

Computer System Design and Administration

Topic 10. Secure WEB Content Management Service: Wordpress (CMS)



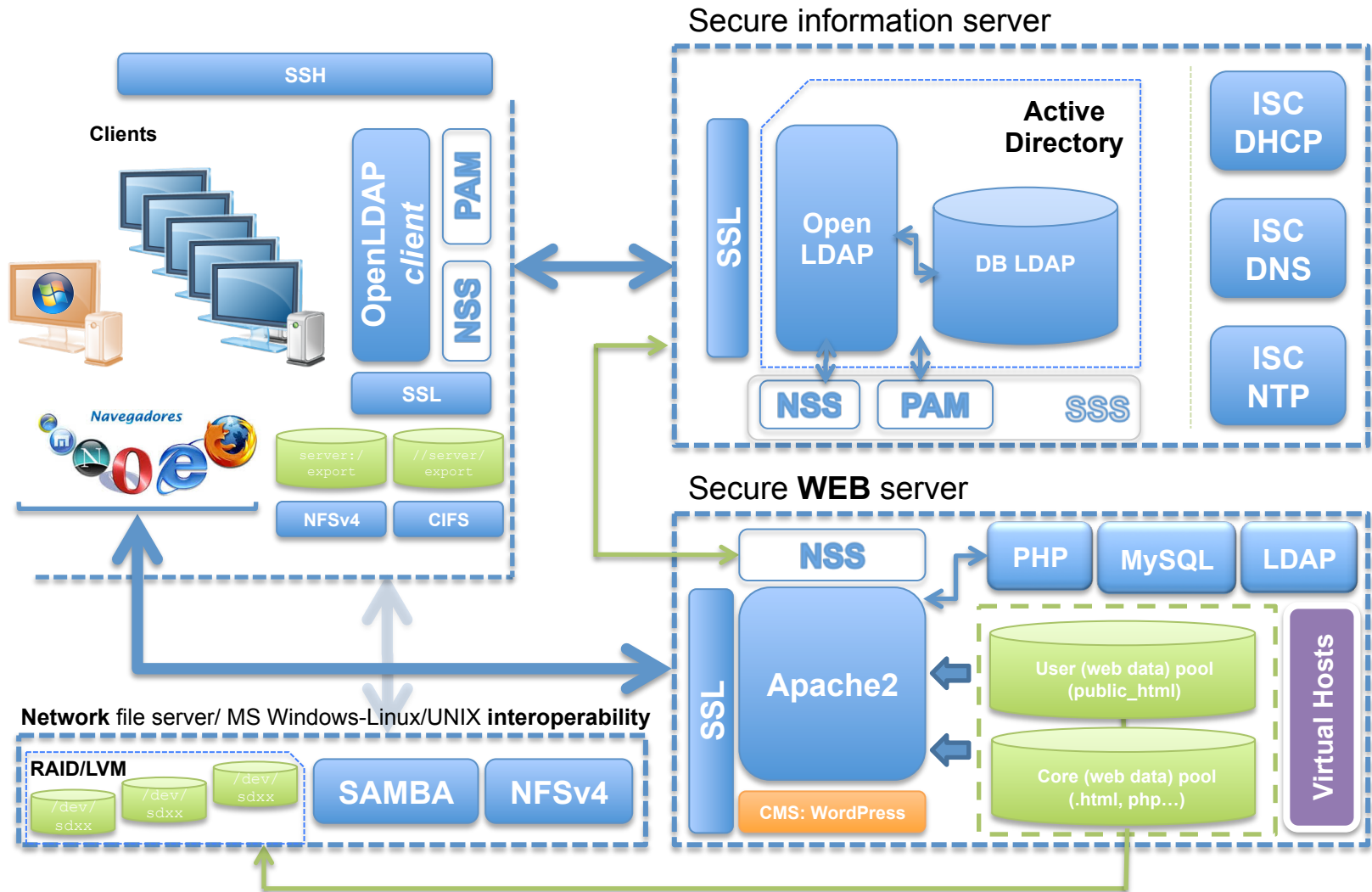
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WEB service (HTTP): Puzzle



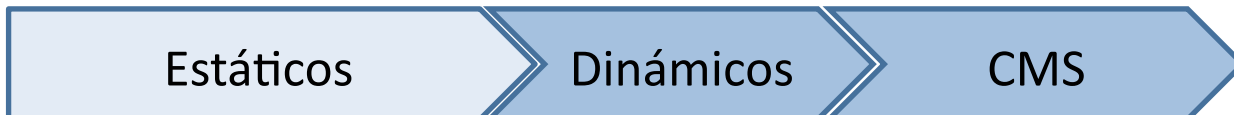
Target: WEB services

- Deployment and development of an INTERNET *secure* **WEB** service based on **Apache** server:
 - **Content management.**
 - **Access control.**
 - *Virtualhost* concept (management).
 - Secure communications: **TLS/SSL.**

- Installation, configuration and start-up of a Web Content Manager (**CMS**):
 - **Wordpress: *more than a blog.***

CMS: Content Management System

- Evolution of Web content management (history):



- **CMS: Content Management System:**

- It is a software which stores all data such as **text, photos, music, documents**, etc. and is made available on your website:
 - It helps in editing, publishing and modifying the content of the website.
- Management of the content is carried out using the **conventional web browser**:
 - Through a *management panel* (Restricted access).
- A common feature of all CMSs is that no special computer skills are required for its management.

- Basic operations:

- Content **creation**.
- Content **management**.
- **Publication** of content.
- CMS **presentation**.



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CMS: Content Management System

- CMS schema:
 - The **frontend**:
 - The visible part of the CMS for users who access as guests or registered users.
 - Based on *themes* that users can customize.
 - Enables users to manage the CMS using a special *panel*.
 - The **backend**:
 - CMS management area.
 - Used by webmasters where all the tasks of updating, configuring and managing the site are carried out.
 - + **Modules**:
 - For the configuration and personalization of the blog/website.
 - For the management of the content of the website (creation, edition, publication of contents, etc.).
 - User manager, profiles and access rights.
 - Extensions that increase the functionality of the content manager.
 - Multilingual.
 - **Data Base**:
 - Data base management system, where **contents** for the CMS are stored:
 - **MySQL, Postgres...**
- Classification and examples:
 - **Blogs**: **Wordpress**, B2evolution.net.
 - **Foros**: phpBB, SMF.
 - **Wikis**: CMS wiki, MediaWiki, TikiWiki.
 - **E-commerce**: OSCommerce, PRESTAShop.
 - **Web sites**: microwebs, fichas.com.
 - **Multimedia Galleries**: galery, Coopermine.
 - **Full**: Drupal.



Wordpress: A very popular blogging system

- **Wordpress:**

- It is an open source **CMS** which allows the users to build dynamic **websites** and **blogs**:
 - Created as a *Blog Software*, in 2003.
 - Open Source (free) distribution: **GPL**:
 - Lots of developers came together and volunteered their experience.
 - Lots of people continue to create additional tools and add-ons (i.e.: themes and plugins).
 - Anyone can use this software free of charge.
- **General purpose** content web manager.
- Specialized in the creation and management of “**blogs**”:
 - ...But nowadays, able to build “anything”:
 - **Blogs and web sites.**
- Developed using PHP over MySQL and Apache environments.
- **Wordpress.com vs. Wordpress.org.**



Wordpress: More than a blog

- How does a **Website** differ from a **Blog**?:
 - Traditional **Websites**:
 - A set of **'static'** pages:
 - **Content does not change often (or at all).**
 - Tends to be more *sales*-oriented.
 - Typically does not offer a way to interact with its visitors.
 - Often needs a web designer to make even minor changes or additions.
 - Traditional **Blog**:
 - **Fresh Content**, changes often:
 - **Newest posts appear highest on the page.**
 - Tends to share *insights* and ideas.
 - Typically offers a space to post comments and continue the conversation.
 - Offers ability to add content quickly.

Wordpress: More than a blog

- **Main features:**

- **User Management:**

- It allows managing the user information, such as:
 - **Changing the role of the users to (subscriber, contributor, author, editor or administrator).**
 - **Create or delete the user.**
 - **Change the password and user information.**
- The main role of the user manager is Authentication.

- **Media Management:**

- It is the tool for managing the media files and folder.

- **Theme System:**

- It allows modifying the site view and functionality.

- **Extend with Plugins:**

- Several *plugins* are available which provides custom functions and features according to the user's needs.

- **Search Engine Optimization:**

- It provides several search engine optimization (SEO) tools which makes on-site SEO simple.

- **Multilingual:**

- It allows translating the entire content into the language preferred by the user.

- **Importers:**

- It allows importing data in the form of posts. It imports custom files, comments, post pages and tags.

- **Simplicity.**

- **Flexibility...**

Wordpress: More than a blog

• Advantages:

- It is an *open source* platform and available for **free**.
- CSS files can be modified according to the **design** as per users need.
- There are many **plugins** and templates available for free:
 - Users can customize the various plugins as per their need.
- It is very easy to edit the content:
 - WYSIWYG editor.
- Media files can be uploaded easily and quickly.
- It offers several SEO tools which makes on-site SEO simple.
- Customization is easy according to the user's needs.
- It allows creating different roles for users for website such as admin, author, editor and contributor.

Wordpress: More than a blog

- **Disadvantages:**

- Using several plugins can make the website **heavy** to load and run.
- **PHP knowledge** is required to make modifications or changes in the WordPress website.
- Sometimes software needs to be updated to keep the WordPress **up-to-date** with the current browsers and mobile devices:
 - Updating WordPress version leads to loss of data, so a backup copy of the website is required.
- Modifying and formatting the graphic images and tables is difficult.

Wordpress: Example of CMS

```

apt-get install -y build-essential zlib1g-dev libyaml-dev libssl-dev

mkdir /usr/src/ruby && cd /usr/src/ruby
curl --progress ftp://ftp.ruby-lang.org/pub/ruby/2.0/ruby-2.0.0-p247
cd ruby-2.0.0-p247
./configure
make make install
ruby --version

gem install bundler --no-ri --no-rdoc

adduser --disabled-login --gecos 'GitLab' git
(( modifico ID y GID a 1100 ))

cd /home/git
git clone https://github.com/gitlabhq/gitlab-shell.git
    
```

<http://blogsistemas.atc.unican.es>