

Multiple RPC Workers

Intro

In havana, the option to spawn multiple API workers was added. This blueprint describes adding an option to neutron.conf, `rpc_workers`, to allow multiple RPC workers to also be spawned.

Architecture

The neutron-server binary spawns RPC listeners in the core plugin code. Most L2 plugin classes have some variation of a “`setup_rpc`” function that is called upon instantiation of the plugin class. The Plugin class is instantiated through NeutronManager as a singleton, so as soon as any code in neutron-server calls `NeutronManager.get_plugin()`, the class is instantiated.

This instantiation happens before the API workers are forked, so the API workers won't spawn their own RPC listeners. To add multiple RPC workers, it is possible to use the ProcessLauncher to fork a new class similar to the WorkerService class that was added for handling API workers. This class contains a `start()` method which calls `NeutronManager.get_plugin()` so each forked process gets its own instance of the core plugin.

One difference with the API worker patch is that the API worker code does not have an API worker running in the parent process. Due to the fact that the API handling code itself instantiates the core plugin by calling `NeutronManager.get_plugin()`, the parent process would also process RPC messages.