## **QA and Production Tiers**

As with all all user-impacting services, we strongly recommend that you set up separate QA and Production tiers for your COmanage service. This will allow, among other things, the testing of functionality key to your deployment prior to making any changes to the Production tier. In addition, the QA tier can also be used to try out new configurations prior to making those changes on the Production tier.

The QA tier should look as similar as possible to the Production tier, including related components such as the database, LDAP server(s), authentication infrastructure, and even applications. Of course, this implies added cost, so at some point it may be necessary to strike a balance between similarity and expense.

The data in the QA tier should look as similar as possible to the Production tier. One option would be to synchronize nightly from Production back to QA. While COmanage does not support this natively, it is possible to dump/restore your database using native database management tools. With this approach, changes made to QA during the day will be reverted the next day. When preparing to test a COmanage upgrade, simply disable this synchronization from the time QA is upgraded until the time Production is upgraded.