An Introduction to OpenClovis
Overview

• What is OpenClovis?

• What OpenClovis can do

• Benefits of OpenClovis

• Problems with OpenClovis
What is OpenClovis?

- Open source Management Infrastructure

Has two parts:

- Application Service Platform
- Integrated Development Environment
OpenClovis ASP

- Runtime decision maker
- Able to be deployed across all blades, shelves and racks
- Example of ASP
Hardware Setup

1. Management Station
   IP 192.168.30.X
   OS: Red Hat

2. Switch

3. Patch Panel

4. Chassis Management Module
   eth0 eth1

5. Blade
   Intel MPCBL0001N04

6. Switch Fabric
My Hardware Setup

Figure 3.4: Runtime Hardware Setup 2.2
ASP Example

Things to Observe

• Where OpenClovis is implemented

• Remote Management (Assignment, Unlock, Instantiation)

• Failover / Checkpointing
Starting ASP

Sauron: Payload Node 1

Saruman: Payload Node 2

Jason: System Controller
Hello World! (seq=44)
Hello World! (seq=45)
Hello World! (seq=46)
Hello World! (seq=47)
Hello World! (seq=48)
Hello World! (seq=49)
Hello World! (seq=50)
Hello World! (seq=51)
Hello World! (seq=52)
Hello World! (seq=53)
Hello World! (seq=54)
Hello World! (seq=55)
Hello World! (seq=56)
Hello World! (seq=57)
Hello World! (seq=58)
Hello World! (seq=59)
Hello World! (seq=60)

Checkpoint opened (handle=0x1)

ERROR: Failed to create checkpoint section

Checkpoint initialization...

Checkpoint service initialized (handle=0x6)

CheckpointOpen with CREATE succeeded

Checkpoint set called

Checkpoint service initialized (handle=0x0)

Checkpoint set called

Wait for CSI assignment...

Checkpoint initialization...

Checkpoint service initialized (handle=0x0)

Checkpoint set called

Standby state requested

Successfully changed state of csa1035G10 to LockAssignment

Successfully changed state of csa1035G10 to Unlock

kill -9 3586
OpenClovis IDE

- Eclipse-based graphical development environment
Benefits of OpenClovis

• It's Free (As in $$, but not time)
• Everything is well packaged and self contained, easy to install (but possibly very hard to have it work)
• Has extensive documentation for installation and evaluation
Problems with OpenClovis

- Despite extensive documentation, evaluation may not work
- Support from OpenClovis.org is minimal
- OpenClovis is kernel sensitive
Future Ventures

• Understand how OpenClovis triggers failovers

• Understanding how to implement OpenClovis to more complex and realistic systems

• Investigate Kernel sensitivity