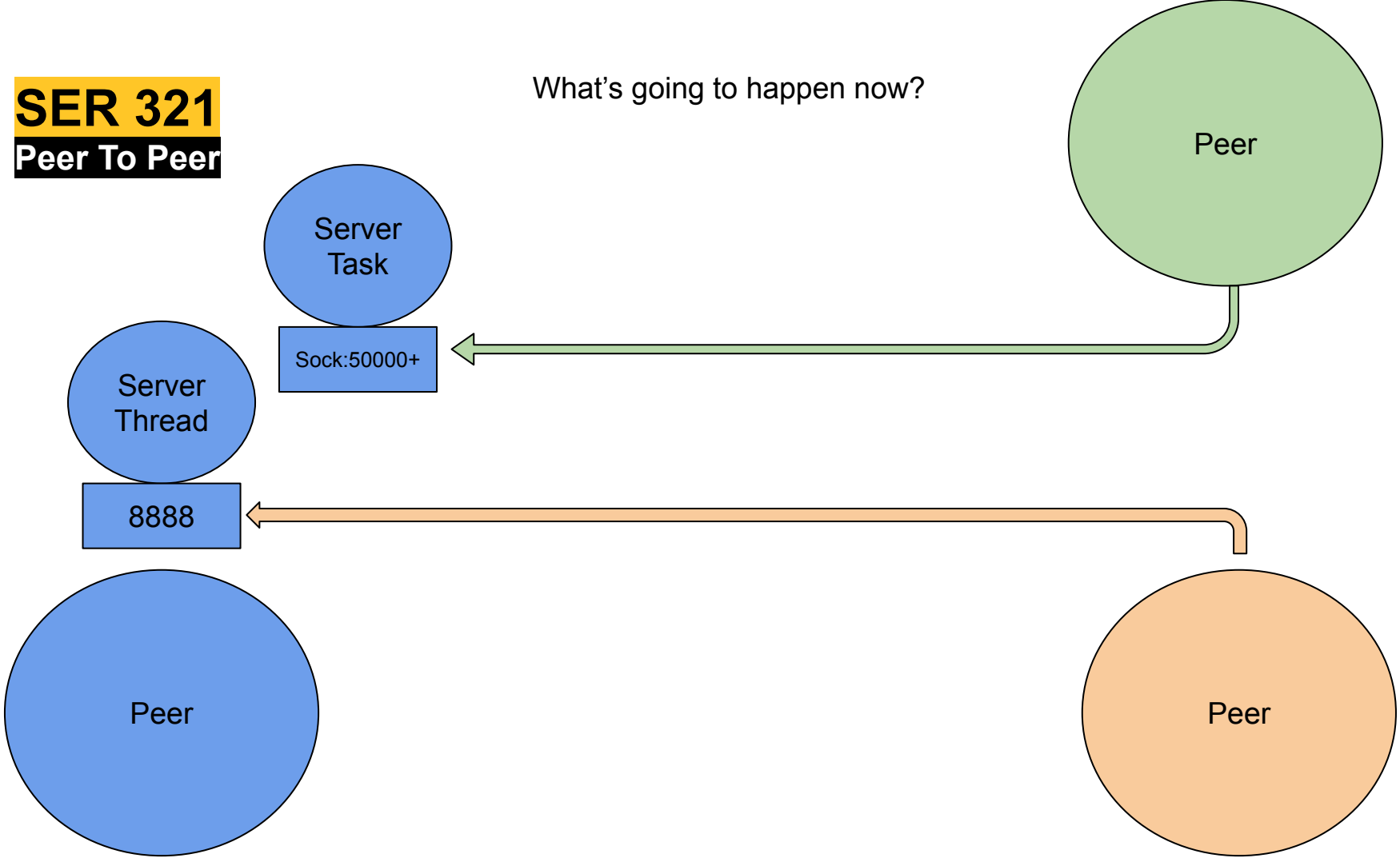
Peer To Peer

What's going to happen now?



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Peer To Peer

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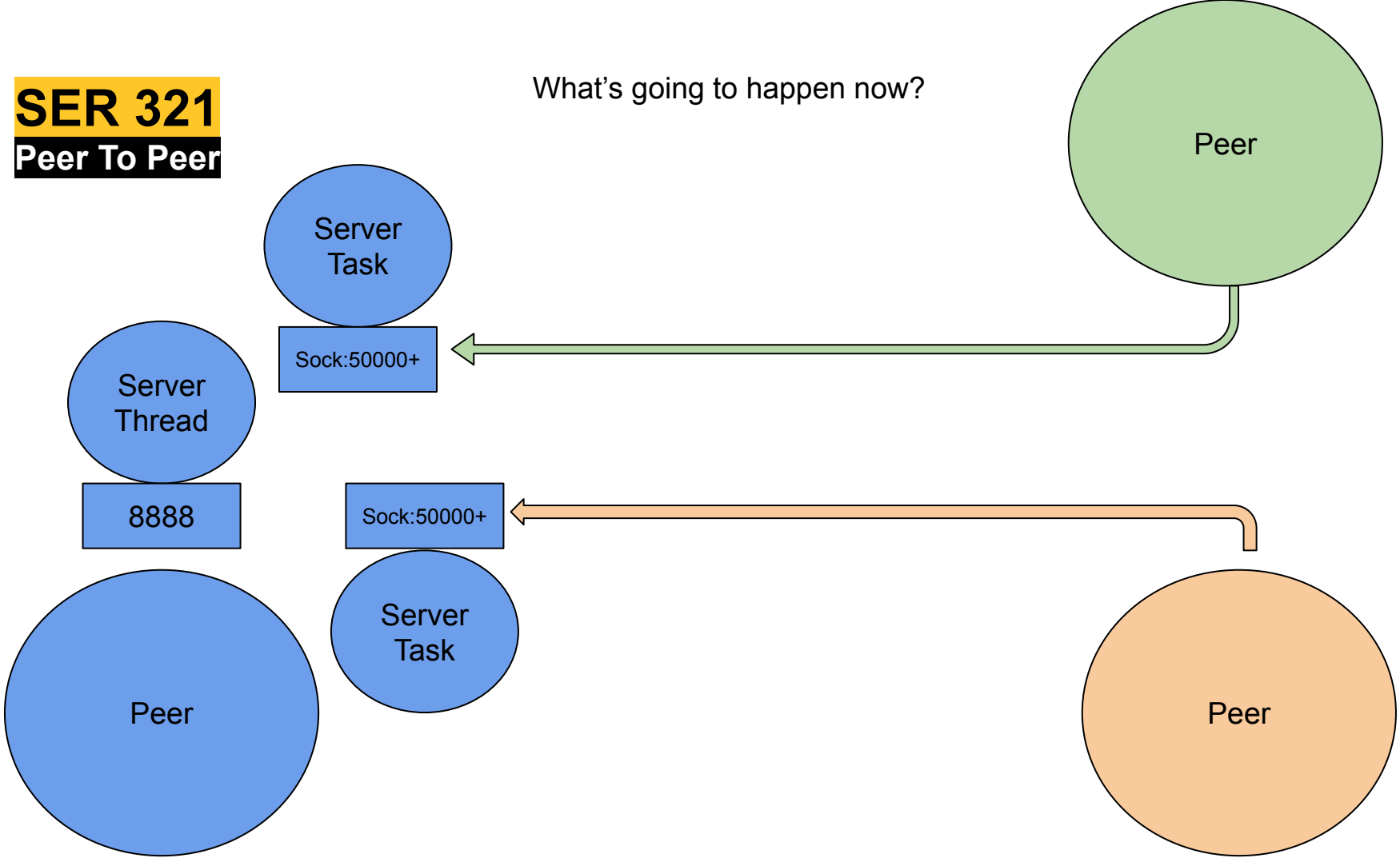

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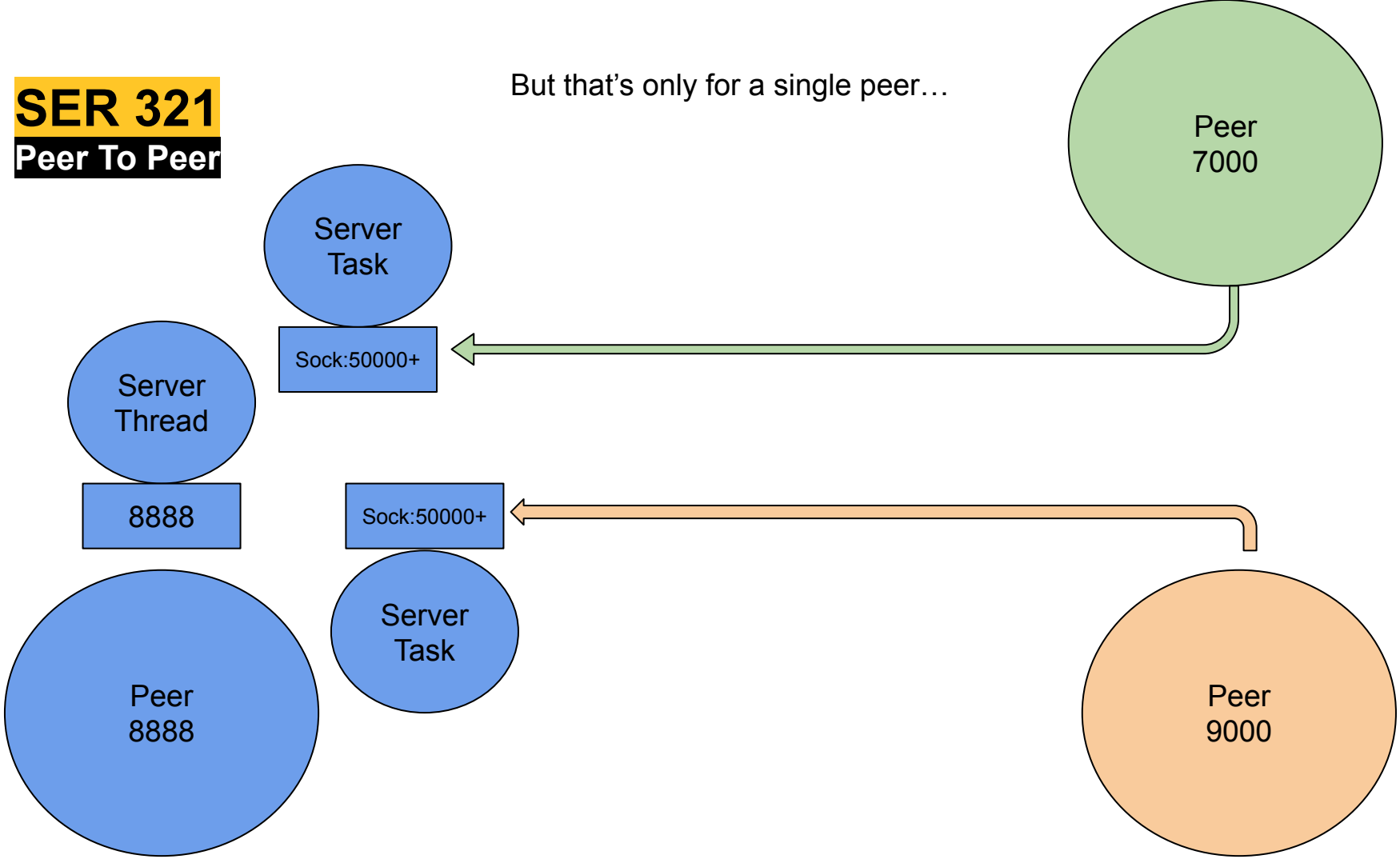
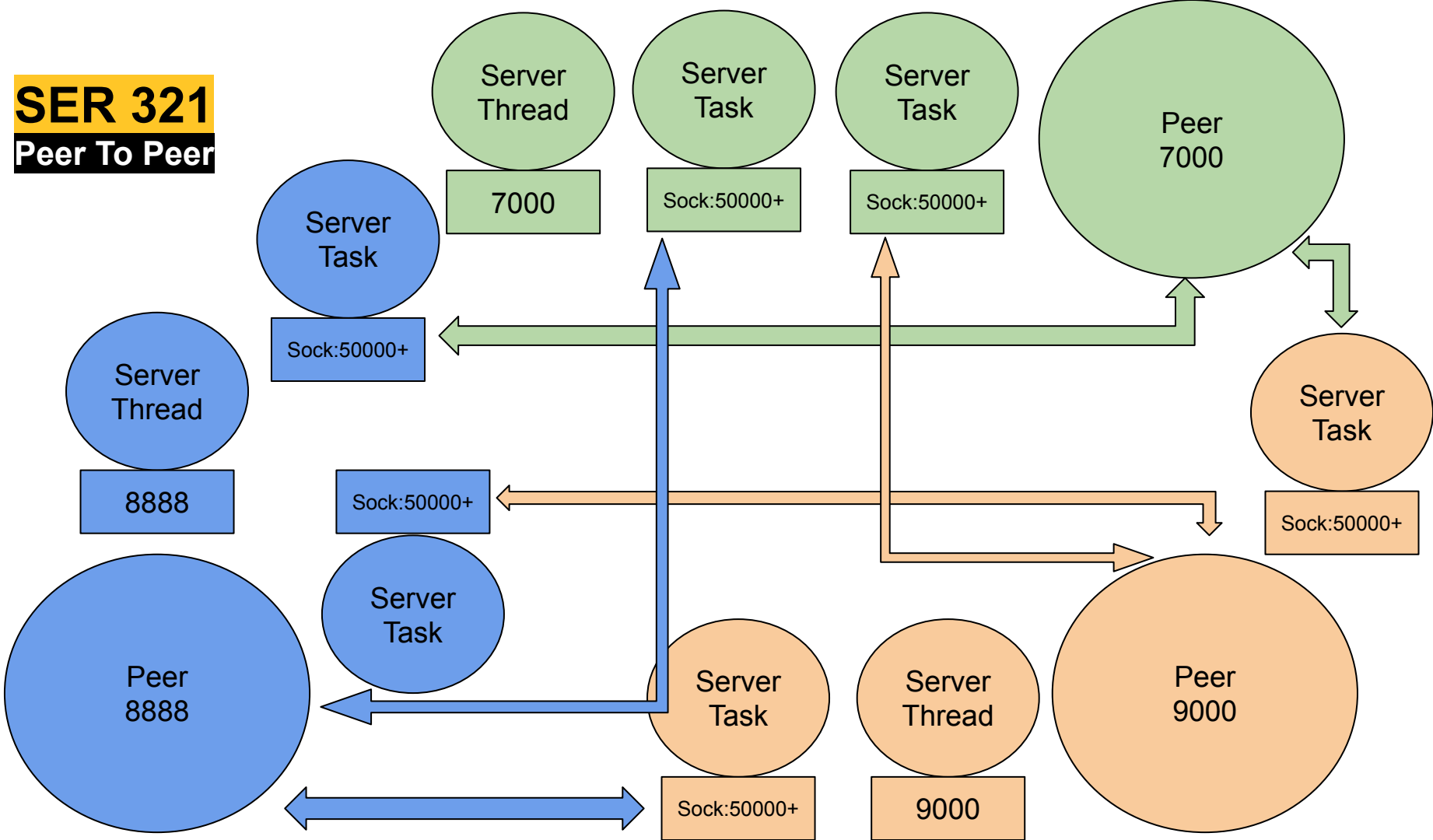
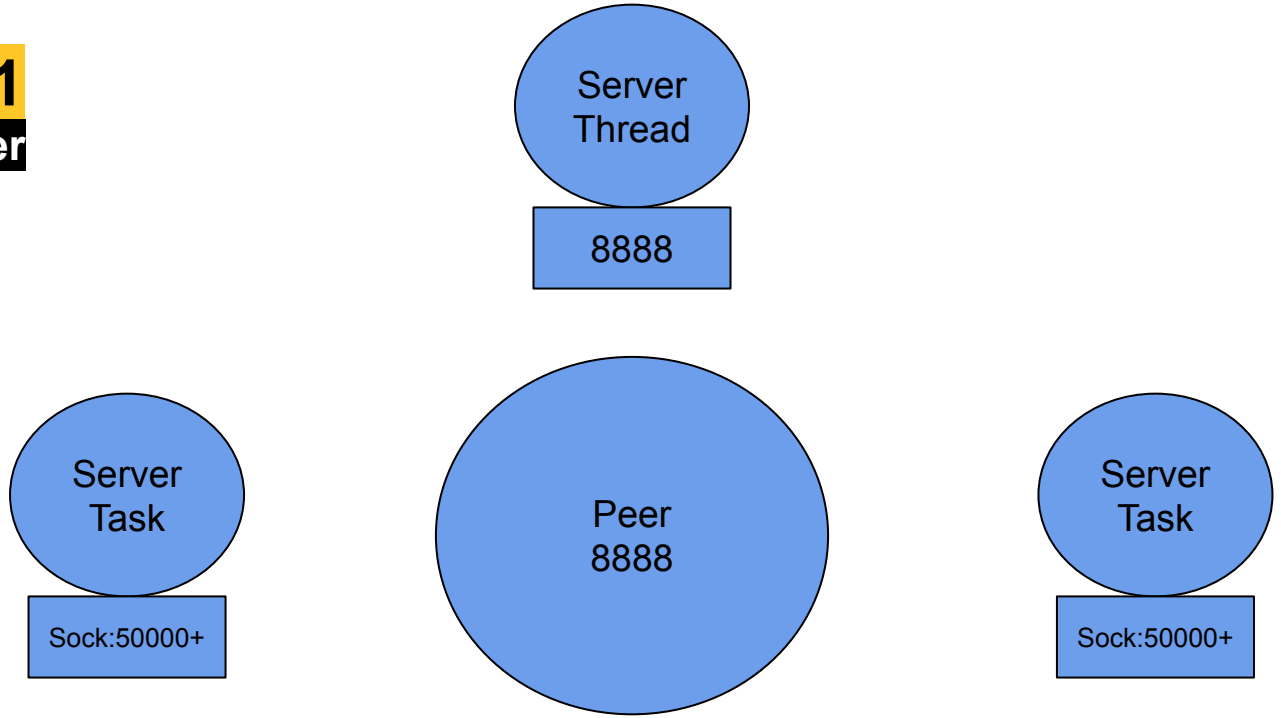
Peer To Peer

But that's only for a single peer…




SER 321
Peer To Peer
Server Thread
7000
Server Task
Sock:50000+
Server Task
Sock:50000+
Peer 7000
Server Task
Sock:50000+
Server Thread
8888
Sock:50000+
Server Task
Sock:50000+
Peer 8888
Server Task
Sock:50000+
Server Thread
9000
Peer 9000

SER 321
Peer To Peer



Questions?

Survey:

https://bit.ly/asn_survey

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Upcoming Events

SI Sessions:

- NONE

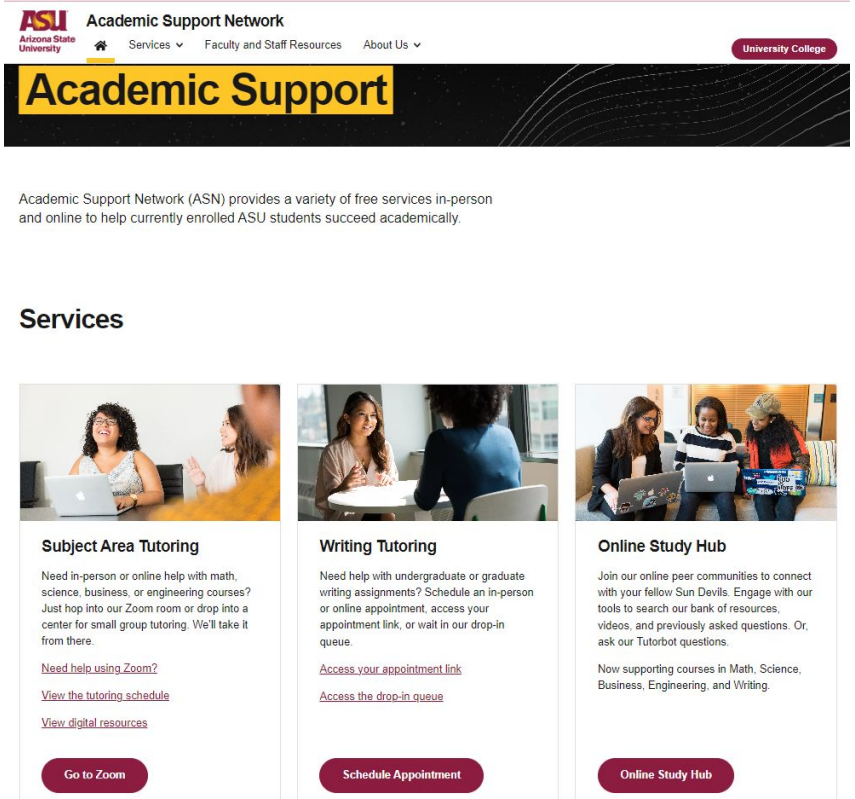
Review Sessions:

- Tomorrow Monday October 2nd 2023 at 6:00 pm MST

More Questions?

Check out our other resources!

tutoring.asu.edu

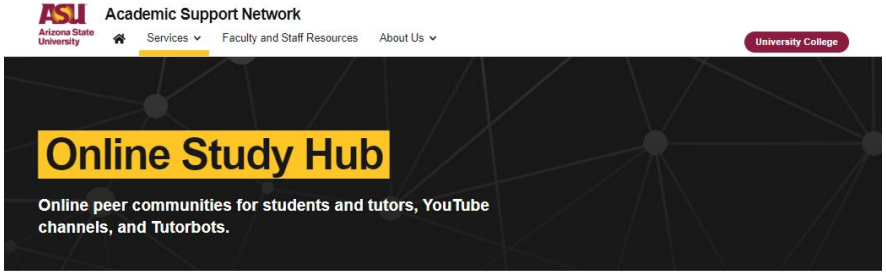


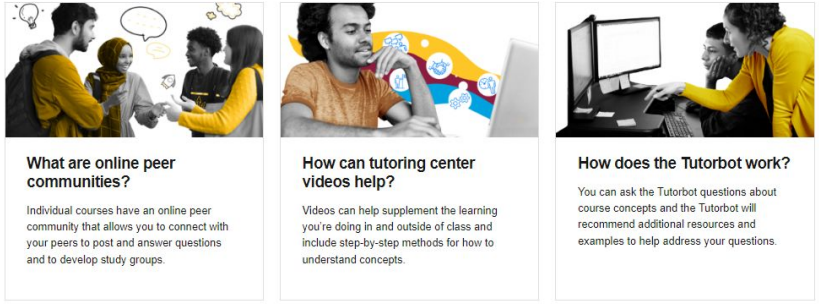
1. **Click on ‘Go to Zoom’ to log onto our Online Tutoring Center.**
2. **Click on ‘View the tutoring schedule’ to see when tutors are available for specific courses.**

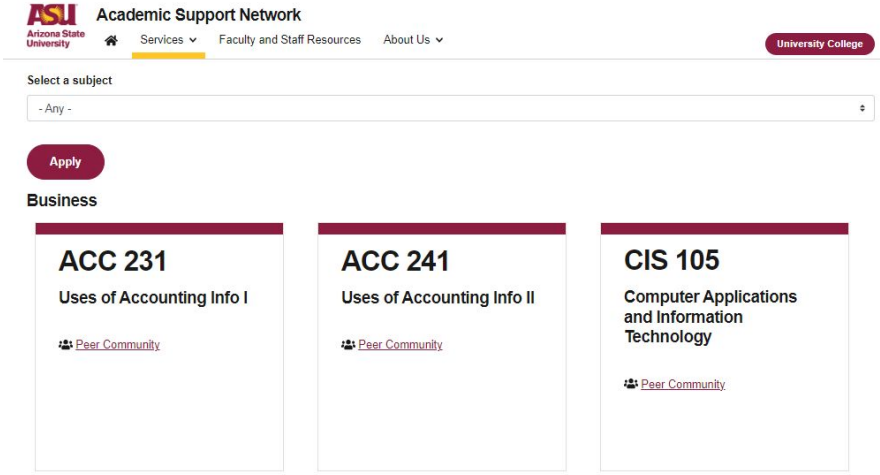
More Questions?

Check out our other resources!

tutoring.asu.edu/online-study-hub







Don't forget to check out the Online Study Hub for additional resources!

Additional Resources

CoureRepo

Dining Philosophers Interactive

Raft Interactive