Spring cloud solution summary

Ref: <http://cloud.spring.io/spring-cloud-static/Edgware.RELEASE/single/spring-cloud.html#_features>

Spring cloud applied 12-factor patterns in app. Many features are delivered by spring boot. Some more are delivered by spring cloud as two libraries: spring cloud context and spring cloud commons. Spring cloud context provides utilities and special services for the ApplicationContext of a spring cloud application(bootstrap context, encryption, refresh scope and environment endpoints). Spring cloud commons is a set of abstractions and common classes used in different spring cloud implementations (eg. spring cloud Netflix vs. spring cloud Consul).

. Bootstrap application context

It is a parent context for the main application. Out of the box it is responsible for loading configuration properties from the external sources, and also decrypting properties in the local external config files. the two context share an Environment which is the source of external properties for any spring application. Bootstrap properties have high precedence, so they cannot be overridden by local configuration by default. It is configured by bootstrap.properties/bootstrap.yaml file.

The goal of spring cloud is to make the legacy project to cloud compatible application so-called native cloud application. The basic idea is really simple. It implemented the microservice concept. Most of legacy spring projects vertically have 3 layers. Controller provides UI or rest-service. Service layer contains the real business logic. Dao/repository layer implements the persistent layer. A microservice application flips the vertical layer to horizontal. Controller and service layers work as DiscoveryClient of Registry server, which means controller and service registered themselves in registry server. The communication goes through the key class of RestTemplate. RestTemplate class can dynamically find the registered microservice (each microservice must be registered in Registry Server if it likes to share to others).

See architecture design

