**Linux**

There are different reasons for each sage of failures, the most failed workflows fail at these stages

**Placement**

The placement service selects an appropriate cluster on which new VMs should be built.

The reason any workflow can fail in Placement, is ether -

* Not enough slots in the cluster
* No IP’s available
* API calling fail

**Case:**

Let’s say there are free slots in a data center, but the workflow still failed.

It’s because there the placement server took from a non-free cluster. – (we resuming the workflow so that it can take from the fee cluster.)

**Case:**

Let’s say there are no free slots in a data center, and the workflow still failed - (we wait to rerun that workflow until slots are freed up cluster.)

**VCO:**

vCenter Orchestrator (VCO) is an application provided by VMware that provides process automation for tasks that take place inside vCenter.

Usually we fix the VCO fails in two ways.

* Memory & CPU changes - (we have to power off and rerun the workflow the vm after talking to app team)
* VE serves down - (we talk with ve team to restart servers)
* Either republishing the VCO message from RabbitMQ
* If now of above works, we open a VE ticket - (so that ve people can look at it)

**Elmo:**

Environment Readiness Service is used to check whether or not hosts are in an active state and ready for high level orchestration steps (accounting, platform, etc.).

Our most elmo fail are from RHEL 5 to RHEL 7 upgrades.

* Hostname mismatch ( When they upgrade RHEL 5 to RHEL 7 , they have to update there PXE record. We ask them to update the PXE record)

**User accounting:**

User Accounting (mkacct) is a home grown UNIX account management tool. It manages user accounts and groups, passwords, SSH keys, and sudo rules on hosts that it manages.

Main reason to fail in user accounting:

* Connection times out - (when the RHEL 5 serves is still ON when upgrading to RHEL 7, we App team to power off the RHEl 5)
* mkacct push doesn’t happened, ‘cause of opt file storage is full. - (We ask app team to free up some space opt file system)
* Duplicate account (we check the app. user and custom .user for the same user and we delete the user from one of them)

**Platform & Alacarte**

The platform and alacarte services are very similar in that they both update a portion of a machine's Puppet manifest and then tell puppet to configure the machine according to the manifest. They just happen to add different types of content to the manifest

Running puppet agent in the servers will gives us the idea of what’s going wrong, most common issue we see:

* Cert not getting sign properly or Cached certificate for ca failed - (we sign manually)
* Cached certificate for ca failed: header too long - (we delete zero-byte PEM files)
* Groups and user (white list the customization)
* Cert expiration (we renew it)
* Duplicate declaration or dependences conflicted (we delete the similar dependence software)
* Host name different (In RHEl 5 to RHEL 7 upgrade, we talk to app team to correct the host name)
* Puppet run taking too long - (have to wait until the puppet runs normally)
* Mco Ping too many times - (we delete multiple MCollective process)
* No ping, happens due to miss time sync (we talk to sys admins to make the time sync properly)
* If OVO monitoring doesn’t install properly - (we completely remove OMA and install it again)

**Ticketing**

The most common Ticketing failure is miss match of any date from the platinum exchange - (we ask app team to update the info in the platinum exchange)

**Sandbox**

**Removing the infrastructure.**

The one common fail in the sandbox workflows in failing at removing the infrastructure, in which care we have to reinstall the puppet, disable the root, rerun the workflow and enable the root mode again.

**Windows**

There most (all most all) of the windows failures happen in two stages;

**Elmo**

This is the step where the actual Windows installation occurs. Elmo polls the server status by calling SCCM (via the SCCM gateway).

It checks the status of all new servers, waiting until one of

1) all servers have finished installing Windows;

2) build fails for a server;

3) the wait time has been exceeded.

So the most of the fails are either Elmo time out (due to OS taking too long to install) or the OS is not installed properly. (we contact the SCCM team)

**SCCM**

The SCCM registration step adds new servers to the SCCM environment. Each time a server is built it must be added to SCCM before the VM is booted. The SCCM registration service takes care of this, powering on the VM once registration has completed. And the most common fail in this registration fail. (we contact the SCCM team)