

处理PushClient发送过来的Push推送请求，转发给客户端；

## 初始化推送服务

```
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();
```

## 启动服务

```
public final class PushCenterBoot extends BootJob {
    private final MPushServer mPushServer;

    public PushCenterBoot(MPushServer mPushServer) {
        this.mPushServer = mPushServer;
    }

    @Override
    protected void start() {
        mPushServer.getPushCenter().start();
        startNext();
    }

    @Override
    protected void stop() {
        stopNext();
        mPushServer.getPushCenter().stop();
    }
}
```

调用PushCenter->BaseService#start(), 然后start()最终调用子类PushCenter#doStart()

```
PushCenter doStart()

@Override
protected void doStart(Listener listener) throws Throwable {
    this.pushListener = PushListenerFactory.create(); 1
    this.pushListener.init(mPushServer); 2

    if (CC.mp.net.udpGateway() || CC.mp.thread.pool.push_task > 0) { 3
        executor = new CustomJDKExecutor(mPushServer.getMonitor().getThreadPoolManager().getPushTaskTimer());
    } else { //实际情况使用EventLoop并没有更快, 还有待测试
        executor = new NettyEventLoopExecutor(); 4
    }

    MBeanRegistry.getInstance().register(new PushCenterBean(taskNum), null); 5
    ackTaskQueue.start(); 6
    logger.info("push center start success");
    listener.onSuccess();
}

@Override
protected void doStop(Listener listener) throws Throwable {
    executor.shutdown();
    ackTaskQueue.stop();
    logger.info("push center stop success");
    listener.onSuccess();
}
```

- 1、通过SPI，找到mpush-core模块中PushListenerFactory接口的实现类GatewayPushListener，得到GatewayPushListener实例；
- 2、获取并设置PushCenter对象到GatewayPushListener中
- 3、如果是UDP模式，使用自定义线程池推送消息
- 4、如果是TCP模式，使用GatewayServer work 线程池
- 5、注册MBean对象PushCenterBean，用于JMX监控推送任务数量
- 6、启动ACK任务，获取ACK连接池对象，用于异步处理ACK任务