Project Proposal

In 2018 we had a successful [Remoting over Message Bus/Queue project](#). As a result of this project, a new Remoting over Kafka plugin was created. Although the plugin and the client side can be used successfully with Jenkins, currently the plugin requires manual configuration of the Apache Kafka and the Remoting subsystem. In this project we propose to enhance the plugin and to provide out-of-the box management in Docker and especially Kubernetes environments.

We invite potential students to try out the plugin and to propose their ideas how to improve the plugin. Few examples of potential improvements:
- Cloud API implementation for Kafka agents, make Jenkins able to provision agents automatically from [Docker plugin](#) and/or [Kubernetes plugin](#)
- Update Remoting over Kafka to improve support of Kubernetes there
  - Implement connector logic using credentials from K8s
  - Automatic provisioning of the Kafka cluster from the plugin management page
  -
  - etc.
- Create reference Kubernetes definitions and Helm charts for Remoting over Apache Kafka system
- Remoting packaging: Simplify JAR cache warmup while building agent images
- Integrate Remoting messaging with Prometheus monitoring

Quick start

- Setup Docker on your machine
- Run the demo by following [these guidelines](#)
- Try connecting multiple agents and see how a bigger Jenkins cluster operates with the plugin

Links

- https://github.com/jenkinsci/remoting-kafka-plugin/
- https://jenkins.io/projects/remoting/
- https://jenkins.io/projects/gsoc/2018/remoting-over-message-bus/
- Discussion in the Developer mailing list: https://groups.google.com/forum/#!topic/jenkinsci-dev/K21qDT5jhIQ

Newbie-friendly issues

- [Query](#)
- [Remoting Kafka Plugin Long Term Plans](#)

Potential Mentors

The potential mentors are:

1) Pham Vu Tuan, https://github.com/pvtuan10
2) Oleg Nenashev, https://github.com/oleg-nenashev
3) Supun Wanniarachchi, https://github.com/Supun94
4) Jeff Thompson, https://github.com/jeffret-b
5) Jeff Pearce, https://github.com/jeffpearce

Project Metadata

Created on: Jan 07, 2018
Title: Remoting over Apache Kafka. Docker/K8s Features
Summary: Enhance the Remoting over Apache Kafka plugin in Docker and Kubernetes environments
Champion: Oleg Nenashev
Champion Github Id and link: https://github.com/oleg-nenashev
Champion Jenkins JIRA/LDAP id: oleg_nenashev

Champion Time Zone: UTC+1/2
Champion Role: I am a making this proposal as a **contributor**

Technical advisor: Oleg Nenashev
Advisor Github Id and link: https://github.com/oleg-nenashev
Advisor Time Zone: UTC+1/2

Project Category: Plugins, Core
SIG/subproject: TBD (Cloud Native SIG)
Project Gitter chat room: https://gitter.im/remoting

Skills

- Java
- Apache Kafka
- Docker
- Kubernetes