初始化长连接服务

```
chain.boot()
        .setNext(new CacheManagerBoot())//1.初始化缓存模块
        .setNext(new ServiceRegistryBoot())//2.启动服务注册与发现模块
        .setNext(new ServiceDiscoveryBoot())//2.启动服务注册与发现模块
        .setNext(new ServerBoot(mPushServer.getConnectionServer(), mPushServer.getConnServerNode()))//3.启动接入服务
        .setNext(() -> new ServerBoot(mPushServer.getWebsocketServer(), mPushServer.getWebsocketServerNode()), wsEnabled()
        .setNext(() -> new ServerBoot(mPushServer.getUdpGatewayServer(), mPushServer.getGatewayServerNode()), udpGateway()
        .setNext(() -> new ServerBoot(mPushServer.getGatewayServer(), mPushServer.getGatewayServerNode()), tcpGateway())//
        .setNext(new ServerBoot(mPushServer.getAdminServer(), null))//7.启动控制台服务
        .setNext(new RouterCenterBoot(mPushServer))//8.启动路由中心组件
        .setNext(new PushCenterBoot(mPushServer))//9.启动推送中心组件
        .setNext(() -> new HttpProxyBoot(mPushServer), CC.mp.http.proxy_enabled)//10.启动http代理服务，dns解析服务
        .setNext(new MonitorBoot(mPushServer))//11.启动监控服务
        .end();
```

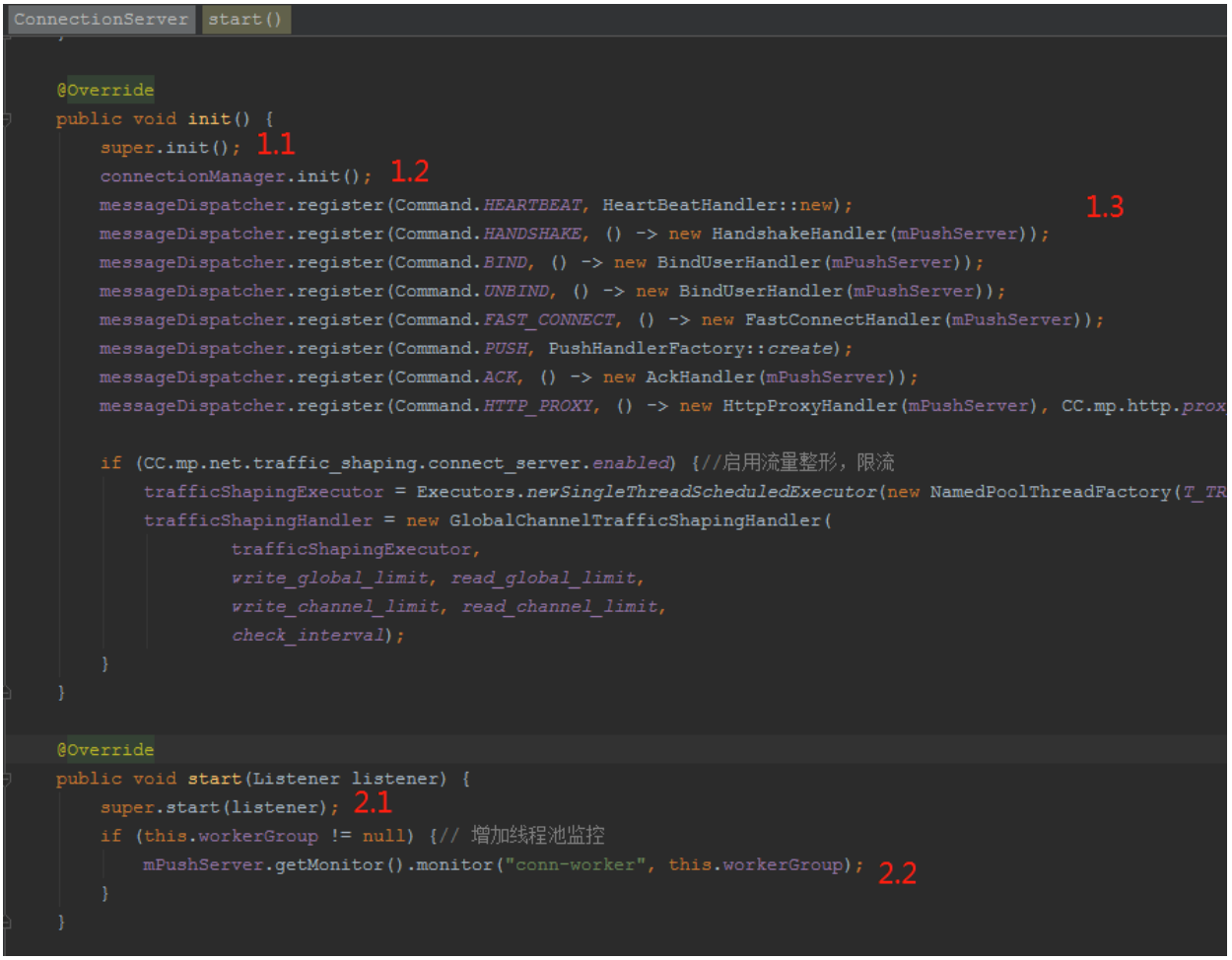
服务启动

```
ServerBoot  start()
    @Override
    public void start() {
1       server.init();
2       server.start(new Listener() {
            @Override
            public void onSuccess(Object... args) {
                Logs.Console.info("start {} success on:{}", server.getClass().getSimpleName(), args[0]);
                if (node != null) {//注册应用到zk
3                   ServiceRegistryFactory.create().register(node);
                    Logs.RSD.info("register {} to srd success.", node);
                }
                startNext();
            }

            @Override
            public void onFailure(Throwable cause) {
                Logs.Console.error("start {} failure, jvm exit with code -1", server.getClass().getSimpleNa
                System.exit(-1);
            }
        });
    }

    @Override
    protected void stop() {
        stopNext();
        if (node != null) {
            ServiceRegistryFactory.create().deregister(node);
        }
        Logs.Console.info("try shutdown {}...", server.getClass().getSimpleName());
        server.stop().join();
        Logs.Console.info("{} shutdown success.", server.getClass().getSimpleName());
    }
```

1、调用ConnectionServer#init()

2、调用ConnectionServer#start()

3、将CS节点信息注册到Zookeeper




1.1 调用NettyTCPServer#init()

主要是利用AtomicReference<State>的cas判断netty服务是不是启动，如果已经启动则抛出ServiceException异常；

1.2 调用ServerConnectionManager#init()

这里主要是心跳连接管理，该方法里面会初始化HashedWheelTimer用于连接超时管理；

1.3 注册各种消息的处理类

2.1 调用NettyTCPServer#start()方法，创建ServerBootstrap启动Netty长连接服务；

NettyTCPServer创建netty ServerBootstrap服务时，会调用其子类ConnectionServer中方法：

initPipeline()：在已有的Pipeline最前面加入trafficShapingHandler限流处理；

initOptions(): 设置发送，接收BUF缓冲区大小、设置Bytebuf高低水位，用于控制写入数据的量；

getChannelHandler(): 设置netty 事件处理类ServerChannelHandler，处理建连、消息、断连、异常事件；

2.2 将workerGroup线程池加入到监控中；