

Runner 类型 执行分析

下面为 spring boot 主程序，启动过程有 callRunner, 在标注有 @Component 并且类实现了上面的 2 个 接口，则执行他们的 run 方法。。。。

有 2 种类型的 runner: ApplicationRunner , CommandLineRunner 他们可以用于在应用 app 启动后执行

分析 SpringApplication run 执行方法:

```
public ConfigurableApplicationContext run(String... args) {
    Stopwatch stopWatch = new Stopwatch();
    stopWatch.start();

    ConfigurableApplicationContext context = null;
    Collection<SpringBootExceptionHandler> exceptionReporters = new ArrayList();
    this.configureHeadlessProperty();
    SpringApplicationRunListeners listeners = this.getRunListeners(args);
    listeners.starting();

    Collection exceptionReporters;

    try {
        ApplicationArguments applicationArguments = new DefaultApplicationArguments(args);
        ConfigurableEnvironment environment = this.prepareEnvironment(listeners, applicationArguments);
        this.configureIgnoreBeanInfo(environment);
        Banner printedBanner = this.printBanner(environment);
        context = this.createApplicationContext();
        exceptionReporters = this.getSpringFactoriesInstances(SpringBootExceptionHandler.class, new
Class[] {ConfigurableApplicationContext.class}, context);
        this.prepareContext(context, environment, listeners, applicationArguments, printedBanner);
        this.refreshContext(context);
        this.afterRefresh(context, applicationArguments);
        stopWatch.stop();
        if (this.logStartupInfo) {
            (new StartupInfoLogger(this.mainApplicationClass)).logStarted(this.getApplicationLog(), stopWatch);
        }

        listeners.started(context);
        this.callRunners(context, applicationArguments);
    } catch (Throwable var10) {
```

```

        this.handleRunFailure(context, var10, exceptionReporters, listeners);
        throw new IllegalStateException(var10);
    }

    try {
        listeners.running(context);
        return context;
    } catch (Throwable var9) {
        this.handleRunFailure(context, var9, exceptionReporters, (SpringApplicationRunListeners)null);
        throw new IllegalStateException(var9);
    }
}

```

在上面中，会执行 `callRunners`，具体实现见下面源码：

```

private void callRunners(ApplicationContext context, ApplicationArguments args) {
    List<Object> runners = new ArrayList();
    runners.addAll(context.getBeansOfType(ApplicationRunner.class).values());
    runners.addAll(context.getBeansOfType(CommandLineRunner.class).values());
    AnnotationAwareOrderComparator.sort(runners);
    Iterator var4 = (new LinkedHashSet(runners)).iterator();

    while(var4.hasNext()) {
        Object runner = var4.next();
        if (runner instanceof ApplicationRunner) {
            this.callRunner((ApplicationRunner)runner, args);
        }

        if (runner instanceof CommandLineRunner) {
            this.callRunner((CommandLineRunner)runner, args);
        }
    }
}

```

从下面的代码看出 先执行 `ApplicationRunner` 再 `CommandLineRunner`