

Deploying Rembo



ALLAN RAE
rae@csee.uq.edu.au

2nd May 2001

Overview

- ▶ Why?
- ▶ Rembo capabilities
- ▶ Deployment plan
- ▶ Problems & students
- ▶ CSEE boot script

Why?

- ▶ Merger of School of Comp. Sci. and Dept. of Elec. Eng. infrastructure
- ▶ Windows 2000 for improved security
- ▶ Previous infrastructure incapable of supporting clients
 - 320 client machines in 16 labs in 3 buildings,
 - At least 10 different machine specifications.

New Infrastructure

- ▶ Gigabit-fibre backbone and 100MBit switched network.
- ▶ Dual 933MHz P3 Dell-4400 1GB RAM and 400GB RAID-5 array.
- ▶ Two domain controllers – 800MHz P3 with 256MB RAM.
- ▶ Sun Ray 100's for dedicated Unix clients

Rembo

- ▶ Supports W2k, W9x and Linux.
 - W2k registries
- ▶ Supports grouping of machines
 - startup script and operational settings
- ▶ Persistent variables
- ▶ Exception handling
- ▶ C-like script syntax
- ▶ Join W2k to domain

Deployment

- ▶ Small local drives and lots of software
- ▶ Map of software, licenses and course numbers
- ▶ Allocated labs accordingly
- ▶ HOSTNAME = Building + Room + “-“ + Asset number
- ▶ Common base image
- ▶ Incremental packages for easier maintenance
- ▶ Assembled packages make final image per lab
- ▶ WhichImage()

W2k in Five Lines

```
Synchronize(WhichImage(), "disk://0:1", "b");
```

```
RequestDHCPInfo();
```

```
NTChangeName(DHCPInfo.HostName);
```

```
NTJoinDomain();
```

```
HDBoot(0,1);
```

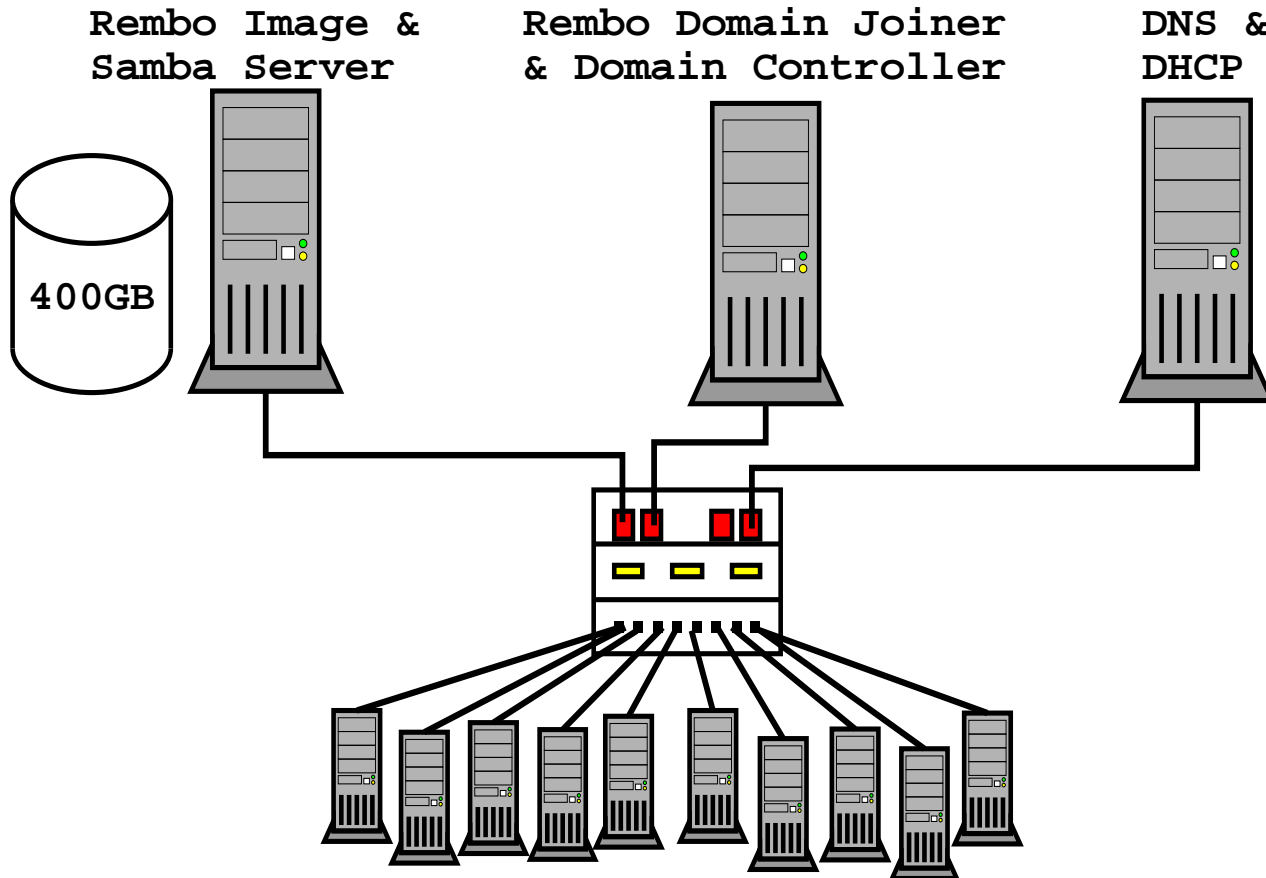
Difficulties

- ▶ Intel and Asus MoBos don't mix
- ▶ Latest BIOSes required
- ▶ Cisco switches and multicasting
 - multicasting is immediate
- ▶ Tab characters in scripts
- ▶ Made all users local admin with policy restrictions.
 - Registry access for scripts and programs (Office 2k)

Student Proofing

- ▶ Persistent variables used to track installation stages
 - HD formatted, synchronizing, crashed
- ▶ Crash-proofing by forced chkdsk
- ▶ Kixtart script run on login

Infrastructure



Student Menu



Admin Menu



The Admin Menu interface consists of a vertical list of four items on the left, each with a small icon and a corresponding text description on the right. The items are: 1. An icon of a CD and a floppy disk next to the text 'Install an image of your choosing Default = PIII Base'. 2. An icon of a cardboard box next to the text 'Create an Incremental Package against Base PIII WZK'. 3. An icon of a blue elephant next to the text 'Assemble Packages onto first partition.'. 4. An icon of a jar with a red lid next to the text 'Build a Big Fat Image of first partition'. A blue arrow cursor is visible at the bottom right of the menu area.

-  Install an image of your choosing
Default = PIII Base
-  Create an Incremental Package
against Base PIII WZK
-  Assemble Packages
onto first partition.
-  Build a Big Fat Image
of first partition

Assembly Stage

Choose the packages you want.

**Foundation packages:
(not configured)**

- jdk-130
- kawa-351a

Hardware specific packages:

- G109-hardware
- G122-hardware
- A306A-hardware
- G110-G112-hardware
- G116-hardware

Packages with Limited Licenses:

- Project98
- visio-2000-pro
- trajan-neural-net-40

**These packages are ready to use:
(pre-configured and site licensed)**

- active-hdl-42
- active-hdl-42-small

Resources

- ▶ Rembo home page <http://www.rembo.com/>
- ▶ CSEE home page <http://www.csee.uq.edu.au/>