SNMP Monitoring of Devices using Lithium

Matthew Tilney
The Australian National University
Introduction

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Workshop

• Lion SNMP setup (& test)
• Windows SNMP setup (& test)
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Workshop

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• Konica device setup
House Keeping
House Keeping

- Mobile phones can be on
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- Skill Level (of 3)
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1. Opened (find) Terminal
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  2. `sudo`, `vi`, `pico`, `kill`
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  1. Opened (find) Terminal
  2. `sudo`, `vi`, `pico`, `kill`
  3. Experienced with SNMP
House Keeping

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- Skill Level (of 3)
  1. Opened (find) Terminal
  2. `sudo`, `vi`, `pico`, `kill`
  3. Experienced with SNMP
- Window Services?
About Me
Device Monitoring

- Why?
- How?
- To what extent?
ANUs Devices

- 128+ Printers / MFDs
- 5 Headless ‘Kiosks’
- 4 Servers
- 150+ staff, various divisions colleges
Requirement
Requirement

• Granular security access
Requirement

- Granular security access
- Single reporting interface
Requirement

• Granular security access
• Single reporting interface
• External services access (SQL pref)
Requirement

- Granular security access
- Single reporting interface
- External services access (SQL pref)
- Easy to setup / support / use
Monitoring Products
Monitoring Products

• Nagios
Monitoring Products

- Nagios
- Cacti
- Konica - PageScope
Monitoring Products

• Nagios
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• HP WebJetAdmin
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SNMP Monitoring Products

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SNMP

- Simple Network Management Protocol
- MIB = Management Information Base
- OID = Object Identifiers

- $\text{Iso}(1).\text{org}(3).\text{dod}(6).\text{internet}(1).\text{private}(4).\text{transition}(868).\text{products}(2).\text{chassis}(4).\text{card}(1).\text{slotCps}(2).-.-\text{cpsSlotSummary}(1).\text{cpsModuleTable}(1).\text{cpsModuleEntry}(1).\text{cpsModuleModel}(3).3562.3$

- $1.3.6.1.4.868.2.4.1.2.1.1.1.3.3562.3$
Get OID .1.3.6.1.2.1.1.1.4

Administrator matt@sambuca.anu

Trap:information
SNMP operation

Trap: information
SNMP Requirements

- Device that supports SNMP
- Ports 161 / 162 opened UDP
- Manager (server / application)
Workshop
1. Go To Finder
2. Open Utilities
3. Open Terminal
4. Run `sudo -s` (provide password)
5. Run `snmpwalk -c public localhost`
6. Enable snmpd
   1. Run `/usr/sbin/snmp`
7. Run `snmpwalk -c public localhost`
8. Worked?
9. Edit `/etc/hostconfig`
10. Add “SNMPSERVER:=-YES-” (save)
Lion Test

1. Still in Terminal
2. Edit /etc/snmp/snmpd.conf
3. Find “rocommunity public default .1.3.6.1.2.1.1.4”
4. Remove the “1.3.6.1.3.1.1.3” bit (save)

6. Restart snmpd: Reboot machine -or-
   1. ps -xa | grep snmp
   2. Using the process id number
   3. kill <process id number>
   4. /usr/sbin/snmpd
7. Test again `snmpwalk -c public localhost`

vi /etc/snmp/snmpd.conf

“rocommunity public default .1.3.6.1.2.1.1.4”

“rocommunity public default .1”

ps -xa | grep snmp
snmpwalk -c public localhost

kill <insert PID>
/usr/sbin/snmpd
1. Open “Control Panel”
2. Select “Programs”
3. Select “Turn Windows features on and off”
4. Find / Select:
   1. “Simple Network Management Protocol”
5. OK
6. Exit Control Panel
1. Open “Services”  
   1. (services.msc)  
2. Find “SNMP Service”  
3. Right-Click “Properties”  
4. tab - “Traps”  
   1. Add community “public”  
   2. ‘Add to list’  
5. tab - “Security”  
6. Add Community “public”, ‘read only’  
7. Add hosts, the IP of your ‘Lion Server’
Windows Test

snmpwalk -c public <windows IP address>
Lithium

• Load Lion Server
• Install Lithium Core <insert location>
  • Un-check Lithium Console
• Open Lithium Core Admin
  • /Applications/
Lithium Reporting

- Website, Console, iPhone
Lithium Reporting

- Actions
- Action Scripts
- Action Filter
- Email setup
- Service Scripts
Lithium Graphing

• Demo (live at ANU)
• Local lab machines (pending data exists)
Process Monitoring

- Monitor an individual process
- Monitor string regular expression process
Service Monitoring

- Monitor specific services
  - SMTP
  - Web
  - AFP
  - DNS
  - Other (is port: X open)
- User Created
Module Builder

• Where SNMP MIB data does not currently exist already

• Able to extend current (pre-configured) Device Types

• Export for use in other applications *
Final

• Matt Tilney
  • e: matt.tilney@anu.edu.au
  • t: @lymbada (protected)
  • (messaging)
  • f: www.facebook.com/lymbada
  • g: matt.tilney@gmail.com
  • h: lymbada@hotmail.com