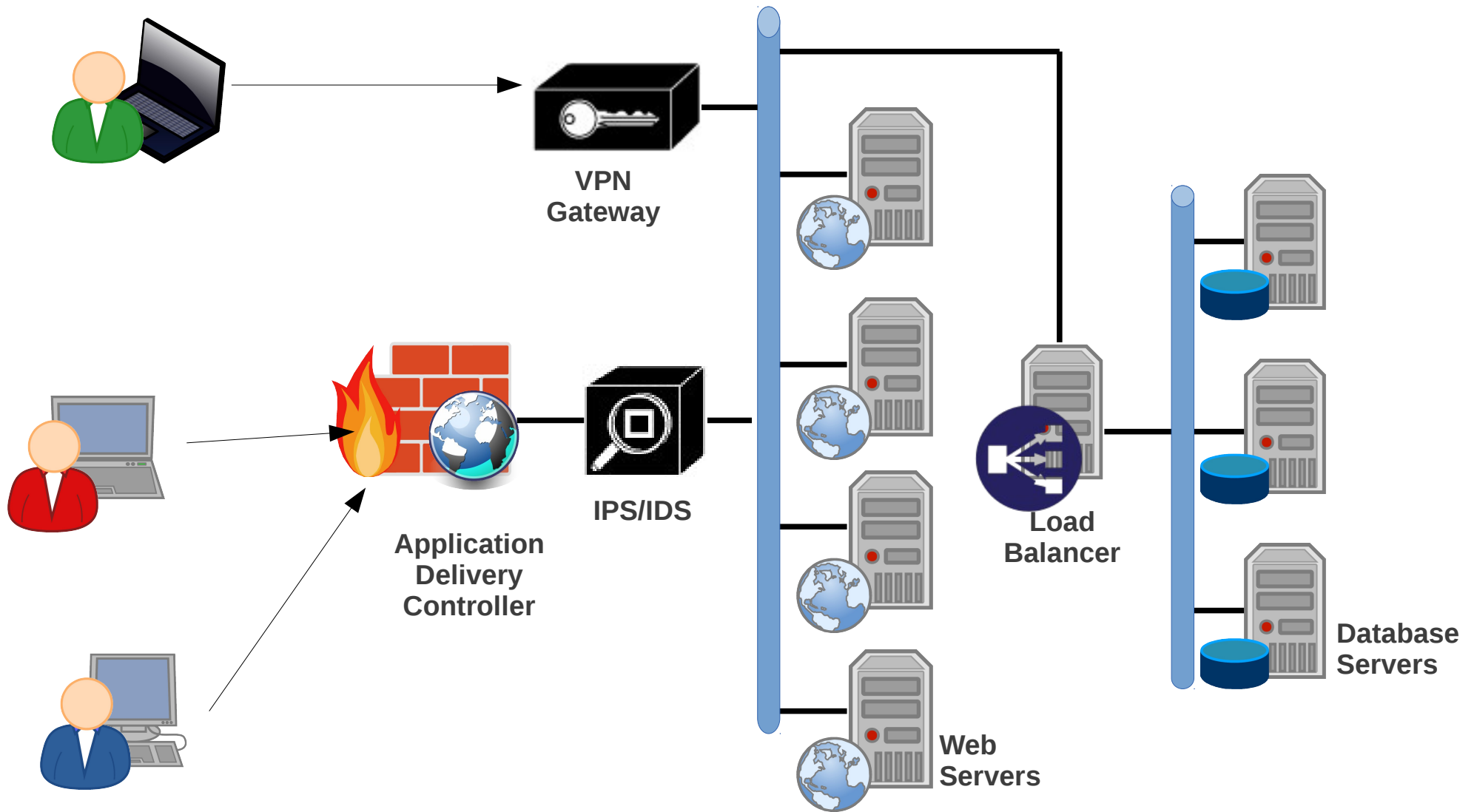# iGovPH WebHosting Services

Agenda

- Administrative Order 39, s 2013
- iGovPH Web Hosting Core Architecture
- Web Hosting Specifications
- Backup and Resiliency
- Incident Reporting and Help Desk
- UWCP
- Recommendations

Core Architecture

VPN Gateway

Application Delivery Controller

IPS/IDS

Web Servers

Load Balancer

Database Servers

Web Hosting Services Components

- Application Delivery Controller
  - Provides the following functionalities:
    - Compression
    - Caching
    - Connection Pooling
    - Traffic Shaping
    - Web Application Firewall (also provides DDOS mitigation)
    - SSL offload
    - Content-based switching

Web Hosting Services Components

- Web Servers
  - LAMP Stack
    - Linux
    - Apache
    - PHP (5.3, 5.4, and 5.5)
    - MySQL 5.5
  - Isolated environment for each tenant
  - Resource limiting per tenant (resource spikes)
    - CPU
    - Memory
    - Storage
  - Provides an administration portal with facilities like PhpMyAdmin and File Uploader
    - Built-in antivirus scanner which scans uploaded files
  - Only UWCP certified CMS' are hosted on the shared platform
  - The shared platform is only applicable to Stage 1 and Stage 2 Websites as per UN-ASPA's Five Stages of e-Government

Web Hosting Services Components

- Database Servers
    - Still running on top of the iGovPH cloud. :)
    - Forked MySQL 5.5 variant (MariaDB)
        - Synchronous replication
        - Active-active multi-master topology
        - Read and write to any cluster node
        - True parallel replication, on row level
        - Direct client connections, native MySQL look & feel
    - Database instances of tenants can be administered through the administration portal

Web Hosting Services Components

- Intrusion Prevention System

  - Detects and prevents anomalous traffic up to the packet level

  - Correlates and analyzes network traffic to positively identify anomalous and malicious payloads

  - Sends alerts and notifications to the administrators in the event there are offending IP addresses sending these kind of traffic

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Web Hosting Services Components

- Load Balancer

  - Acts as a reverse proxy and distributes network or application traffic across a number of servers

  - Used to increase capacity (accommodating more concurrent connections)

  - ensures reliability and availability by monitoring the "health" of applications

Web Hosting Services Components

- VPN Gateway

  - Authorizes remote users to gain access to the back-end administrator portal of each website (/administrator/, /wp-admin/, and /user/)

  - This mitigates brute force attack logins to the back-end login portal and unauthorized access

  - Puts remote clients in a contained network

Web Hosting Specifications

- For the shared environment

  - 1 database per domain

  - 2 GB of storage capacity

  - Unlimited bandwidth transfers

- For the cloud/dedicated environment (per agency)

  - Ten (10) cores maximum (can be distributed to a number of VMs)

  - 40 GB RAM

  - 100 GB Storage Capacity

  - 1 Public IP and 1 Private /24 Network

Self Service Portal

- The iGovPH will require per agency to register at least three (3) technical contact persons that we will be issuing iGovPH user credentials to (possibly these should be the CIO/IT Manager, DevOps, and a content manager).

- The user credentials issued to these persons will be used to create the web/server space for the agency's website.

Backup and Resiliency

- The iGovPH web hosting server sits atop iGovPH's cloud infrastructure.

- The cloud infrastructure is equipped with redundant hardware components which should eliminate single-point-of-failure (SPOF) domains and ensure availability.

- We're running our backup processes daily to facilitate in recovering unexpected failures and interruption.

- We're in the course of drafting our business continuity plan and DR plan to identify and streamline recovery and restoration processes to our secondary data center

- The project will be operating two (2) data centers. Each having a cloud infrastructure. We can design your application to take advantage of these multi-site configuration. Same with our web hosting platform.

Issue Reporting and Help Desk

- Agencies can send their inquiries and report issues through our issue tracking system that will be available at:

    http://support.i.gov.ph/

- This website shall enable users to create tickets according to what component they are inquiring about or have any issues with.

- This shall also have a live chat facility where users can easily talk with our support staff immediately.

UWCP

- We will be putting up a portal from where users can download pre-packaged CMS distributions with the UWCP template embedded:

    - Joomla

    - Wordpress

    - Drupal

Recommendations

- For websites that do not fall under Stage 1 and Stage 2, we can dedicate a separate server with application and database components.

- Better if you will talk to us and we'll find the best architecture for your existing/new web application.