Cloud Computing and Virtualization

Practical Lab 2 – Ansible

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Practical Lab 2

- Task – provision a web app using Ansible Roles (based on W2 examples)
    1. Configure a multi-machine vagrant environment (3 vms: ansible, web, db)
        - ansible = CentOS, web = CentOS, db = Ubuntu
        - If HDD space is an issue, continue with the previous env (W2 env, use: ansible, node1, node4)
        - Include the provisioning of the ansible node with a) Ansible and b) the SSH key-pair
    2. Ansible node basic setup
        1. As in the W2 examples, create role for "ssh_setup" which will run a local task to execute the key-scan and key-add
        2. Create a "test.yml" playbook to test each role independently as you develop them
    3. Provision the webserver (web node)
        1. Create a role to provision apache with a default personalized page (index.html)
        2. Create a role to install php (and other modules) and to deploy a php_status.php file, content →
        3. Test both roles, check if both pages load
    4. Provision a DB server (db node)
        1. Create a role to install and secure MySQL (or PostgreSQL)
            1. Create a db, user and import dump.sql - module
    5. Provision a small hello world (simple php script that queries a DB table)
        1. Random starting point: PHP MySQL SELECT Query

```php
<?php
// Show all information
phpinfo();
?>
```

```sql
# dump.sql
CREATE TABLE IF NOT EXISTS test (
message varchar(255) NOT NULL
) ENGINE=MyISAM DEFAULT CHARSET=utf8;
INSERT INTO test(message) VALUES('Ansible To Do List');
INSERT INTO test(message) VALUES('Get ready');
INSERT INTO test(message) VALUES('Ansible is fun')
```