CIT Hosting Services Cornell Stack (webhost)

Cornell Stack

The new Cornell Stack provides an updated platform that combines the hosting services onto a single VM.

The service is intended for customers that have technical skills/knowledge in installing/maintaining web software. Customers that have limited technical knowledge/skills may be more comfortable with some of the options listed at: http://www.it.cornell.edu/services/hosting/

The Cornell Stack provides the following level of support: http://www.it.cornell.edu/services/hosting/support.cfm

Please review our Hosting Terms. http://www.it.cornell.edu/services/hosting/terms.cfm

PCI and Confidential data should not be stored on Cornell Stack VMs (or any Hosting Services VMs). If your application or website requires storage of confidential data or needs to process credit card transactions, please contact cit-hosting@cornell.edu to discuss options or next steps.

Customers that require a higher level of customization and/or have a deep technical background may be more comfortable with a "Managed Server" and installing the web application stack on their own: http://www.it.cornell.edu/services/managed_servers/

What's new

A summary of the updated features:

- 64-bit RHEL 6 (Coldfusion can allocate more than 2 GB of memory)
    - CF9/LAMP currently using 32-bit RHEL5
- Coldfusion 10 using Java 1.7
    - CF9 currently using CF9 with Java 1.6
- PHP 5.4
    - LAMP2 currently uses PHP 5.3
    - PHP-FPM also now available as an alternative to mod_php (uses less memory)
- Python 2.7
    - No change from LAMP2
- Ruby 1.9.3
    - LAMP2 currently uses Ruby 1.8.7
- Perl 5.16
    - No change from LAMP2
- MySQL 5.5
    - Same version from LAMP2
    - MySQL database located on same VM versus separate
- Local storage
    - No longer uses NFS (Shared File Service) for storage
    - Customers can opt to continue to use SFS, but will incur additional charges
- Updated administrative tools
    - Can now modify both ".wdaccess" and ".htaccess" via web inteface
    - Can upload files via PHP Shell
    - Can utilize "pip" for installing Python software
- Shared Apache instance
    - Provides lower memory footprint for hosting multiple isolated instances

The PHP Shell/virtualenv utilities are no longer an "experimental" utility. There are some new "experimental" features that may be of interest for advanced web developers by special request.

- Git Repository
    - A git repository that can be used as an alternative to webdav for publishing code
- Mercurial Repository
    - A mercurial repository that can be used as an alternative to webdav for publishing code

What's Changed

Apache Web Server (httpd)

- The Apache version is now 2.2.15, some features from LAMP2/CF9 may not be available (i.e. FallbackResource)
- The new Cornell Stack VM's are in private address space, so an Instance Splash page can only be accessed from on campus networks or the Cornell VPN.
- Many "default" configurations that existed in CF9 have been removed. Some examples:
    - Default "allow from all" for the "scripts","images","styles","icons" sub-folders
    - Default "allow from localhost" for the "tasks" sub-folder
- When using "PortalProxy" it may be necessary to update configurations
    - Previous configurations that used "localhost" may no longer work and need to be updated
- It is no longer possible to have "legacy" CU WebAuth configurations
    - This may require obtaining an SSL certificate and/or updates to ".htaccess" configuration files
- Change in ".htaccess" behavior (no longer inherit from "htdocs")
    - Previously in LAMP2/CF9 ".htaccess" files would be inherited up to the "htdocs" level when multiple sub-sites existed under once instance

○ This change can impact sites that make use of a large number of redirects/rewrite rules

Coldfusion 10

- Secure Profile enabled
  - ○ Table of these listings can be found at: http://help.adobe.com/en_US/ColdFusion/10.0/Admin/WSf23b27ebc7b554b629cab0421369741d5a7-7fff.html
  - ○ In a development setting you may want to remove the custom error templates to restore behavior similar to Coldfusion 9
- "Cornell" jar files for Fedora are no longer included

PHP-FPM 5.4

- When using PHP-FPM you will no longer be able to use a ".htaccess" file to manage PHP settings. Instead use a ".user.ini" file http://php.net/manual/en/configuration.file.per-user.php
- php_suhosin is no longer available

MySQL

- The mysql configuration has changed. Please use "localhost" instead of the previous hostname from LAMP2

File snapshots / restores

- You can no longer access file snapshots in the ".snapshot" directory. Instead you will need to use TSM to restore any files.

Let's get going!

Listed below is more information on several parts of the Cornell Stack.