# Behind the Scenes: The Technology Stack that Powers SNWorks

SNWorks is the in-house web development arm of The State News, here, in East Lansing.  In addition to providing the Content Management System or CMS "Gryphon", it oversees the development and design of the State News website.  Additionally, the web development team also develops and maintains sites for various college newspapers across the country.  Some of its' clients include, in addition to The State News, The Daily Pennsylvanian, The Daily Tarheel, and the Cavalier Daily, to name just a few.

**Application Servers:**
SNWorks uses Amazon Web Services or AWS for virtualized Ubuntu servers that run Apache 2, PHP 5.3, and Python.  By utilizing the cloud, AWS assists in providing SNWorks with a stable and affordable platform that can scale, in some cases instantly, as needed.  In total, SNWorks utilizes 4 web servers (for redundancy and localized content), 1 staging server (for development) and 2 database servers (for information).

**Job/Utility Servers:**
SNWorks deploys a M1 Medium Instance on the AWS cloud that provides the following:

- 3.75 GiB of memory
- 2 EC2 Compute Units (1 virtual core with 2 EC2 Compute Unit)
- 410 GB instance storage
- 64-bit platform
- I/O Performance: Moderate

**Search:**
Currently, SNWorks uses in-house built search configuration with plans in the immediate future to switch to Sphinx an open source search server.

**Database & Memcache/Redis Servers:**

SNWorks uses MySQL Query Caching and Varnish reverse proxy cache to speed up requests made to its' servers (requests → varnish → server).

**Storage:**
SNWorks currently uses 456.9 GBs of storage and utilizes Amazon S3 to serve up media for all its' sites.

**OS Choice:**
Database servers run MySQL while application and utility servers run Ubuntu LTS.