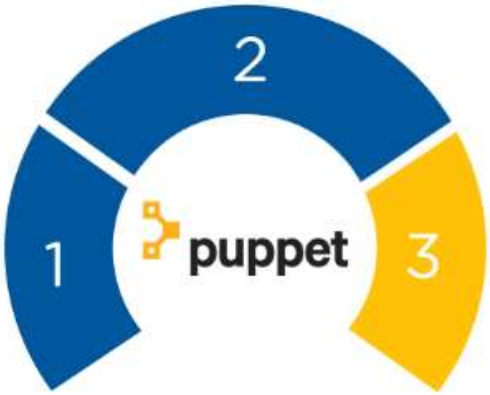
Puppet

What is Puppet?

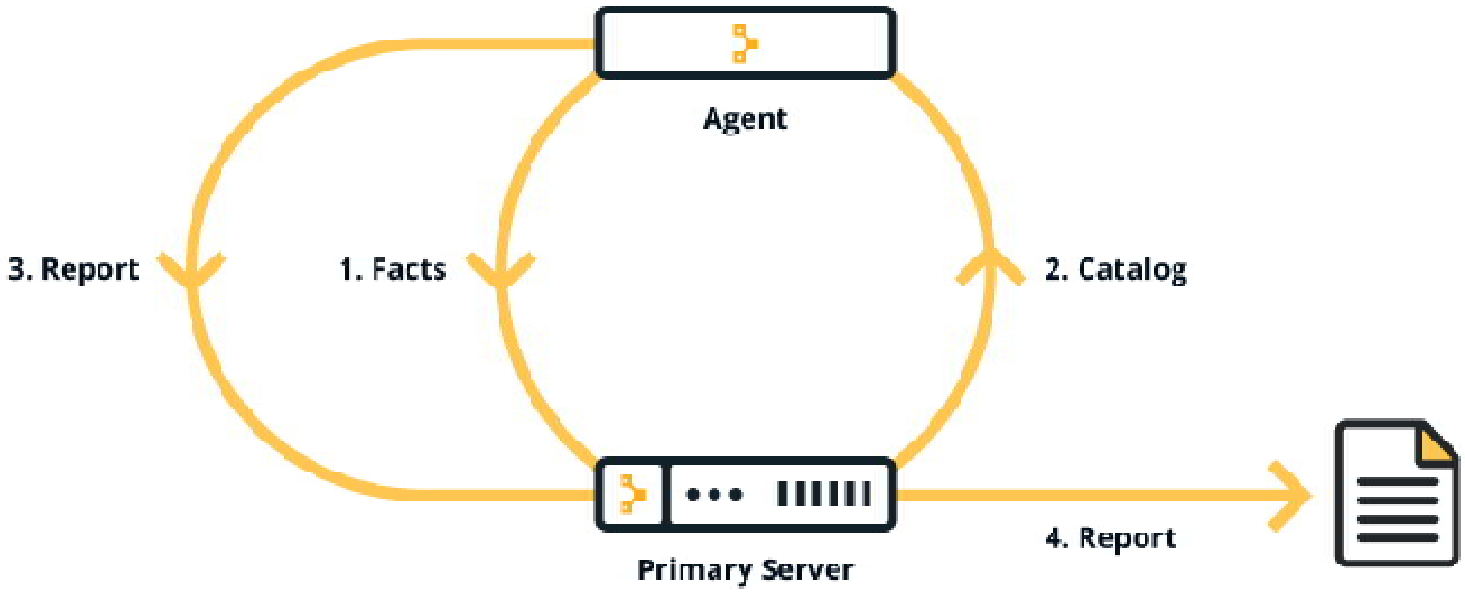
Puppet is also used as a deployment tool

Puppet is a configuration management tool

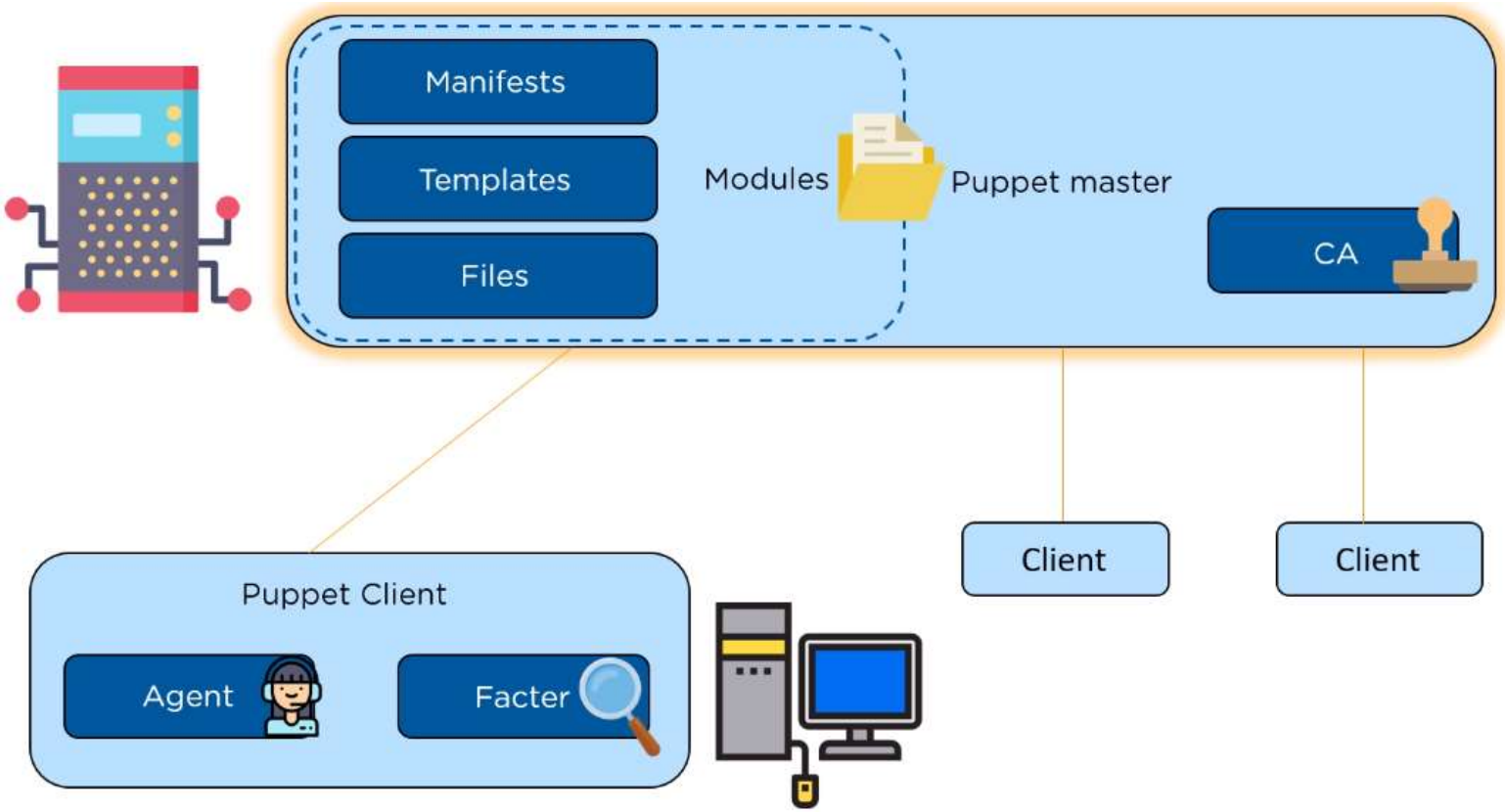


Puppet implements infrastructure as code

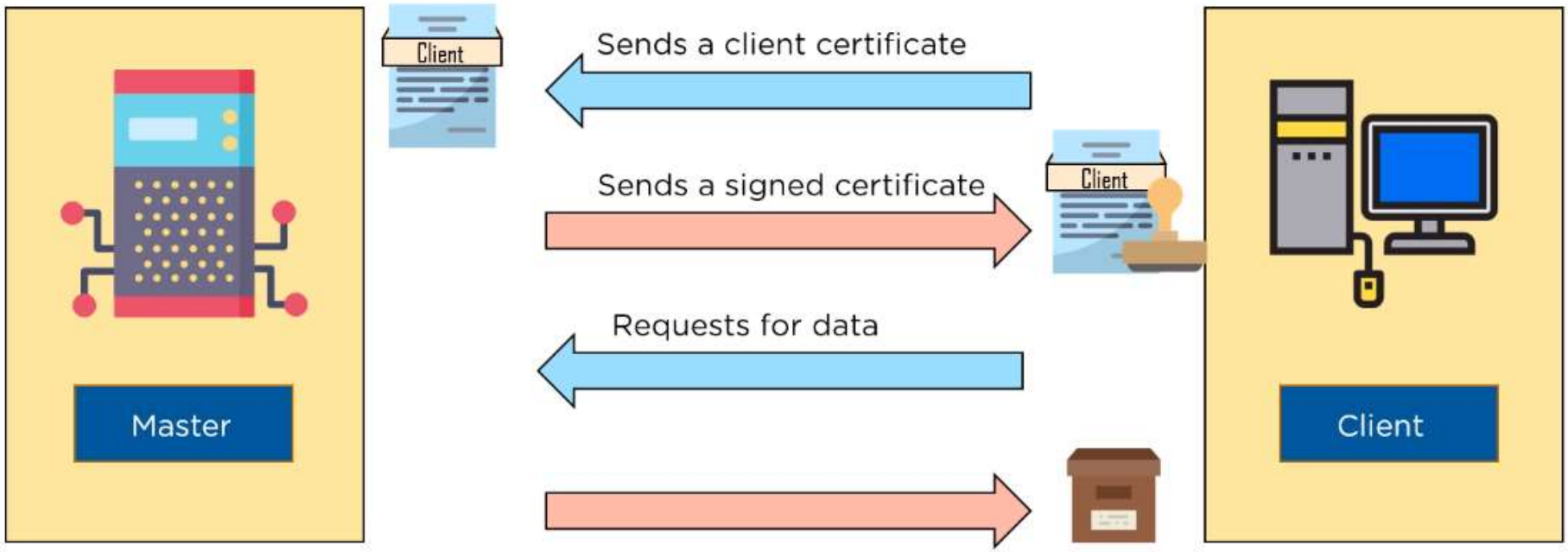
Puppet Architecture



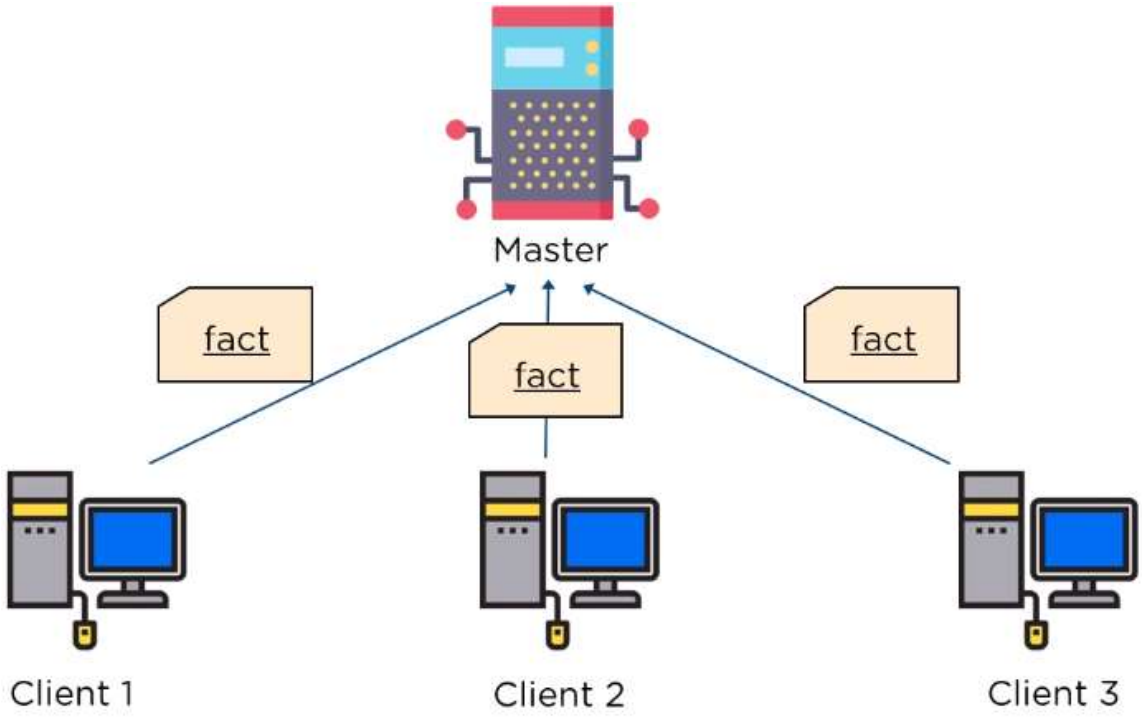
Puppet Architecture



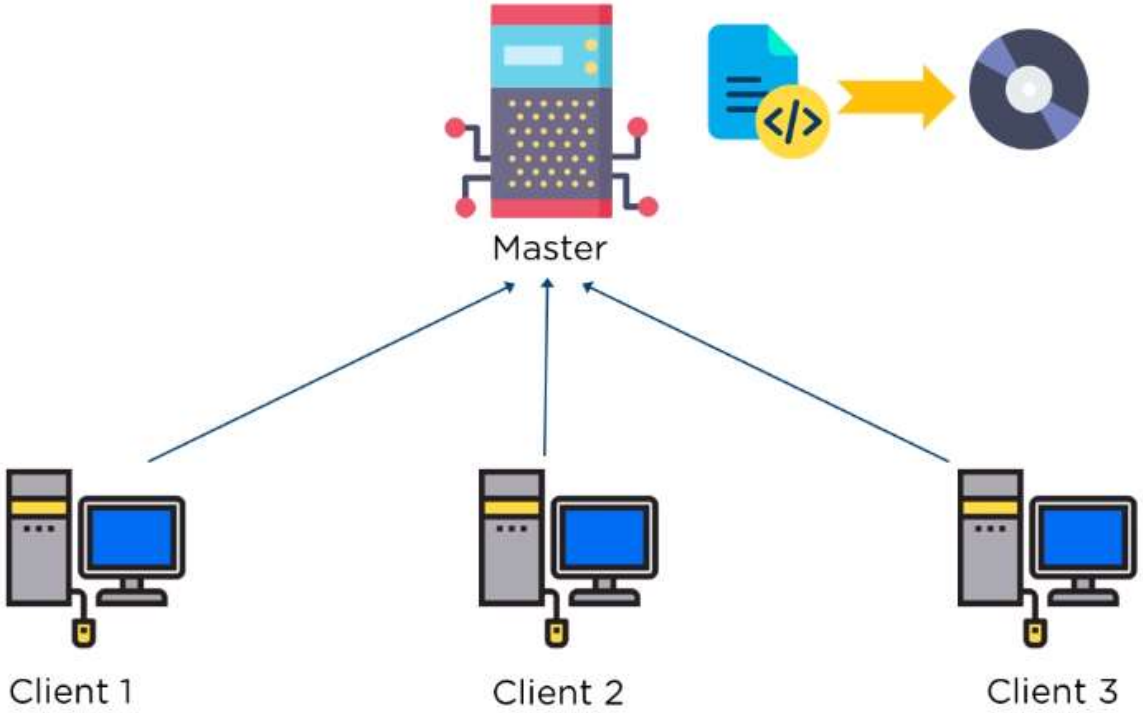
SSL Certification



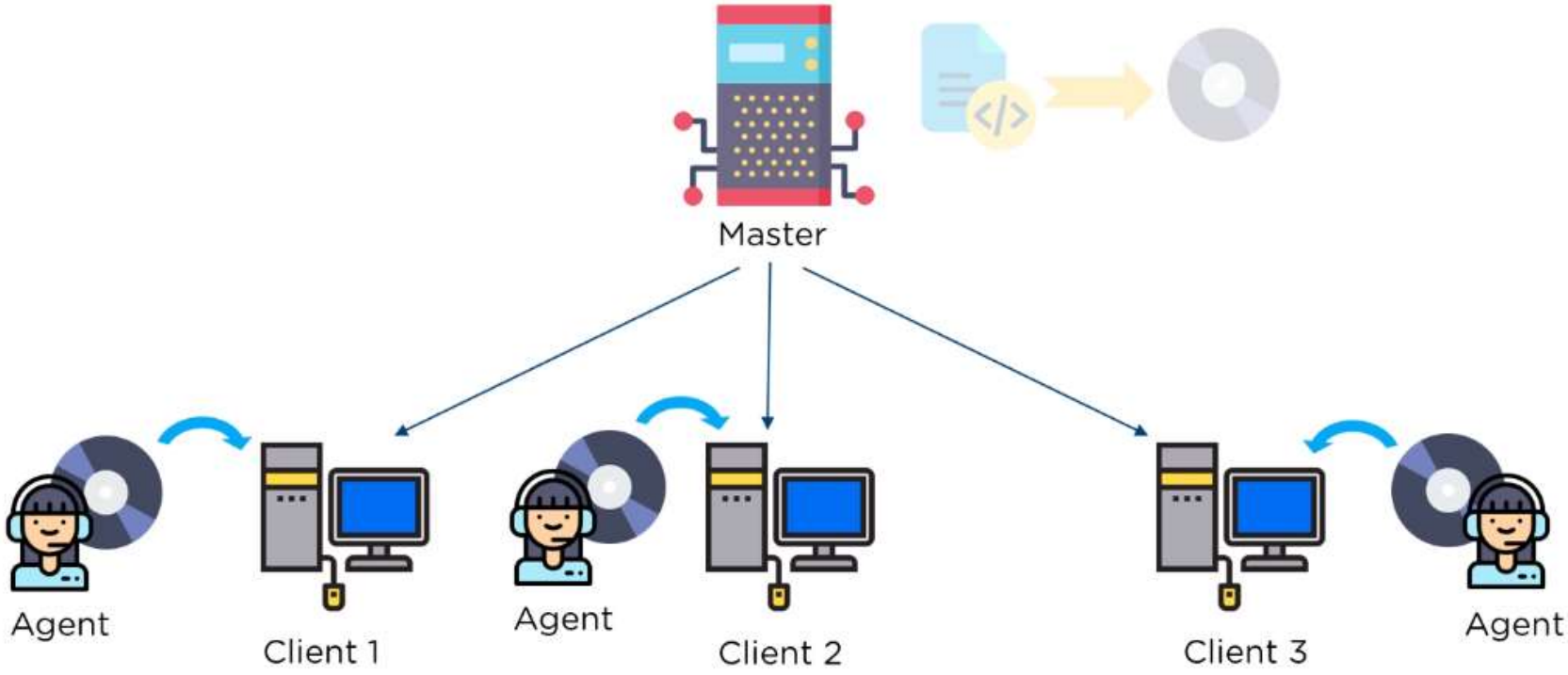
Factor sends state of the client to master



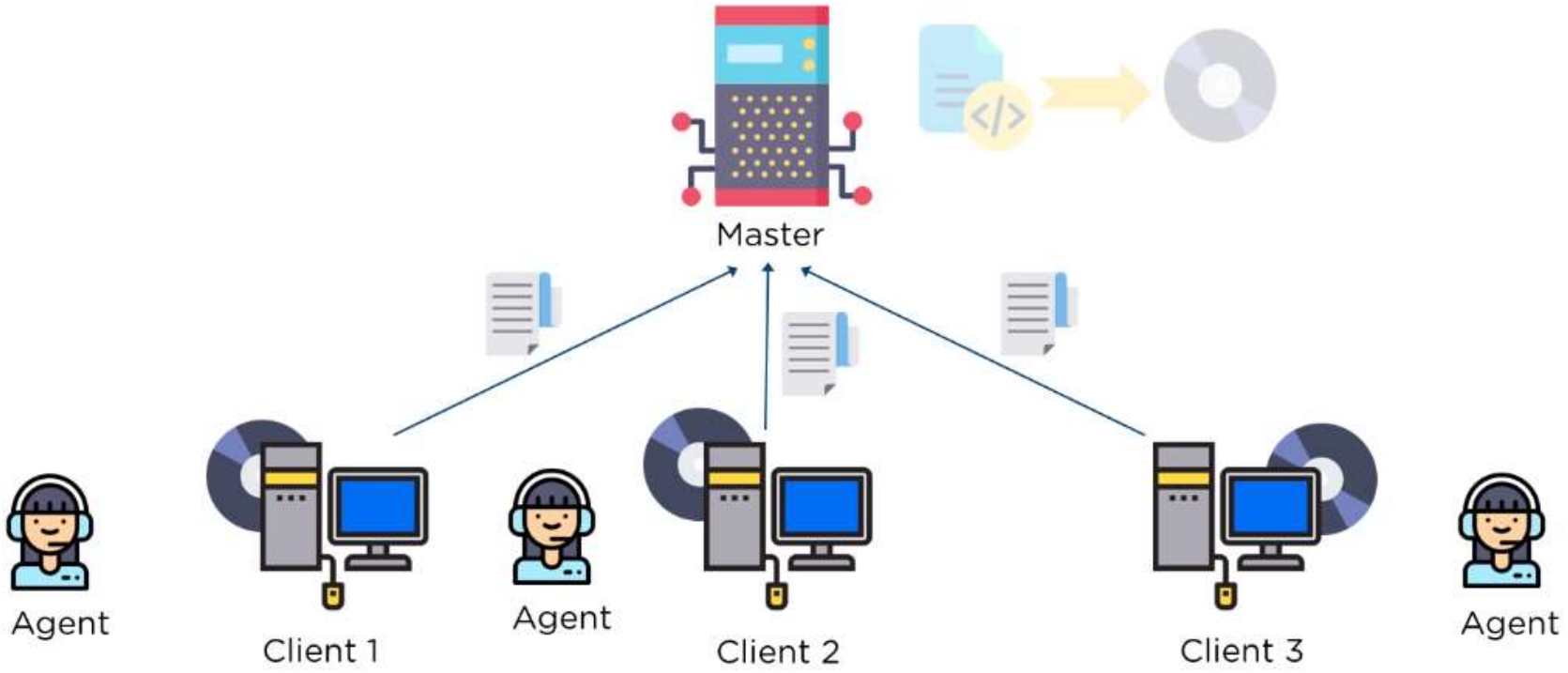
Based on facts master compiles manifests



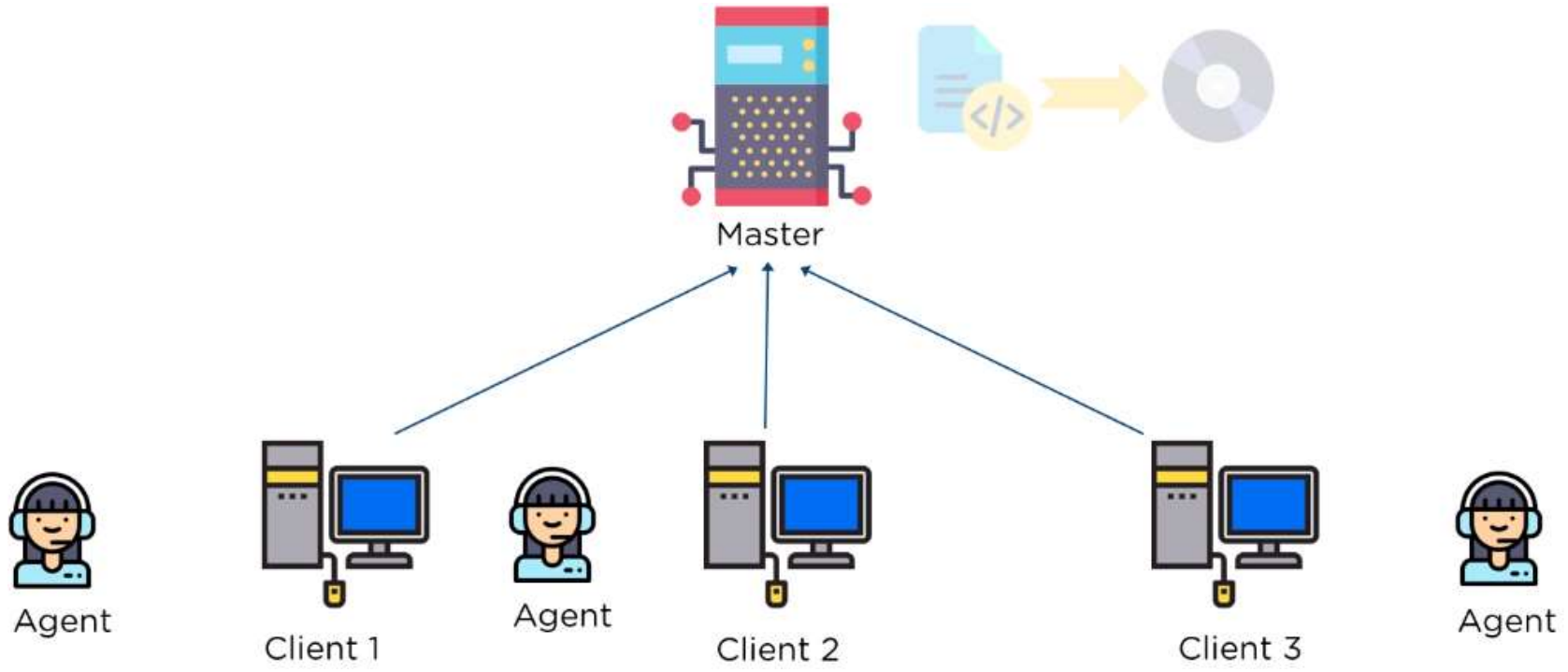
Agent on the client, executes the catalog



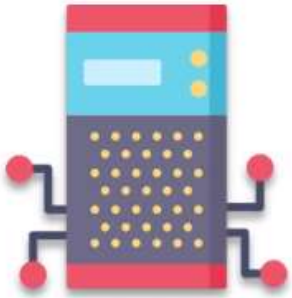
Report is sent back to the master



Report is generated and sent every 30 minutes



Puppet Setup



Server – CentOS 7

Install Puppet server

Start the Puppet server service

Sign the certificate

Write the manifest

Node - CentOS 7

Install Puppet agent

Start agent service and create SSL certificate

Run the agent. manifest/catalog are executed on the node

Hands-On

- Refer: Puppet Setup and Hands On.txt

Why use Puppet desired state management?

- Consistency
  - Troubleshooting problems with servers is a
    - time-consuming and
    - manually intensive process.
  - Without configuration management
    - Unable to make assumptions about infrastructure
  - Using Puppet, able to validate that Puppet applied the desired state you wanted.

Why use Puppet desired state management?

- Automation
  - If you have
    - 100 or 1,000 servers,
    - a mixed environment, or
    - you have plans to scale your infrastructure in the future,
  - It is difficult to do this manually

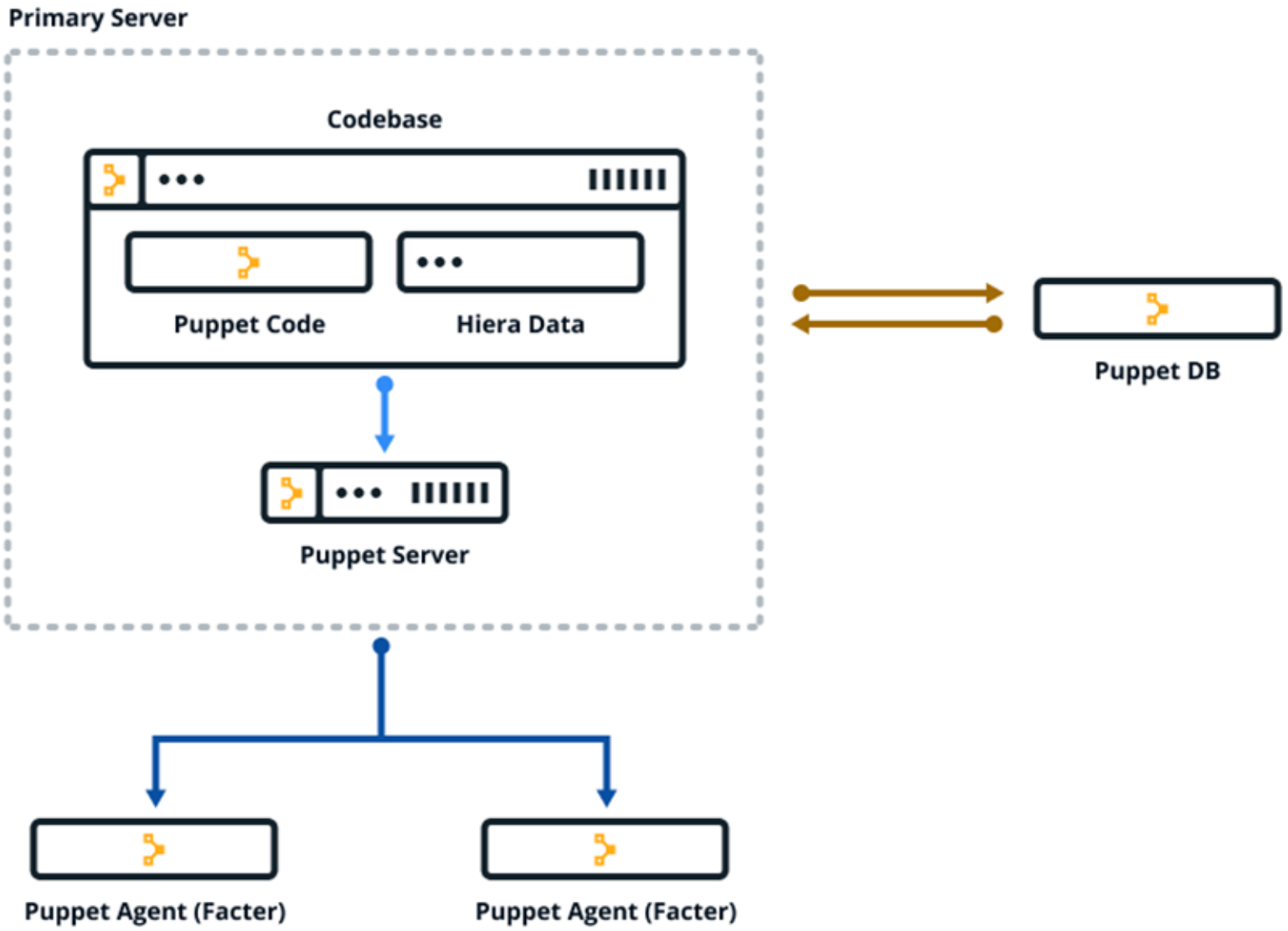
  - This is where Puppet can help you — to save you time and money, to scale effectively, and to do so securely.

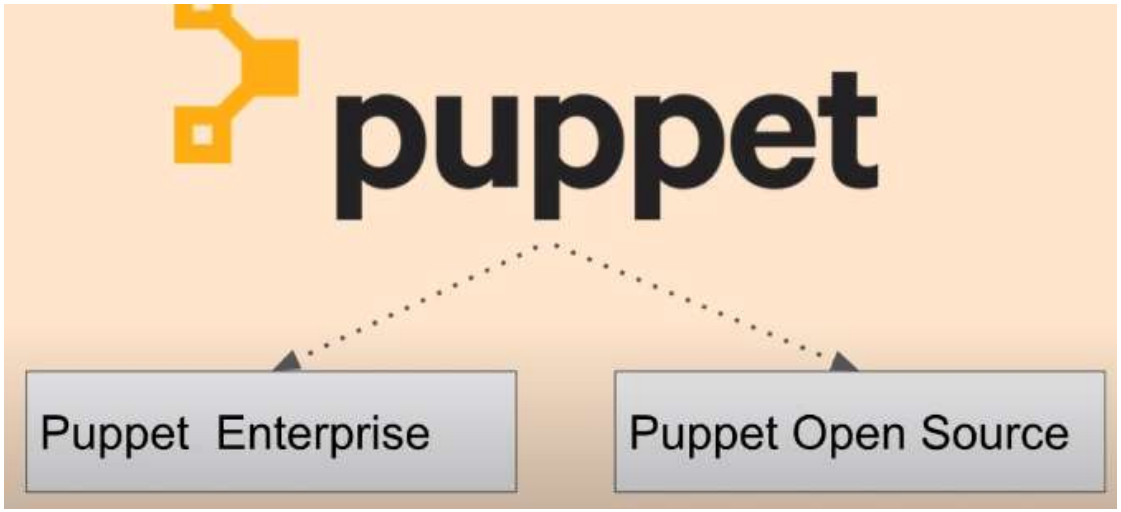
Key concepts behind Puppet

- Infrastructure-as-code
- Idempotency
  - The ability to repeatedly apply code to guarantee a desired state on a system, with the assurance that you will get the same result every time.
- Agile methodology
  - Working in incremental units of work and reusing code
- Git and version control

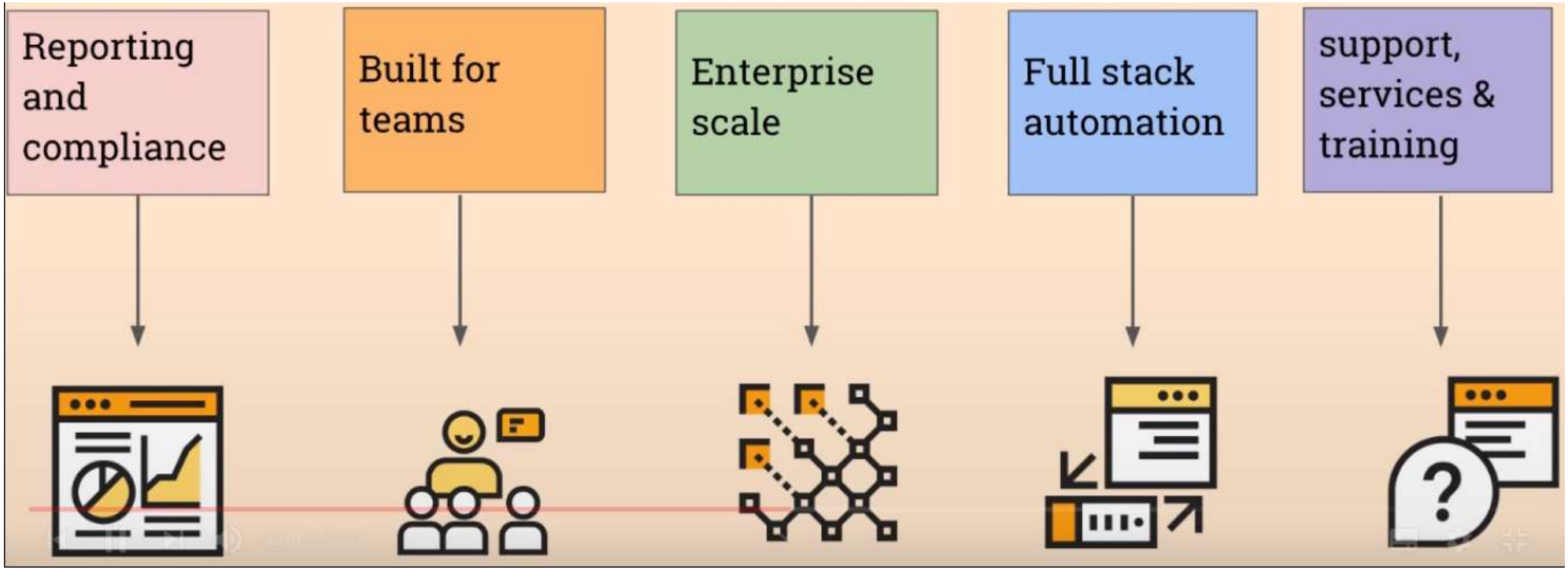
The components that make up Puppet

- Puppet Server and Puppet agent
  - Configured in an agent-server architecture
  - Includes a built-in certificate authority for managing certificates
  - Performs the role of the primary node and also runs an agent to configure itself.
- Facter
  - Gathers facts about an agent node such as its hostname, IP address, and OS
- Hiera
  - Separate data from the code and place it in a centralized location.
- PuppetDB
  - All data generated (for example facts, catalogs, reports) is stored in PuppetDB


Primary Server
Codebase
Puppet Code
Hiera Data
Puppet Server
Puppet DB
Puppet Agent (Facter)
Puppet Agent (Facter)


puppet
Puppet Enterprise
Puppet Open Source

Why Puppet Enterprise



Thanks