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HW: U2 M1 L1 & U2 M1 L2

1. What are microservices? What are the benefits of this architectural style?

Microservices is a way of developing software that allows for components of your application to be broken down into independent, pieces that communicate with each other, often through http protocol. Benefits of this architectural style include scalability, as each microservice (i.e. database service, application rest services) can be spun up and increased to meet capacity and the ability to organize the application around business capabilities. Each microservice can also use different language, enabling developers to use specific tools to solve specific problems, and to design a continuous integration pipeline that allows for rapid releases of small incremental fixes or updates. Since each microservice is alienated from others, changes or updates to one will have minimal, if any impact on other microservices.

1. What are the limitations of traditional configuration? What are the advantages of externalizing configuration settings?

With traditional configuration, your application may need to be updated in various locations when you a password, username, or host address changes. When external configuration settings, you can have your application refer to a configuration hosted in a VCS system that can be updated once and distributed to entire application with no manual effort. This also allows you to update such configuration variables without having to bring down the application.

1. What is Spring Cloud? List and explain five features.

Spring Cloud is a family of projects based on Spring Boot that allows for tools such as config server, Spring Cloud Service for Pivotal Cloud Foundry (PCF) to become available to Spring applications as libraries. These tools include:

* Eureka – service registry for microservice; supplies instance information to help discover other services
* Hystrix – provides fault tolerance via circuit breakers
* Turbine – along with hystrix and histrix dashboard helps provide fault tolerance
* Spring Cloud config – provides configuration server and client library
* PCF – provides these above tools in PCF marketplace