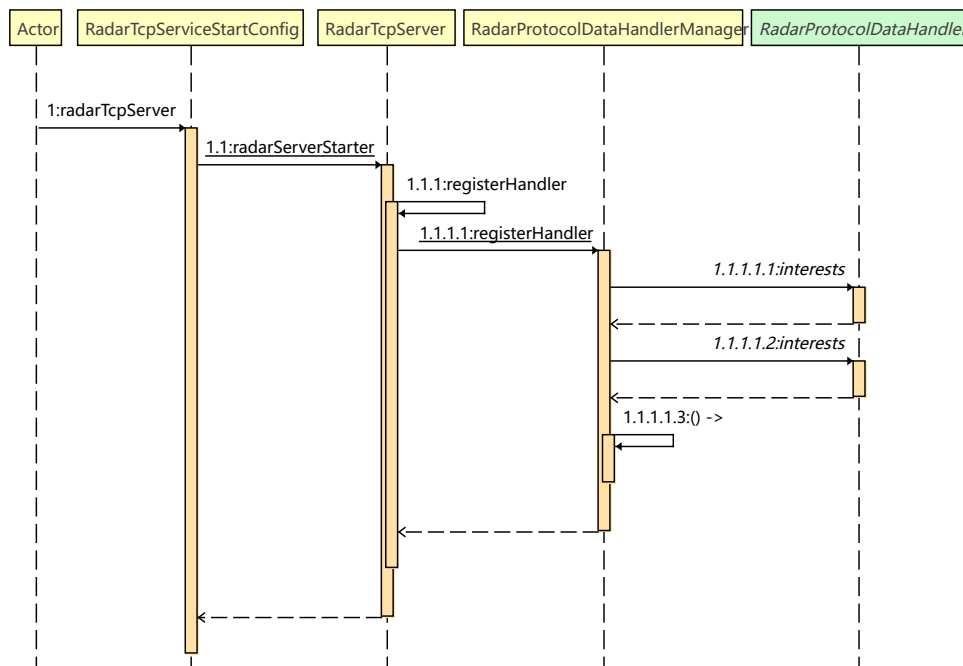# 1. Architecture analysis

## (1) Flowchart to initiate the service

Use springboot to load the configuration file, then initialize the tcp server. Set the radar protocol processor when the tcp server is in initializing.

(2) Flowchart to process the radar server request

The bottom layer is firstly decoded and unpacked using the RadarCommandDecoder protocol, then deserialized through the RadarSerializer, and finally processed by each handler as shown in the diagram below.
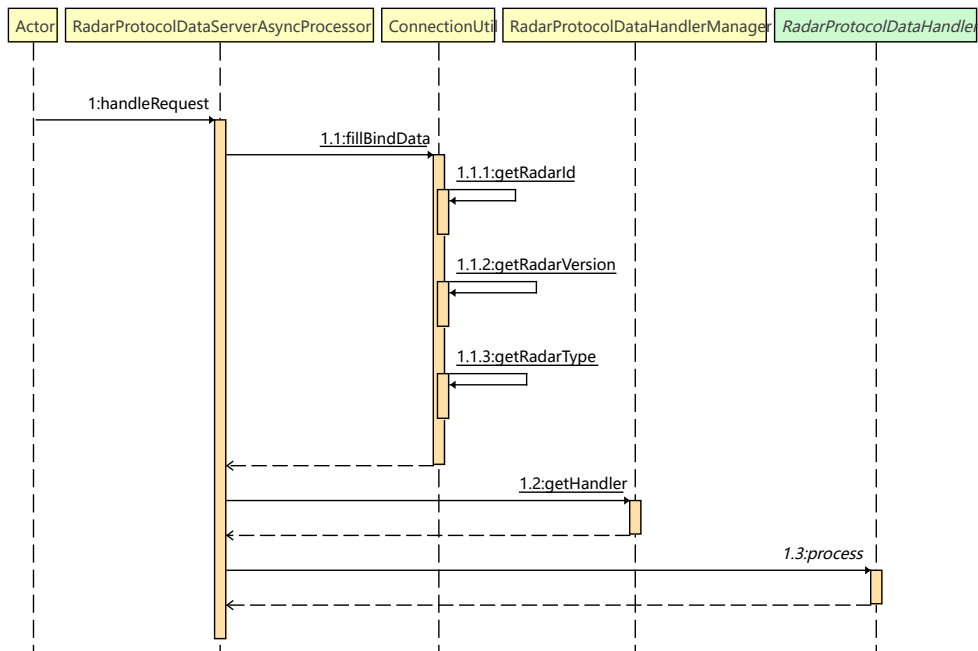
```java
package com.aerosense.radar.tcp.service.fromRadar;

import com.google.common.collect.Sets;
import RadarProtocolDataHandler;
import FunctionEnum;
import RadarProtocolData;
import ByteUtil;
import org.springframework.stereotype.Service;

import java.util.Set;

/**
 * @author : ywb
 * @date : Created in 2022/2/12 10:07
 * @modified By：
 * establish connection
 */
@Service
public class CreateConnectionHandler implements RadarProtocolDataHandler {


    @Override
    public Object process(RadarProtocolData protocolData) {
        //big endian return
        RadarProtocolData radarProtocolData = new RadarProtocolData();
        radarProtocolData.setFunction(FunctionEnum.createConnection);
        radarProtocolData.setData(ByteUtil.intToByteBig(1));
        return radarProtocolData;
    }

    @Override
    public Set<FunctionEnum> interests() {
        return Sets.newHashSet(FunctionEnum.createConnection);
    }
}
```

2. Quick start

(1) Clone this project

(2) Implement the command handler as defined in FunctionEnum and sent by the radar, Annotate it with @Service and inject it into the spring container to process the corresponding logic. There are several examples of the implementation of the handlers, as shown in the package " com.aerosense.radar.tcp.service.fromRadar". However, the developer is recommended to user their own logic to implement the alerts.

(3) See README.md doc and run application.

3. The server proactively sends data to the radar

A static method that has been encapsulated can be directly called by using the tool " RequestRadarUtil" to call the data that has been returned by the radar.

4. It is NOT allowed as there can be ONLY one processor for each protocol.