



Legislative Web Platform Using Drupal

California State, Legislative Data Center

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Seventh Year Using Drupal: Looking Back

- Legislative Web Platform using Drupal
- Roadmap and Growth over Seven Years
- Achievements and Challenges
- Next Steps : Looking Ahead

Legislative Web Platform using Drupal



Legislative Web Platform using Drupal

- Why Drupal?
- Drupal Architecture at Legislative Data Center

Why Drupal?

The main reason, it's the quality of the software and the community behind it: hundreds of thousands of people around the world work on developing and maintaining the Drupal platform and ecosystem every second of every day.

This makes for an incredibly powerful, cutting-edge content management system (CMS).

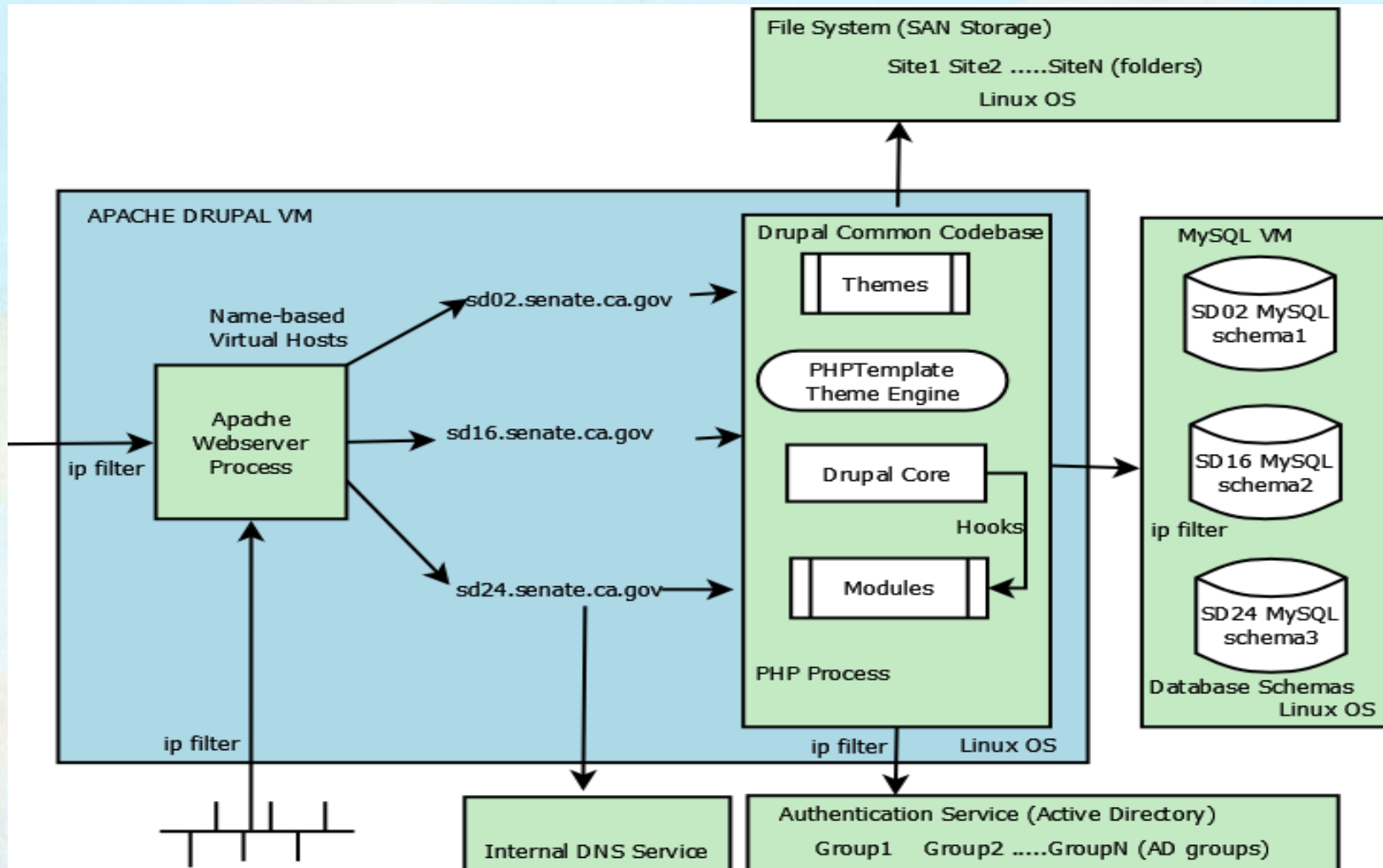
Who uses Drupal?



...and more than a million other organizations

Drupal Architecture

Common Codebase Architecture



Senate External and Internal Stacks

3 Virtual Machines*
65 Websites*

OLC External and Internal Stacks

3 Virtual Machines*
12 Websites*

Senate Democratic Caucus External and Internal Stacks

2 Virtual Machines*
30 Websites*



Assembly External and Internal Stacks

2 Virtual Machines*
63 Websites*

Bi-cameral External and Internal Stacks

2 Virtual Machines*
30 Websites*

Assembly Democratic Caucus External and Internal Stacks

2 Virtual Machines*
85 Websites*

Other Internal Dedicated Stacks

5 Virtual Machines*
5 Websites*

Assembly Republican Caucus External and Internal Dedicated Stacks

3 Virtual Machines*

*production environment

Drupal Sites Building Workflow

- Site Request from Senate and Assembly Rules
- Design (Theme, Branding, Accessibility)
- Development (Modules)
- Hosting Environment
- Deployment
- Testing, Security, Performance
- Release Site in Production Environment
- Manage Content in Production
- Customer Support
- Maintenance – Patching, Upgrade, Bug Fixes

Roadmap and Growth over Seven Years



Roadmap

2010

- Drupal First Prototype
- Senate Commiitees
- Senate Intranet

2012

- Senate, Assembly Committees
- Senate Majority Caucus

2014

- Intranets, OLC sites
- SDC Migration

2016

- Assembly Dem Caucus Migration
- GitLab, Google Analytics Integration

2011

- Senate, Assembly Internet
- Bicameral Sites
- Google Search Integration

2013

- Drupal 7 migration
- 100+ sites on D7

2015

- Mobile Responsive sites
- Assembly Intranet
- RHEL7 upgrades

2017

- Intranet sites, LHC
- 150+ sites on Drupal

Growth in Numbers

- 36 Production RHEL7 VMs using vmware
- 120+ Senate, Assembly all Internet and Intranet sites are on Drupal
- 100+ Both Houses Caucuses sites are on Drupal
- Migrated 50+ ADC sites from external vendor
- Senate Internet Page views 1M over one year
- ROI – hardware, licensing, staff, support costs
 - Before 2010 – Approx. 1 M
 - Seventh Year – Approx. 250 K

Achievements and Challenges



Achievements

- Rapid Delivery of Websites

 - Template-based Virtual Machines Environments

 - Repetitive Process & Automation

- Successfully Self-hosted Drupal Environment

 - Best practices and Team with Good Technical Skillset

- Growth in Customer-base

- Continuous Improvements to Tools & Processes

 - e.g. Development Environment Improvement

Example: Current Development Environment

DRUPAL VM

Drupal VM is a VM for local Drupal development, built with Vagrant + Ansible

[Read the documentation](#)

Workbooks

- 192.168.100.10 drupal-vm
- 192.168.100.11 drupal-vm
- 192.168.100.12 drupal-vm
- 192.168.100.13 drupal-vm
- 192.168.100.14 drupal-vm
- 192.168.100.15 drupal-vm
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- 192.168.100.48 drupal-vm
- 192.168.100.49 drupal-vm
- 192.168.100.50 drupal-vm

Your VMs

Hostname	Document Root	Drupal site?
drupal-vm	/var/www/html/drupal-vm	drupal-vm

Development Tools

Application	Address	Status
Apache	192.168.100.10:80	Running
Mailhog	192.168.100.10:8025	Running
PingPong	192.168.100.10:8080	Running

VM Information

Property	Value
PHP Version	5.6
Webserver	Apache
Memory limit	256M
PHP-FPM enabled	Yes

MySQL connection information

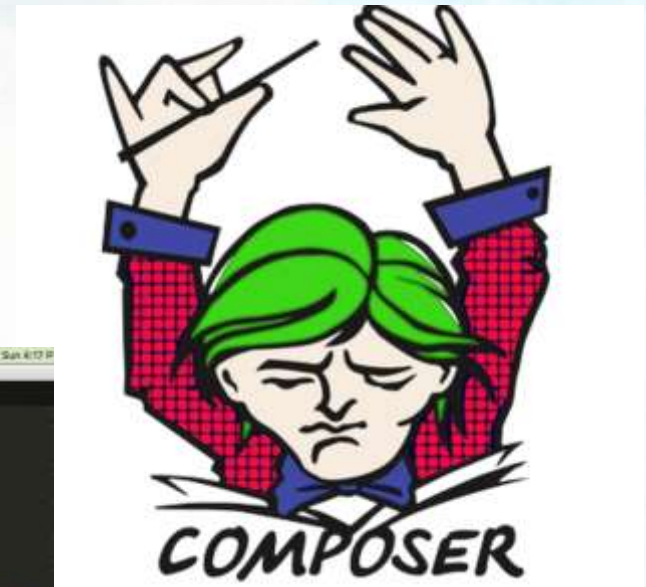
Property	Value
MySQL Hostname	192.168.100.10
MySQL Port	3306
MySQL Username	root
MySQL Password	root
SSH Hostname	192.168.100.10
SSH Username	drupal
SSH Private Key	/vagrant/.ssh/private_key

Databases

Property	Value
Database name	drupal
Username	drupal
Password	drupal



```
function db_connect($hostname, $port, $username, $password) {  
    $db = mysql_connect($hostname, $username, $password);  
    if (!$db) {  
        die('Could not connect to MySQL: ' . mysql_error());  
    }  
    mysql_select_db($database, $db);  
    return $db;  
}  
  
function db_create($hostname, $port, $username, $password, $database) {  
    $db = db_connect($hostname, $port, $username, $password);  
    if (!$db) {  
        die('Could not connect to MySQL: ' . mysql_error());  
    }  
    mysql_query("CREATE DATABASE IF NOT EXISTS $database", $db);  
    return $db;  
}
```



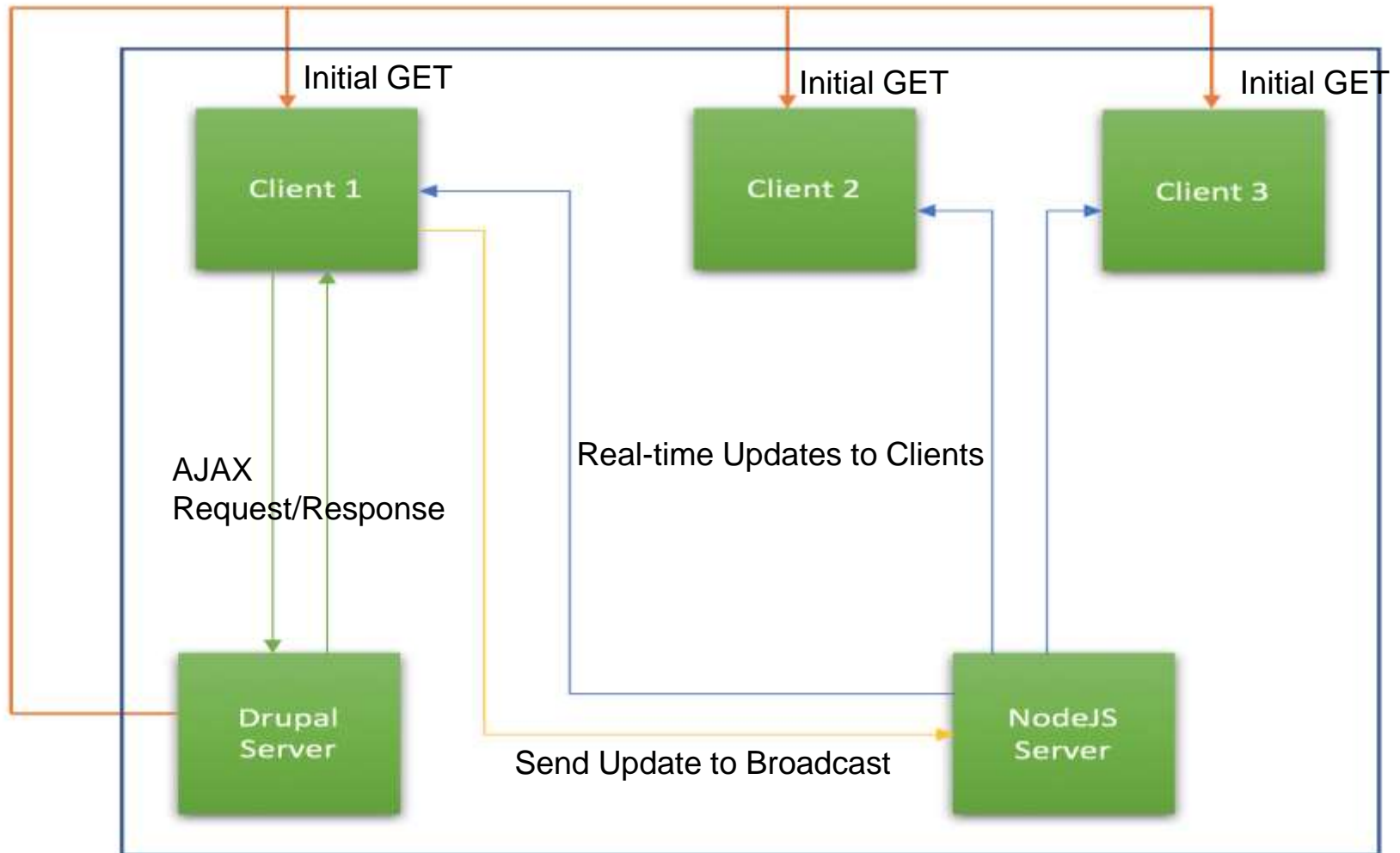
Challenges

- VM with multiple versions of software support
- SSO support for non-Kerberos devices
- Custom modules upgrade and maintenance
- Major version upgrades, D6 out of support
- GSA out of support

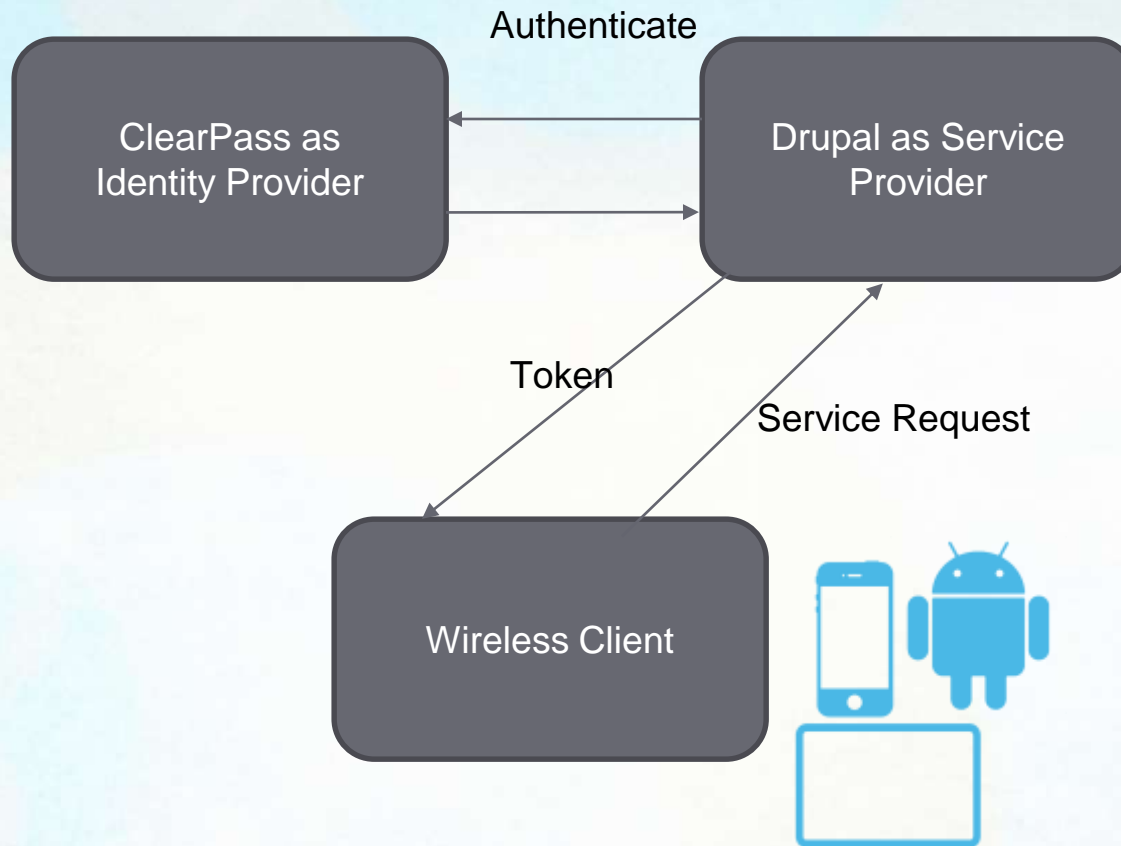
Next Steps: Looking Ahead

- Decoupled Drupal Architecture
- SAML based Security
- Container based VM
- Migration to Drupal 8
- Search Integration

Example: Decoupled Drupal Architecture



Example: SAML based Security



Thank You!

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