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**Business Process – Spinning up Servers**

**Overview of Process**

At Kinney Group (An IT automation and datacenter design consulting company), new VMs (virtual machines) are requested on a very regular but semi-random basis. While the process itself doesn’t change very often, the location of where the VM is placed does.

**Process Steps**

1. An employee at Kinney Group (KGI) requests a VM, or several VMs.
2. The VM is then provisioned in one of the following locations:
   1. Internal Lab (Hardware located onsite)
   2. Softlayer (Offsite Rented Hardware)
   3. AWS (Amazon Web Services)

**Elements of Decision Process**

Each of the locations have a different set of positives and negatives. For the internal lab, it has the benefit of being used historically, and is assumed to be the cheapest location (Which may be inaccurate). However, it also has the lowest reliability of the three, and is risky for important workloads. Softlayer is assumed to be the most expensive environment, but offers just as much flexibility as the lab, but with high reliability. The price for AWS hasn’t been determined, as it has lower flexibility but may offer higher reliability at a better price.

**KPI Overview**

Currently the result of choosing a VM location is not reviewed. The following are KPIs that can/should be measured (but are not at present):

* Virtual Machine Performance – How fast the VM performs, and time from request to creation. This is the primary KPI.
* Cost – What is the price of an individual VM? This is difficult to obtain, because aside from AWS, the other two environments have external and/or hard to quantify costs such as maintenance, network costs, etc.

**Economic Benefit of Making Better Decisions**

Selecting the best environment has a huge effect on not only the overall costs, but also on overall team and company productivity. The faster the VMs are able to perform, the faster employees are able to test and improve code, and the majority of the IT budget is dedicated to hosting the VMs as well.

**Current Gaps in Data**

At present, it is assumed that hosting hardware internally is the cheapest. This assumption is flawed as the cost of maintaining the lab, energy costs, cost of a backup power source, etc. has not been factored in.