Under the Hood: Using IT Client Manager Enhanced Network Connectivity for Real World Management

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Abstract

Under the Hood: Using IT Client Manager Enhanced Network Connectivity for Real World Management

CA IT Client Manager r12 includes the first release of a new management communications technology known as Extended Network Connectivity (ENC). ENC provides a secure channel for CA IT Client Management communications that can traverse both personal and corporate firewalls, NAT routers and proxies with no requirement for reconfiguration of those intermediate network components. This facilitates management across disciplined enterprises (such as VPNs), as well as across the public internet. Join us for a live demonstration of ENC in action including setup, configuration and auditing.
Agenda

> Overview of ENC
> Overview of Demo scenario
> Demo
> Summary
> Q&A
What is ENC?

> Extended Network Connectivity
> Enables management over the internet or isolated internal networks
> Allows secure traversal of firewalls – personal/corporate
> Also handles NAT/PAT routers, proxies and SOCKS
> Currently a Windows only solution
> ENC is optional – it doesn’t have to be installed or enabled
Quite Simply...
Can Be Distributed

- ENC Gateway Server
- ENC Gateway Manager
- ENC Gateway Routers
- Applications + ENC Clients
- Applications + ENC Clients
Demo Scenario

Corporate HQ

RC Viewer
- Laptop
  “Parda06-loan”
  150.150.150.5

Internet

DMZ

ENC Gateway
- Laptop
  “Parda08-loan2”
  150.150.150.4

Remote Site

150.150.150.1
WAN Side

NAT router/firewall
- Netgear FWG114P

LAN Side(wireless)
- “LOUNGENET”
  192.169.0.1

150.150.150.1
WAN Side

Netgear RP114

192.169.0.3

Netbook
- “EDDY”

150.150.150.5

Laptop
- “Parda06-loan”

Netgear RP114

192.169.0.1

WAN Side

9 September 25, 2009   ENC for real world management   Copyright © 2009 CA
Making a Connection:

Machine A wants to connect to Machine B – first, CA ITCM tries a direct connection...which fails
Making a Connection:
Machine A wants to connect to Machine B – tries ENC
Making a Connection:
Machine A wants to connect to Machine B – connects via Router 1

Machine A establishes a connection to Machine B via Router 1
All ENC Connections are Secured
Security Overview

> All inter-node connections protected using TLS (SSL 3.1)
  - Authentication – uses X.509v3 certificates
  - Mutual – client and server authenticate each other
  - Encryption
  - Integrity

> Certificates stored in Microsoft Certificate Store

> Suggest use of PKI, but CLI cert tools supplied

> ENC Gateway not installed by default

> If installed not enabled by default (Gateway and Client)

> If Enabled config locked down by default i.e. no access
Authorisation Configuration Views

![ENC Authorization Rules](image)

**ENC Authorization Rules**

<table>
<thead>
<tr>
<th>Realms</th>
<th>Name Mapping</th>
<th>Time Ranges</th>
<th>Access Control</th>
<th>IP Addresses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
<td>The value of parameter 'ENC Authorization Access Control List' is set by this policy.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**State:** Enabled  
**Events:**
- Authenticated Connection
- Server Registration
- Router Registration
- Manager Router Registration
- User Router Registration

**Name:** AC-infrastructure-infrastructure

**Time Range:** all-days

**Access Type:** allow

**Security Principal**

**Match Type:** Realm  
**Realm:** [infrastructure]

**URI:**

**Secured Object**

**Match Type:** Realm  
**Realm:** [infrastructure]

**URI:**

**Description:**
List of Time based Access Control Entries (TACEs).
Restrictions

> Wake-on-LAN (WOL) uses UDP

> Instant Diagnostics
  - Some rely on components provided with the operating system e.g. FTP.

> Direct MDB connections
  - DSM Reporter
  - Domain Manager to Domain MDB
  - Enterprise Manager to Enterprise MDB
  - Domain Engine Replication to Enterprise MDB
  - Web Console
  - Contents Import/Export Utility
Q&A