



Architecture

See ZAM manuals in ZEN Suite
ZAM servers

ZAM Manager

Process Control Panel (PCP)
ZAM DB & File Store
ZAM DB
#Prereq.: MDAC (CD: \Desktop\ExtProd\)
#Default DB ZENworks,
ZAM File Store

ZAM Web Console

Collection Domain
ZAM Task & Collection Server
ZAM Task Server

ZAM Collection Server

ZAM Collection Client
ZAM Collector
ZAM Collection Editor
.wif file (ws inventory file)
.waf file (ws auxiliary file)
Auxiliary data

Plan the goals

- 1) Discover network attached devices, such as printers, routers, switches?
- 2) SNMP community strings?
- 3) Monitor client roll-out
- 4) Hardware inventory?
- 5) Software inventory?
- 6) Usage tracking?
- 7) Compliance reporting?
- 8) File gathering for help desk?
- 9) How current should data be?
- 10) History data?
- 11) Integrate with AD?
- 12) Integrate with eDirectory?
- 13) Send notifications?
- 14) Network links & speed?
- 15) Nr of WS per site?
- 16) Operational hours?
- 17) Existing DB and expertise?
- 18) Standalone Deployment?
- 19) Location/credentials File Store?
- 20) Location Web Console(s)/Manager(s)/Task&Collection Servers?
- 21) Universal credentials for hosts?
`net user username password /add /expires:never /passwordchg:no`
`net localgroup Administrators username /add`
- 22) ZAM user list/roles?

#Definitions (also see Appendix of manual)
#<http://novell.com/documentation>
#Win2K/Win2k3 srv (> =512MB)
#Inst: `File Store\Setup\Modules\Setup.exe`
#Customize, man. install.; Query/edit DB
#Bottom window in ZAM Manager
#Only one per enterprise!
#MSDE(incl.),SQL2K,Oracle8i/9i case sens!
#Admin user `NCSystem/tally`
#Windows share or FTP for all ZAM srvs
#RW rights req. for Man., Task & Coll.Srv
#For automated srv updates
#JRE/Tomcat/ODBC reports&compliance
#Dedicated & near DB, if > = 6,10 users
#run reports simultaneously (Max. 1)
#Report/add/edit/remove devices
#Major WAN segment or location
#One per 'domain', major WAN segment.
#Public or domain server;
#Near DB for scheduled reports & purges
#Provides instructions to collection clients,
#and receives collection files (.wif).
#Max. 10,000 devices per srv (5,000)
#Receives instructions from Coll. Srv
#Scan software
#Fill in user defined fields (not unix/linux)
#User, component & prod. info file for DB
#For .wif, not for DB, viewable by Man. &
#In File Store\WAFdir; e.g. IRQ, I/D, DMA,
#collected config. files
#Check list

User roles

Enterprise/Domain Administrator
Enterprise/Domain Assistant
Enterprise/Domain Analyst
Manager, Administration menu, ZAM Users...

#Six roles, three per enterprise/domain:
#Manage all. `EntAdmin/enterprise`
#Change data, such as Location
#Read only access (help desk/auditor)

Port usage

21
25
80/443
139/445
389
1433
1521
7460
7461
7462
7465
8080
SNMP, ICMP, WMI ports

#Is customizable
#FTP File Store(if in use)
#Task server email notifications
#Alternate Web Console ports
#Win File Store (for Coll., Task, Man. Srv)
#Queries from Task Srv to AD
#DB on MS SQL
#DB on Oracle
#WS to Task Srv to send .wif files
#WS ZAM Agent listener for immed. scan
#ZAM Manager listener
#ZAM Task Server listener
#ZAM Web Console
#For Task Server usage

Post-Installation Checks

Check `Collection Srv (CS)` Tab
Check `Task Srv (TS)` Tab
`<MouseButton> CS & TS`
`<MB2> CS`
Or check Windows, Services, ZENworks... (3)
Check Web Console
Change password
Install updates

#From `Process Control Panel` in `Manager`:
#Server is listed (<F5>)
#Server is listed (<F5>)
#View Errors...
#View Detailed Status... (Coll. begin/end)
#<http://srv.8080/rtrlet/rtr>
#Tools menu, `Change Password...`
#Administration menu, `Product Live Upd...`

Network Discovery

#For scanning all devices: ws, switches - ports, firmware, printers, etc.
#For automated client roll-out #Windows only
#Manager configures task (EntAdmins only), TS starts netdisc.dll
#Uses fingerprints (File Store\KBdir\Misc\Win32\ndrec.tkb text file)
#loader.dll adds/updates record(s) in DB (for tables see user manual)
#DB tables `NC__NetworkDeviceBase` & `NC__NetworkDeviceExtended`, `NC...`

Implement discovery

#Optionally scheduled on regular basis
`Manager`, `Public Network Discovery Tasks, Default ...` or `New (<MB2>I/site)`,
`Network Discovery` menu, `Options` (e.g. `Community Name List`)
#Check: `PCP Tasks <F5>` & `History <F5>`

Add undiscovered devices and/or Assign company specific locations

#(e.g. mass Loc. assignments)
`Web C`, `Network Discovery`, `Reports`, `Find Devices`, select (no sub* for mass editing), `Add/Delete/Edit/Excel/CSV/PDF`, close extra window
#Required fields (4): `Network Device Type`, `Location`, `Subnet`, `IP address`

Reports (e.g. last discovery date: zoom in & sort on column):

`Web C`, `Network Discovery`, `Reports`, `Client Status` with(out) agent, not Linux

`Manager` Reports can export (via screen) to:

#pdf/char-sv/csv/rpt/dif/xls/html/lotus/odbc/paginated text/
#record style/report definition/tab separated/text/word



Configure Inventory Collection #From **Manager**
Enterprise Options #Tools menu, e.g. historical data & updates
Create domains #Management tab, <MB2> on Enterprise
Collection Servers #Management tab, <Double Click> on srv
#Log files: #C:\Program...Nlogs\...srv...-date.log
User Defined Fields #Administration menu, UDFs...
#e.g. Fill in via Query or Collection Editor
#manual or registry value retrieval
#Stop Inventory Process #Control menu
Collection Schedules #Linked to Collection Option Sets
Collection Option Sets #UNIX: for scheduling only
#New Workstation scan & Scan Now options should be default or separate,
#because most Option Sets to use can only be determined after first scan

Distribute ZAM Agent #Win, Mac, (NetWare), UNIX/Linux
See installation manual #AIX, HP-UX, Solaris 32/64, Linux 32bits
UNIX/Linux install #Software on CD \UNIX\Install\<OSdir>\
tar -zxvf tsclient-7.0* #1)Unpack correct Collection Client
cp mcsysinfo* same-dir #2)Copy Collector to Collection Client dir.
./tsclient-install.sh -s collsrv #3)Install tsclient, -s or use options file
Windows install #cdclient.exe:
Manual install #File Store\Setup\Client\Setup.exe
Remote Client install #WS requires File Sharing & RPC enabled:
Manager, Tools menu, Remote Client Install, lists, drag&drop, <Play> button
Login script install, e.g.: #Requires local administrators or SANUR
#utility + known administrator password
#\srv\vol\zam\setup.exe -s # -s uses setup.iss for unattended install
ZDM NAL Application Object #Distr. Options: Appl.File copy to %TEMP%
#if C:\Prog...cdclient.exe does not exist
#%TEMP%\setup.exe -s
#run as Secure System User

ZSM TED #Post-Distribution Script: setup.exe -s
SYSPREP #setup.exe -s in cmdlines.txt,
or unregister if already installed in the image: delete reg key value:
HKLM\Software\Tally Systems\TSCensus\CollectionClient\WorkstationDID
#Check agent installation #Manager, PCP, Collection Servers tab,
#<MB2> CS, View Detailed Status...

Scan on demand #Scheduled as immediate (is not immed.)
Web C, Reports, System List, find any, checkbox, Scan Selected WS (Bottom)
Manager, Query (any), select (left column), <MB2> Scan WS, or Tools menu
#Beware of Collection Option Set in use for Scan Now

Portable Collector #To/from usb/... for disconnected clients
Manager, Tools menu, Create/Load Portable Coll. (.wif/(.waf) file), collect.bat
#Replaces former DB records! #Inventory Type = Portable

Inventory Reporting/Editing #No edit while scanning (=checked out!)
ZAM Manager, Query #For Query/Edit/Replace multiple records
#e.g. Machine Name!=Lost and Found
#Edit via Query, Display Results Window,
#Left column, <MB2>
#Field edits survive scans, except Portable

Component #Add/move/edit/delete
FNI (Files Not Identified) #Create Local Products, exclude files
Product #Delete (local only), re-classify
User #Add/edit/delete workstation users
Workstation #Edit/delete/re-assign/recover/check-in

ZAM Web Console, Reports #For custom/canned reports, e.g.:
Systems #Per user, mfg, model, duplicates
Software Applications #Recognized applications
Application Usage #For Windows only
Software Files #Unrecognized files
Hardware Components #BIOS, Proc., Mem., Disk Space
Upgrade Readiness #Application, OS qualifiers
License Tracking #Manually entered licensing
Admin #Collection options, scans
Custom Reports #To screen, XLS, DB, email, scheduled
#SMTP data #Options menu,
#Manage E-mail Server & Addresses

Maintenance #Regular job examples
Apply Updates #Manager, Administration, Live Update...
#Inventory Process should be down
Query ZAM client status #Web C, Reports, ...Admin, Last Scan His...
#Web C, Netw.Disc., Reports, Client Status
(requires regular netw.discovery) #Web C, Netw.Disc., Dev. List, Type: Other
Resolve rogue objects #Web C, Reports, Systems, Duplicate Sys...
#Web C, Reports, HW Comp., Duplicate s/n
#Web C, CusRep., Systems, ..not
#e.g. Inventory Type=Lost and Found
#and use s/n, asset tag in history reports
#Client is Connected = No, AND
#Disconnection Time < date
#Backup, purge, shrink, ...

Manager, Query
DB tasks #Collection Option Set, Collector tab
#Manager, Query, New, FNI ...
#File Scan Category = Other, AND
#Total Runtime (sec) > 0
#<MB2> on results #Exclude FNI/Create Local Product
#Also from Web C, Usage reports

Software ID Wizard, on the web, for uploading new fingerprints to Novell

Software Usage&Compliance #Usage reports not for Unix/Linux, e.g.:
Usage #Web C, Reports, Application Usage, ...
#Web C, Reports, Srv Software Usage, ...
Enter purchase records #Import or manual (only entadmins)
#Catalog record, plus Purchase records
#Web C, SW., Purch. Rec., Imports, or
#Add, fill in, Choose Product, Add New ...
Exclude Discovered Prod. #Web C, SW., Disc.Prod., Exclude Product
Reconcile Discov. Prod.->Lic.rec #Web C, SW., Lic.Rec., Auto-reconcile, ...,
#Select (all), Create Licenses ->

Reconcile Catalog Prod.->Lic.rec #Create matches (Discov. to Catal. Prod.)
#manufacturer, name, version must match
Allocations #Lic. compliance on demographic basis
#by cost center, dept, or site (init once!)
Software standards #Allows assigning a cat. to applications
#Web C, SW., Disc.Prod., Man. SW. Stand.

AD integration #Scheduled retrieval, e.g. dept, loc., phone
Manager, Public AD Import Tasks, <MB2>, New ...
#AD Connection info, Schedule, Mapping: unique key + additional attributes
eDirectory integration via AD #Via Novell IDM