CS 444 OS Lab 3
Virtualization
What is Virtualization
Infrastructure
Why is virtualization useful?

- Running multiple operating systems simultaneously.
- Easier software installations.
- Testing and disaster recovery.
- Infrastructure consolidation.
## Virtualization and Cloud Service

### Step 1: Choose an Amazon Machine Image (AMI)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace, or you can select one of your own AMIs.

<table>
<thead>
<tr>
<th>AMI Name</th>
<th>AMI ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amazon Linux AMI 2014.09.2 (HVM)</td>
<td>ami-dff2b386</td>
<td>The Amazon Linux AMI is an EBS-backed image. The default image includes AWS command line tools, Python, Ruby, Perl, and Java. The repositories include Apache HTTPD, Docker, PHP, MySQL, PostgreSQL, and other packages.</td>
</tr>
<tr>
<td>Red Hat Enterprise Linux 7.0 (HVM), SSD Volume Type</td>
<td>ami-96bf7a9</td>
<td>Red Hat Enterprise Linux version 7.0 (HVM), EBS General Purpose (SSD) Volume Type</td>
</tr>
<tr>
<td>SUSE Linux Enterprise Server 12 (HVM), SSD Volume Type</td>
<td>ami-d47450b7</td>
<td>SUSE Linux Enterprise Server 12 (HVM), EBS General Purpose (SSD) Volume Type. Public Cloud, Advanced Systems Management, Web and Scripting, and Legacy modules enabled.</td>
</tr>
<tr>
<td>Ubuntu Server 14.04 LTS (HVM), SSD Volume Type</td>
<td>ami-9b8bb519</td>
<td>Ubuntu Server 14.04 LTS (HVM), EBS General Purpose (SSD) Volume Type. Support available from Canonical (<a href="http://www.ubuntu.com/cloud/services">http://www.ubuntu.com/cloud/services</a>).</td>
</tr>
<tr>
<td>Microsoft Windows Server 2012 R2 Base</td>
<td>ami-891a45b70</td>
<td>Microsoft Windows Server 2012 R2 Standard edition with 64-bit architecture. [English]</td>
</tr>
</tbody>
</table>
Virtualization and Cloud Service
Virtualization Solutions

- Personal Solution
  - VMWare
  - Virtual Box
- Industry Solution
  - VMWare vSphere
  - Virtual Box
  - KVM
  - HyperV
  - Xen Server
Play with Virtual Box