



xm on XenAPI

Testing XenAPI

Tom Wilkie

University of Cambridge Computer Lab

XenSource UK

- Nice new API for Xen
- But need a tool to communicate with it...
- For 3.0.5, xm talks XenAPI
 - Also talks old SXP XML RPC
- Configurable via xm-config.xml:

```
<xm>
  <server type='Xen-API'
    uri='http://localhost:9363/'
    username='me'
    password='mypassword' />
</xm>
```

- Most original xm commands
- Syntax and semantics remain the same
 - Some new options
- Output should be almost identical
 - Legacy scrapers should still work
 - But recommend moving to XenAPI ASAP

xm create

- New XML file format
- Auto generate XML from python files or S-Expressions
- Auto detect input file type
- Issue XenAPI commands from XML
- XML checked against DTD, but option to turn it off (very slowwww...)
- Options to print XML (like -n, but -x)

xm create Example

```
<?xml version="1.0" encoding="UTF-8"?>
<xm>
  <vm vcpus_max="4" ...>
    <name><label>Debian</label></name>
    <version>1.0</version>
    <pv kernel="/boot/vmlinuz-2.6.18-xen" .../>
    <memory static_max="134217728"
      static_min="0" .../>
    <vbd name="vdb-1187369562" bootable="1"
      device="hda1" mode="RW"
      vdi="vdi-root" .../>
    <vif device="eth0" name="vif-eth0".../>
    <other_config value="True" key="transient"/>
  </vm>
  <vdi read_only="false"
    src="file:/root/Debian32Clean.dd" name="vdi-root"
    shareable="false" type="system" size="-1">
    <name>...</name>
  </vdi>
</xm>
```

- All parameters map 1-to-1 onto XenAPI
- Create multiple VMs
- Share VDIs between VMs
- **Future**
 - Support internal networks between VMs?

- Can now run xm-test against xm talking XenAPI
- Comprehensive test has found many bugs in XenAPI implementation, mainly with device attach, but all fixed...
- **Fails**
 - `xm --long list` doesn't show devices
 - `xm list` doesn't show hint when run as non-root

- In the regression test suite
- Should be run nightly but...
- Some errors just getting ironed out - dependencies and makefiles not quite right yet

- Currently the XenAPI implementation of the following classes requires some attention:
 - Network and VIF
 - Bridges currently set up on VIF creation not Network
 - Storage (VBD, VDI and SR)
 - VDI create has wrong semantics - really want an 'introduce' method

Questions?

