Web Browser	Django Server	XMLRPC Server	Master Device	Slave Device

Web Browser
- Request to view device record in test app
- Request to run test(s) on device under test (DUT)
- Displays test results to user

Django Server
- Looks up record via id and responds with rendered HTML and JSON via Django templates
- Transforms request into commands and arguments
- Interprets and records test results from master and slave devices (a)synchronously

XMLRPC Server
- Serializes XML to send to master
- Serializes XML to send to slave
- Deserializes XML results from master
- Deserializes XML results from slave

Master Device
- Runs control tests on slave (timing, electrical IO, serial, etc.)
- Interprets results and converts data to XML

Slave Device
- Runs tests on itself (memory, timing, RNG, etc.)
- Reports back its results to master and to HTTP/XMLRPC server

WHAT ABOUT THE EMBEDDED PYTHON? 🐍

➤ Some Orion computers are low resource

   ➤ (No SSD, 256mb RAM)

➤ OS customized to be more efficient

   ➤ Removed man pages and unneeded tools:

      ➤ No vim, but vi

      ➤ No htop, but top

➤ Python 2.7.x included

➤ Test Client application receives XMLRPC and runs shell commands

   ➤ Too big to cover in this presentation… until next time!