

HP IUM Fundamentals

Monitoring
Troubleshooting
Backup & Recovery



Monitoring IUM

- Log files are the main tool to monitor your IUM processes
 - Set in LaunchPad – Admin Tab or **siucontrol** command:
 - 0 = Critical
 - 1 = Accounting
 - 2 = Error
 - 3 = Warning
 - 4 = Informative (default setting)
 - 5 = Debug
 - 6 = Debug2
 - 7 = Debug 3
 - 8 = Debug 4
 - View in LaunchPad – Monitor Tab

Monitoring IUM

- How to Read the IUM Log Files:
 1. Read from the bottom - up
 2. Search for CRITICAL, WARNING and the description that follows. Ignore the java stack trace information
- Note: Log Level 4 is fine for standard operation, but increasing to level 6 is sometime required for de-bugging. If increasing the log level above 4 beware of amount of log file generated. It can fill up the file system very quickly.

Monitoring IUM

- Log Files – Collector Log Files
 - Stored in:
 - C:\Siu\var\log** – Windows
 - /var/opt/SIU/log** – UX
 - Naming Convention:
 - <collector_name>.log**
 - <collector_name>.logOLD** – rolled-over Logs
 - LOGLINELIMIT – controls log size before roll-over
 - Set to 0 = no rollover
 - Default is 5120 lines

Monitoring IUM

- Other important Log Files
 - LaunchPad Log Files
 - LaunchPad_Day_MMM_DD_YYYY_HH_mm_SS.log
 - Config Server Log Files
 - Admin Agent Log Files
 - Instruction Log Files
 - Unix daemos Log Files
 - /etc/rc.log for HP-UX

Monitoring IUM

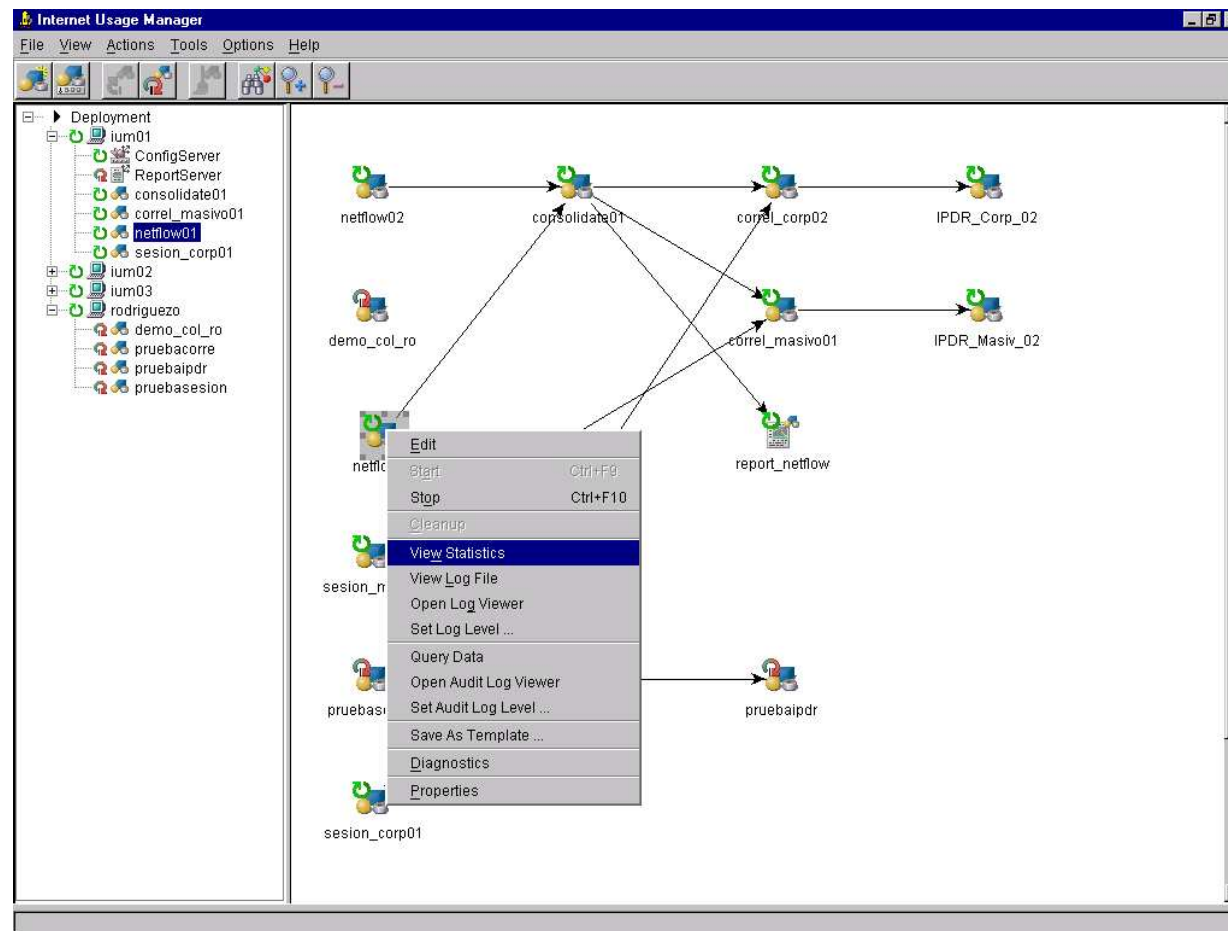
- IUM Main Processes
 - Admin Agent Service → java process (SIU_AdminAgent)
 - Solid Database → Database process (SIU_SOLID)
- To check process
 - Task Manager
 - UNIX → `ps -efx | grep <filter>`

Monitoring IUM

- Launchpad can be used to monitor IUM processes
 - View Statistics
 - View Log
 - QueryData

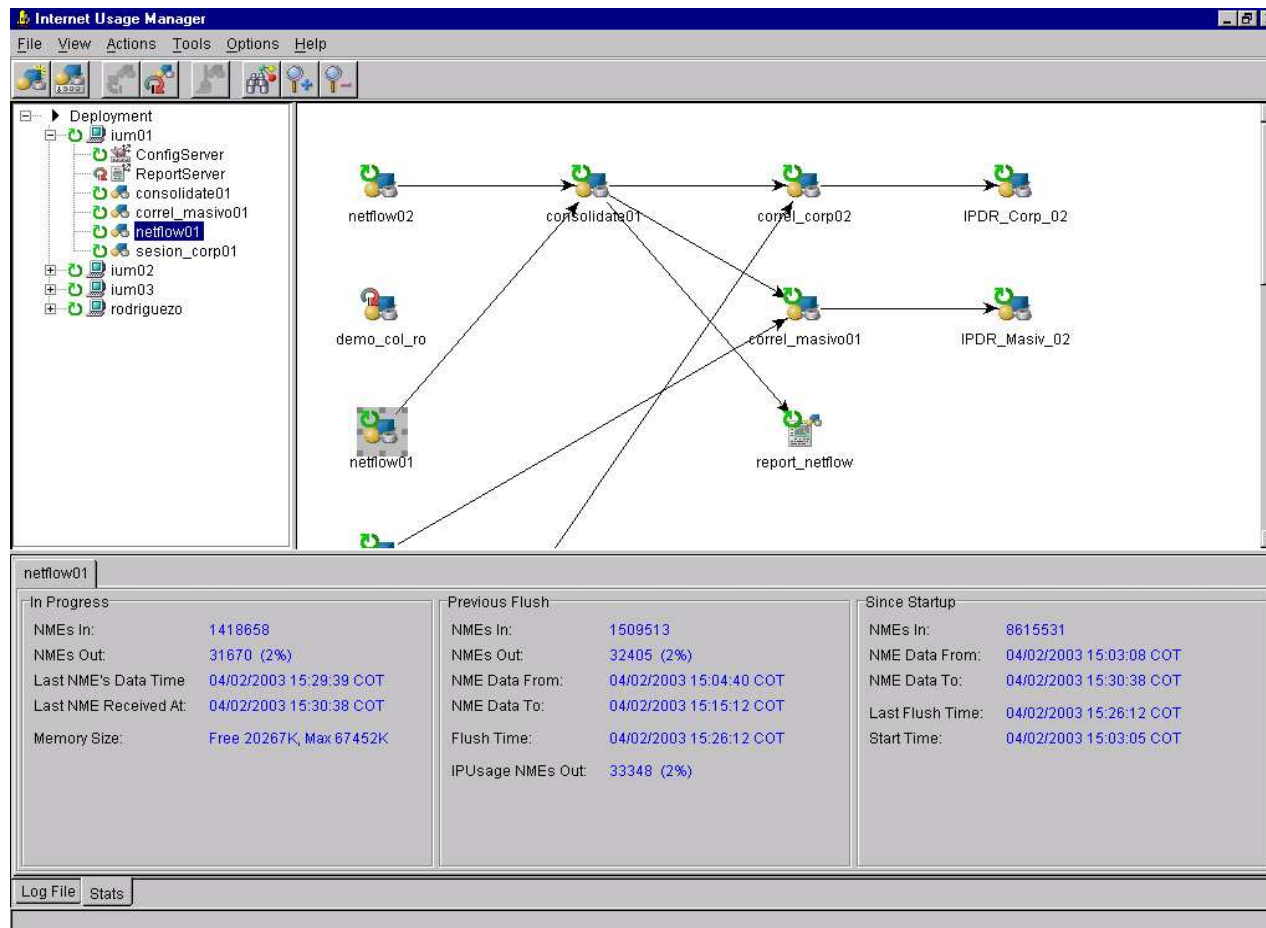
Monitoring IUM

- View Statistics



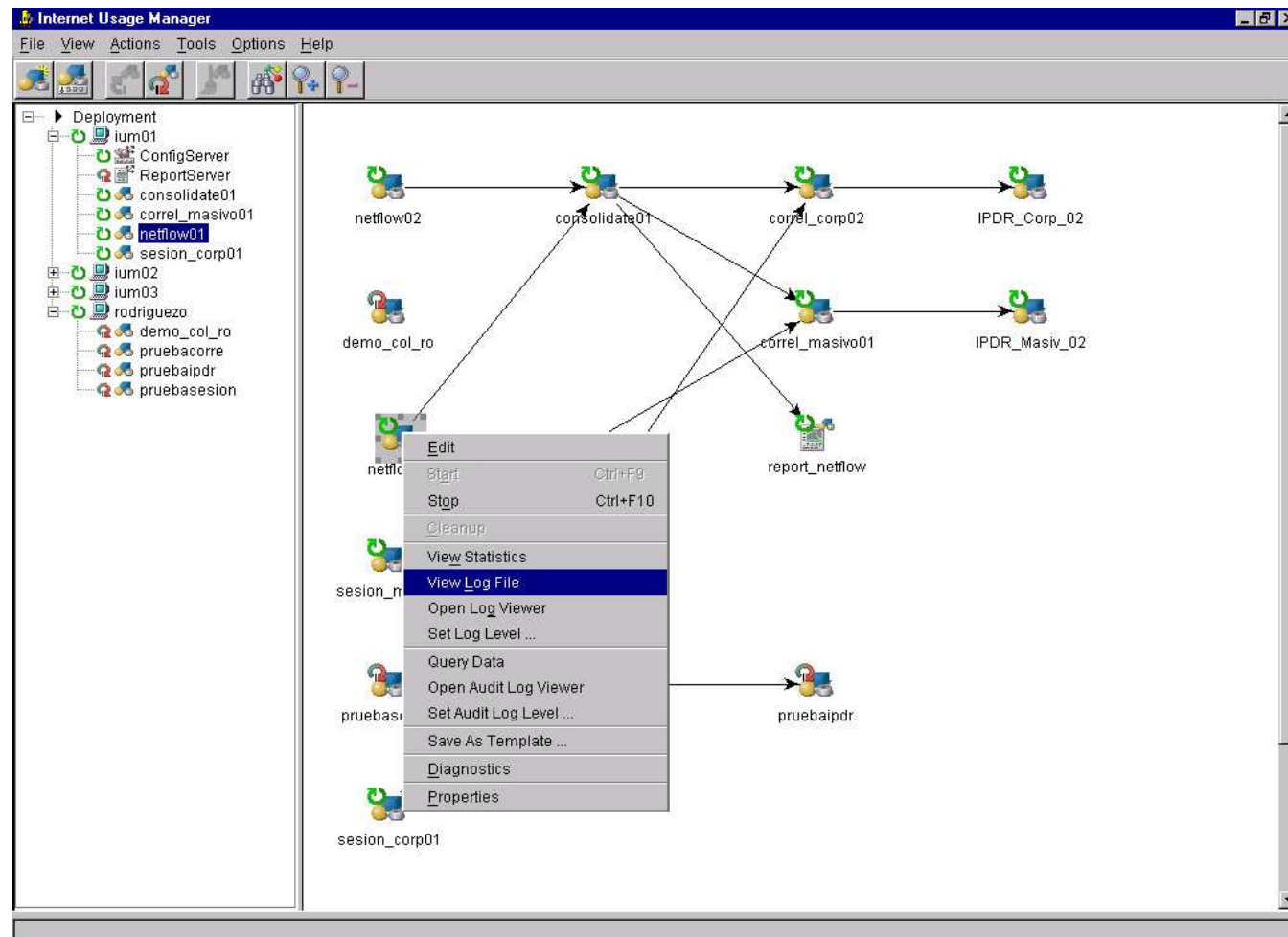
Monitoring IUM

- View Statistics



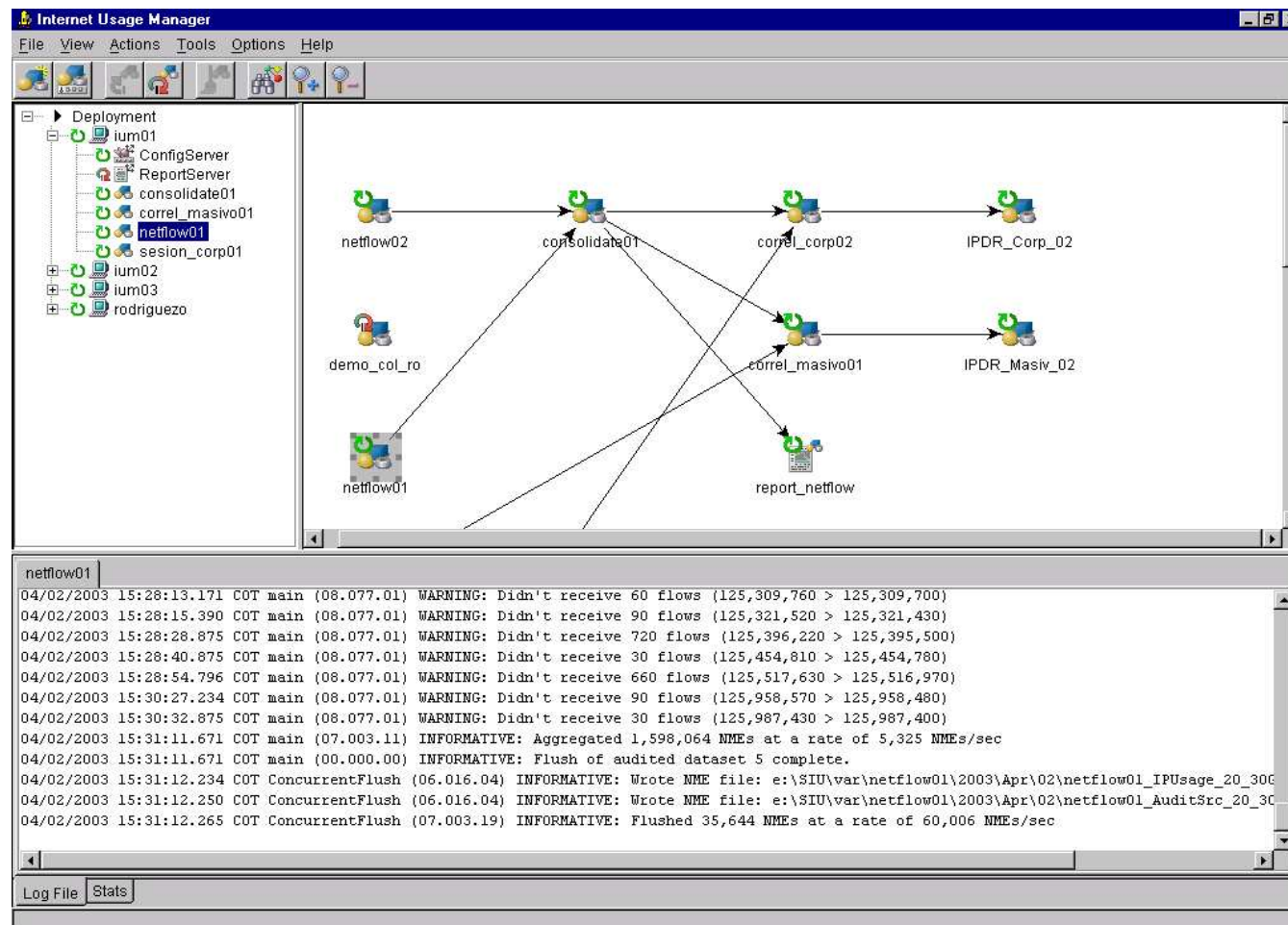
Monitoring IUM

- View Log



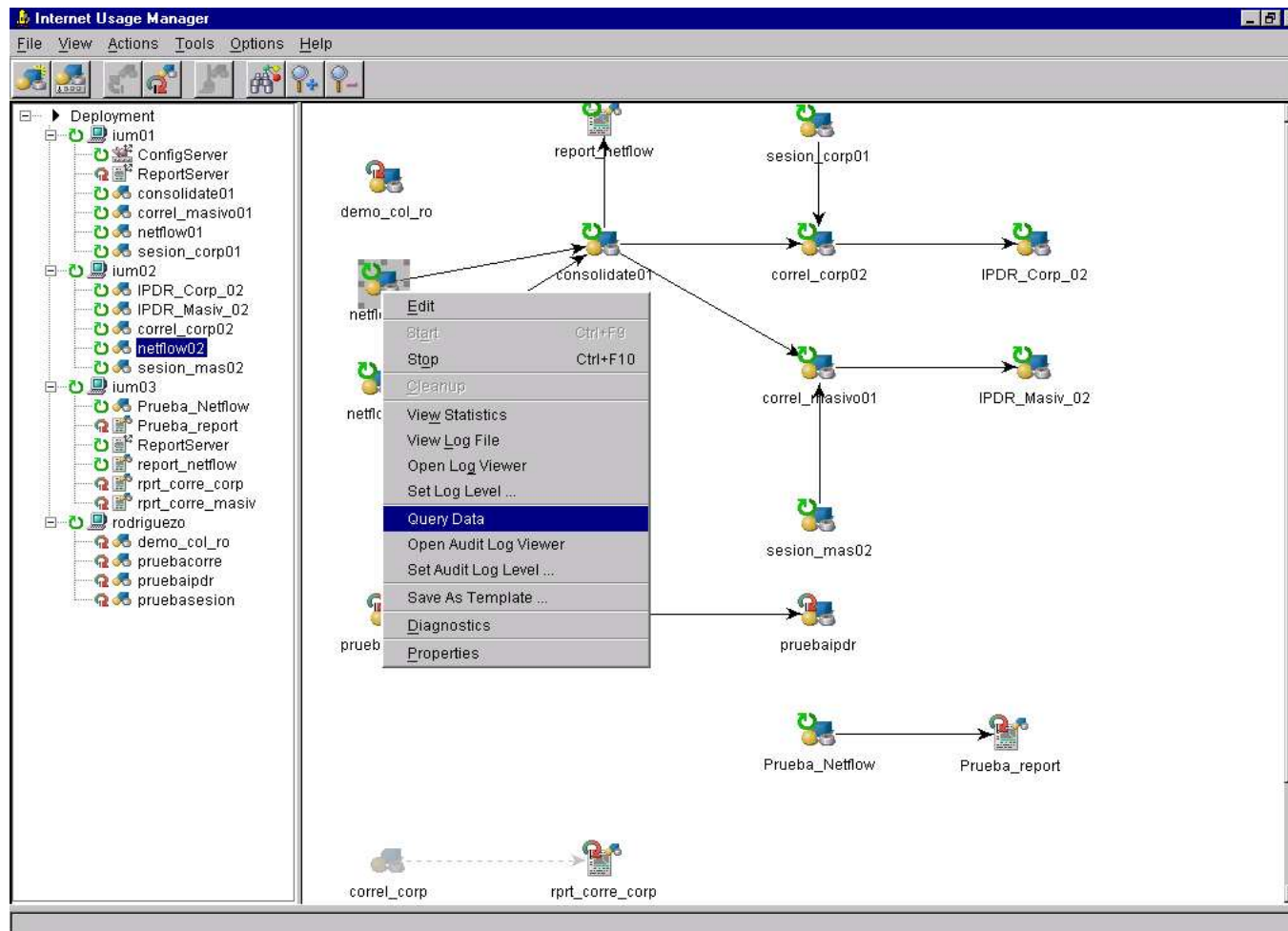
Monitoring IUM

- View Log



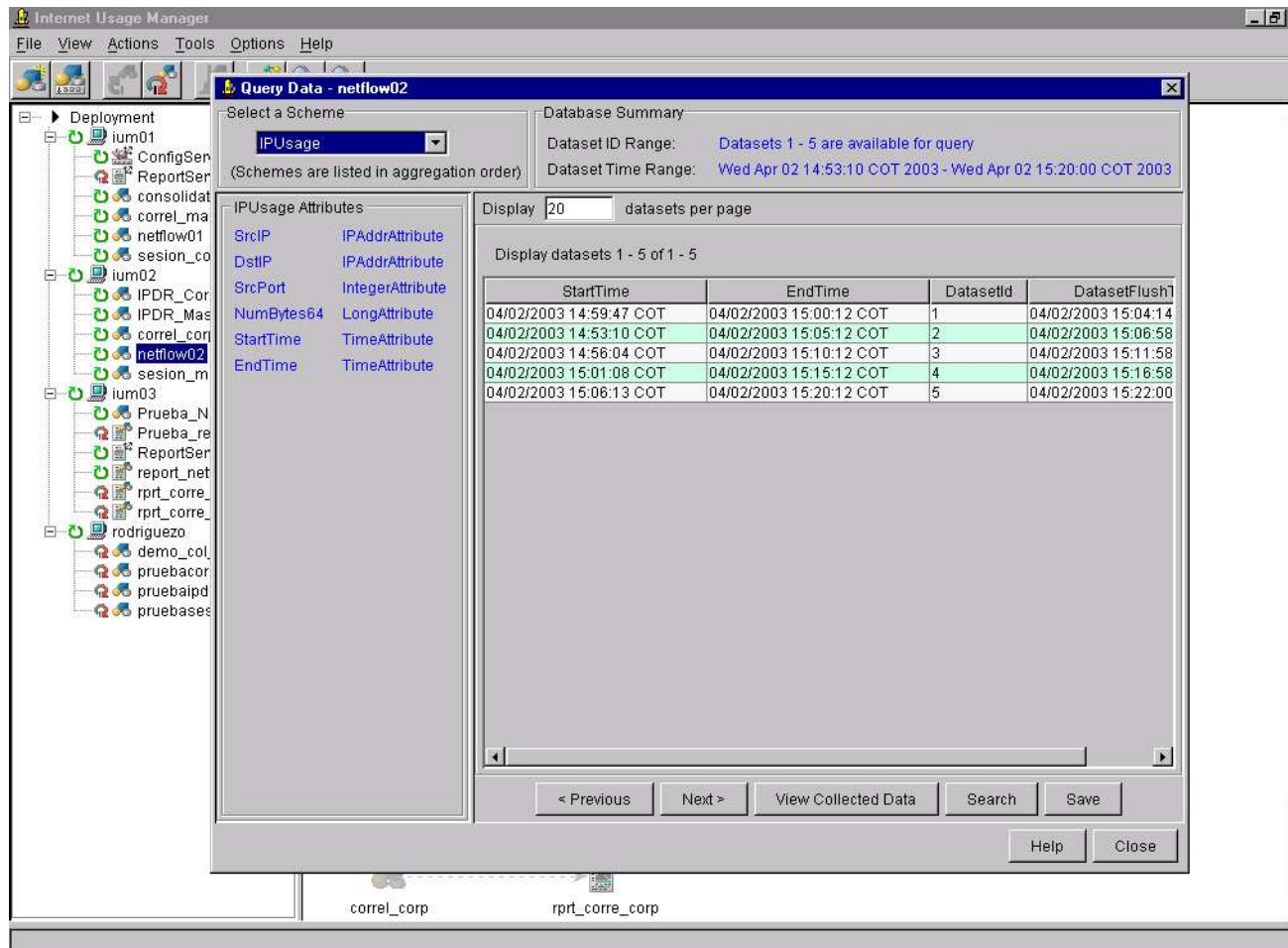
Monitoring IUM

- Query Data



Monitoring IUM

- Query Data



Monitoring IUM

- Query Data

Collected Data (NMEs) - netflow01 | IPUsage | Dataset 548

Dataset Summary

Dataset: 548 Scheme: IPUsage

Created at: 04/04/2003 12:41:14 COT

Data Time Range: 04/04/2003 12:28:52 COT - 04/04/2003 12:40:12 COT

Records (NMEs): 24622

Collected Data

24622 matches found

SrcIP	DstIP	SrcPort	NumBytes64	StartTime	EndTime
64.237.39.79	65.167.90.206	80	4222	04/04/2003 12:37:57 COT	04/04/2003 12:39:23 COT
64.237.39.76	65.167.56.212	80	300	04/04/2003 12:31:08 COT	04/04/2003 12:31:53 COT
64.237.39.76	65.167.81.101	80	5909	04/04/2003 12:35:03 COT	04/04/2003 12:36:50 COT
148.243.232.98	65.167.84.132	80	12900	04/04/2003 12:31:02 COT	04/04/2003 12:31:07 COT
64.237.39.74	65.167.56.212	80	40	04/04/2003 12:30:58 COT	04/04/2003 12:30:58 COT
64.237.39.73	65.167.82.85	80	4534	04/04/2003 12:35:20 COT	04/04/2003 12:39:41 COT
64.237.39.73	65.167.81.101	80	44365	04/04/2003 12:34:48 COT	04/04/2003 12:36:25 COT
130.88.203.74	65.167.82.252	80	86692	04/04/2003 12:32:30 COT	04/04/2003 12:32:58 COT
67.68.48.159	65.167.90.71	80	4196	04/04/2003 12:36:27 COT	04/04/2003 12:37:21 COT
66.218.95.202	65.167.83.150	80	19356	04/04/2003 12:35:16 COT	04/04/2003 12:36:10 COT
146.201.132.129	65.167.63.245	1094	133	04/04/2003 12:31:07 COT	04/04/2003 12:31:07 COT
66.218.95.199	65.167.80.246	80	82591	04/04/2003 12:37:25 COT	04/04/2003 12:39:47 COT
66.218.95.199	65.167.60.4	80	4732	04/04/2003 12:32:19 COT	04/04/2003 12:32:21 COT
66.218.95.199	65.167.88.133	80	17520	04/04/2003 12:33:57 COT	04/04/2003 12:39:28 COT
66.218.95.199	65.167.91.243	80	9956	04/04/2003 12:31:35 COT	04/04/2003 12:31:38 COT
66.218.95.199	65.167.86.71	80	62967	04/04/2003 12:34:13 COT	04/04/2003 12:35:45 COT
66.218.95.198	200.69.104.60	80	38245	04/04/2003 12:35:17 COT	04/04/2003 12:35:47 COT
66.218.95.198	65.167.56.60	80	46603	04/04/2003 12:36:32 COT	04/04/2003 12:39:25 COT
66.218.95.198	65.167.84.159	80	10246	04/04/2003 12:38:59 COT	04/04/2003 12:39:11 COT
66.218.95.198	65.167.88.95	80	13063	04/04/2003 12:39:33 COT	04/04/2003 12:39:40 COT
217.224.196.71	200.69.127.157	4236	120	04/04/2003 12:35:01 COT	04/04/2003 12:35:01 COT
66.218.95.197	65.167.57.37	80	193001	04/04/2003 12:16:00 COT	04/04/2003 12:37:33 COT
66.218.95.197	65.167.84.139	80	36177	04/04/2003 12:37:53 COT	04/04/2003 12:38:47 COT
66.218.95.196	65.167.90.87	80	1320987	04/04/2003 12:32:02 COT	04/04/2003 12:36:23 COT
64.237.39.62	65.167.82.85	80	240426	04/04/2003 12:36:25 COT	04/04/2003 12:39:21 COT
66.218.95.195	65.167.63.207	80	199986	04/04/2003 12:35:56 COT	04/04/2003 12:39:47 COT
66.218.95.195	65.167.82.105	80	80803	04/04/2003 12:35:06 COT	04/04/2003 12:39:18 COT
64.237.39.61	65.167.56.212	80	40	04/04/2003 12:34:50 COT	04/04/2003 12:34:50 COT
64.237.39.61	65.167.90.206	80	6426	04/04/2003 12:39:10 COT	04/04/2003 12:39:30 COT
66.218.95.194	65.167.57.84	80	45291	04/04/2003 12:37:44 COT	04/04/2003 12:38:07 COT
66.218.95.194	65.167.81.75	80	2960	04/04/2003 12:37:04 COT	04/04/2003 12:39:10 COT

< Previous Next > Save Close

Monitoring IUM

- Available Diagnostic Tools
 - Launchpad
 - siucontrol command
 - siuquery command
 - siucleanup command
 - siudiag command
 - loadconfig
 - saveconfig
 - jcscontrol
 - jcscleanup

Troubleshooting IUM

- Checklist
 1. Check which components are running
 - a. Check ConfigServer is running
 - Launchpad
 - siucontrol "showStatus"
 - jcscontrol for FileService
 - b. Check AdminAgent and Solid Database services
 2. Check Completeness and Correctness of your deployment
 - a. Check collectores, templates, NMESchema...
 3. Check IOR files

Troubleshooting IUM

- Checklist

- 4. Check SIU.ini file

- Installed in <CFGROOT>
 - Controls behaviour of all IUM components
 - Can be customized (e.g. Log Level)
 - Command line options override property values in the file
 - Test that this file has valid property values and is readable by all components

- 5. Check SIUJava.ini

- Installed at <CFGROOT>
 - It should not be edited manually, but can be customized
 - Test that this file has valid property values and is readable by all components

Troubleshooting IUM

- Typical Issues
- Loss of Network Connectivity or ConfigServer dies
 - If collector is up, it will continue to run
 - If trying to startup, will try to access, but then use locally saved config file
- No more space on file system
 - collector will stop; exceptions written to log
- IP Address for server changes
 - need to get new IUM License file
 - need to remove old **CfgServer.ior** file and restart the config server
- License Key or Security Certificate expires

Tunnig IUM

- JVM Max Heap Size: Amount of memory per java process
 - Default is 64Mb; can't be more than physical memory
 - Changes affect all IUM apps
 - More likely to occur on collectors with high aggregation rate
 - Size should be based on:
 - NME Size (# of types of attributes)
 - number of aggregated NMEs prior to flush
 - concurrent flush policy (need room for 2 x the aggregated NMEs)
 - TrafficTime set in the correlator

Tunnig IUM

- JVM Max Heap Size – Changing the value for collectors
 1. Run LaunchPad. Select the host machine from the left-pane.
 2. Select the Configure Tab
 3. Select “Edit Host Defaults”
 4. Select the Classpath “JVMOPTS”
 5. Click “Settings”
 6. Modify the values of the memory settings
 7. Stop and restart all collectors that you want to use the new settings

Tunnig IUM

- IUM Host Heap Memory: Amount of memory per Solid process
 - SOLID requires 68MB per process by default
 - Some collectors may require less
 - HP-UX requires kernel param. Change (maxdsiz)
 - Windows platform does not require registry change
 - To Modify IUM Host Heap Size:
 1. Stop the SOLID Database
 2. Modify the Solid.ini file and change the CacheSize Parameter
 3. Restart Solid Service and collectors

Backup & Recover with IUM

- Configuration Store (dynamic)
- The Configuration server holds the configurations of all collectors and should be periodically backed up
- Configuration Store Backup
 - **saveconfig** utility creates a backup:
C:\SIU> bin\saveconfig -p / -f
C:\SIU\var\backups\01Jul2001FullBackup.config
- Note: Collectors do not need to be stopped during the backup of the Configuration Store

Backup & Recover with IUM

- Configuration Store Restore: **loadconfig** utility restores from backup
 - Start the Config Server
 - Stop all collectors
 - Save current config server IOR
 - `saveconfig -p /ConfigServer -f C:\SIU\var\backups\01Jul2001iors.config`
 - Restore configuration from backup
 - `loadconfig -f C:\SIU\var\backups\01Jul2001FullBackup.config`
 - Restore config IOR info
 - `loadconfig -f C:\SIU\var\backups\01Jul2001iors.config`
 - Restore IUM license (if IUM changed since backup)
 - Restart all collectors

Backup & Recover with IUM

- Datastore (dynamic) – SOLID Database backup
- By default, backups occur at 11am and 1am daily
- Solid configuration file:
 - NT: **<BINROOT>/solid/bin/solid.ini**
 - UX: **<VARROOT>/Solid/db/solid.ini**
- Use separate physical disks for database, backup, and logfiles
(By default, all directories are relative to the **solid.ini** file)
- To change SOLID configuration:
 1. Shutdown collectors
 2. Shutdown SOLID
 3. Edit **solid.ini**
 4. Restart SOLID server and collectors

Backup & Recover with IUM

- Datastore (dynamic) – SOLID Database recovery
- Two options
 1. Recover to current state of failure
 - copy the backup db files to the database directory
 - copy logfiles from backup dir to the log dir (Do NOT overwrite the existing logfiles)
 - start the SOLID server
 - recovery is automatic
 2. Return to state at backup
 - delete logfiles from the log dir
 - copy the db files to the database dir
 - start the SOLID server

Backup & Recover with IUM

- Datastore (dynamic) – FileJDCB or IDRJDBCDatastore:
- NMEs are stored in Binary or ASCII Files
- Stop collecting (pause collectors)
- Backup SOLID and file system
- Start Collecting