Prime the Pump!

- SSH us! (it’ll fail, and that’s OK)
  - Pick a username, we’ll use them in our demo
  - Be funny, witty, self-promoting, whatever
  - … but be professional ...

- ssh <YOU>@juju.does-it.net
Big Data DumbOps: Easy Meets Amazing!

Kevin Monroe, May 2016
DumbOps: What’d you call me?

- WE aren’t dumb
DumbOps: Blame Skynet

- WE aren’t dumb
- But our infrastructure can be
DumbOps: This doesn’t feel like a compliment

- WE aren’t dumb
- But our infrastructure can be
- And sometimes we stoop to its (it’s?) level
DumbOps: Exhibit A

# If we can't reverse resolve the hostname (like on azure), support DN registration by IP address.

try:
    socket.gethostbyaddr(utility.unit_private_ip())
except socket.herror:
    hdfs_site = Path('/etc/hadoop/conf/hdfs-site.xml')
    with utility.xmlpropmap_edit_in_place(hdfs_site) as props:
        props['dfs.namenode.datanode.registration.ip-hostname-check'] = 'false'
DumbOps: Exhibit B

# We know java7 has MAXHOSTNAMELEN of 64 char, so we cannot rely on
# java to do a hostname lookup on clouds that have >64 char fqdns
# (gce). Force short hostname (< 64 char) into /etc/hosts as workaround.
# Better fix may be to move to java8. See http://paste.ubuntu.com/16230171/
# NB: do this before the puppet apply, which may call java stuffs
# like format namenode, which will fail if we dont get this fix
# down early.

fqdn_host = subprocess.check_output(['facter', 'fqdn']).strip().decode()
short_host = subprocess.check_output(['facter', 'hostname']).strip().decode()
private_ip = utils.resolve_private_address(hookenv.unit_private_ip())

if len(fqdn_host) > 64:
    utils.manage etc hosts(private_ip, short_host)
DumbOps: Exhibit C

# NB:
DumbOps: What does it all mean?

- Big Software is complicated
DumbOps: Let’s make it easy

- Juju
  - Open source modeling language for (big) software
  - Decouple operational code from architecture
    - What do you really care about when upgrading a web server?
DumbOps: If saying it only made it so...

- Juju charms
  - Encapsulate operational code for software
  - Reusable, Repeatable, Available
DumbOps: Sounds charming

● Charm bundles

  ○ Simple way to define a collection of charms
    ■ Scale, Configure, Relate
    ■ Share, Tweak, Collaborate
DumbOps: Too many words

- Let’s make a bundle!
  - [http://jujucharms.com](http://jujucharms.com)
DumbOps: Bundle demos

- **Spark**
  - [https://jujucharms.com/u/bigdata-dev/apache-processing-spark/](https://jujucharms.com/u/bigdata-dev/apache-processing-spark/)

- **Syslog**
  - [https://jujucharms.com/u/bigdata-dev/realtime-syslog-analytics/](https://jujucharms.com/u/bigdata-dev/realtime-syslog-analytics/)

- **Mapred**
DumpOps: Ready for more?

- Dive deeper into the Big Top charms
  - Dev, Test, Benchmark
  - 10:00am tomorrow (May 10)
DumbOps: The struggle is real

- Tell us about your workflow
- Big Data friction
- Missing Big Data charms
Resources

- **Mailing Lists**
  - Juju Big Data: [https://lists.ubuntu.com/mailman/listinfo/bigdata](https://lists.ubuntu.com/mailman/listinfo/bigdata)
  - Juju: [https://lists.ubuntu.com/mailman/listinfo/juju](https://lists.ubuntu.com/mailman/listinfo/juju)

- **IRC (Freenode)**
  - #juju

- **Web**
  - [jujucharms.com/get-started](https://jujucharms.com/get-started)
  - [jujucharms.com/big-data](https://jujucharms.com/big-data)
  - [developer.juju.solutions](https://developer.juju.solutions)
  - Free AWS creds!!
Thanks!