CA IAMCS Round-Robin Load-Balancing for Endpoints

Example: Active Directory

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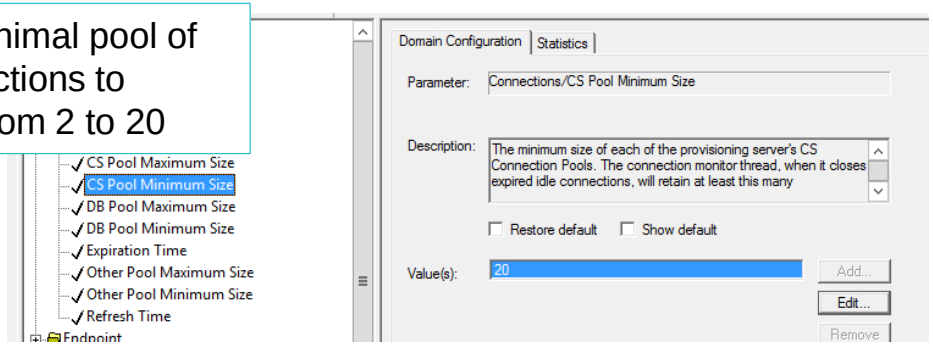
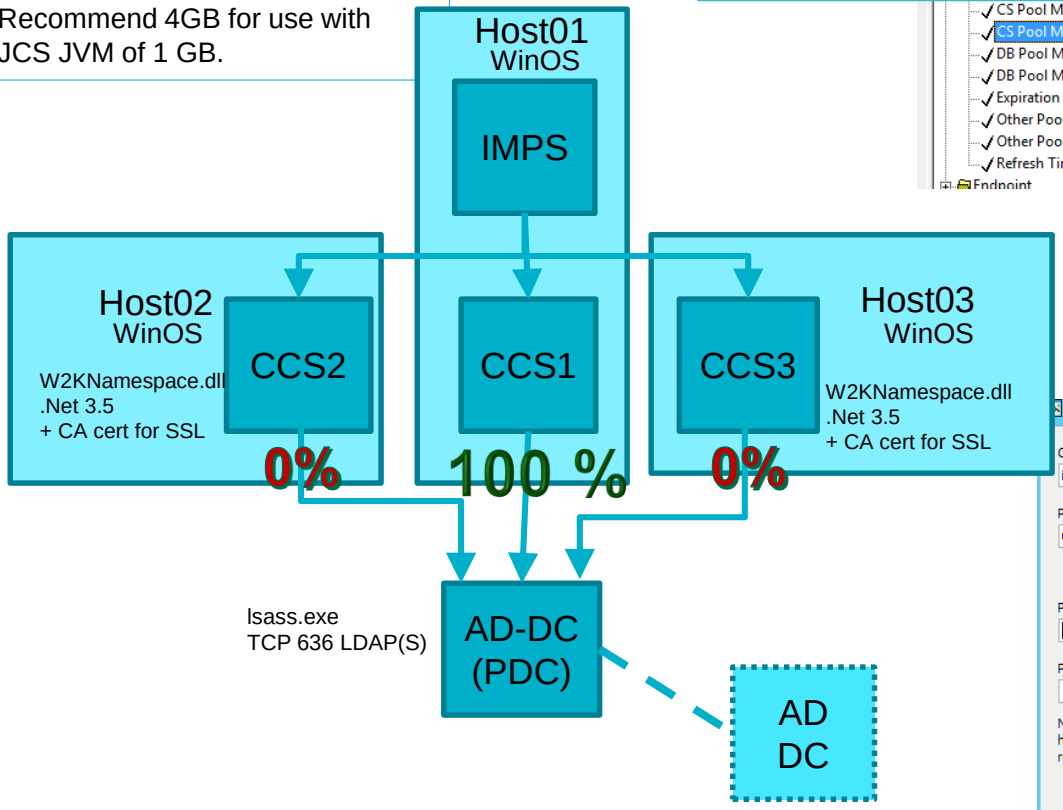
Increase IMPS to Endpoint Performance with "legacy" Failover CCS Service (CA IM r12.0/5 framework)

Increase vCPU from 1 to 2

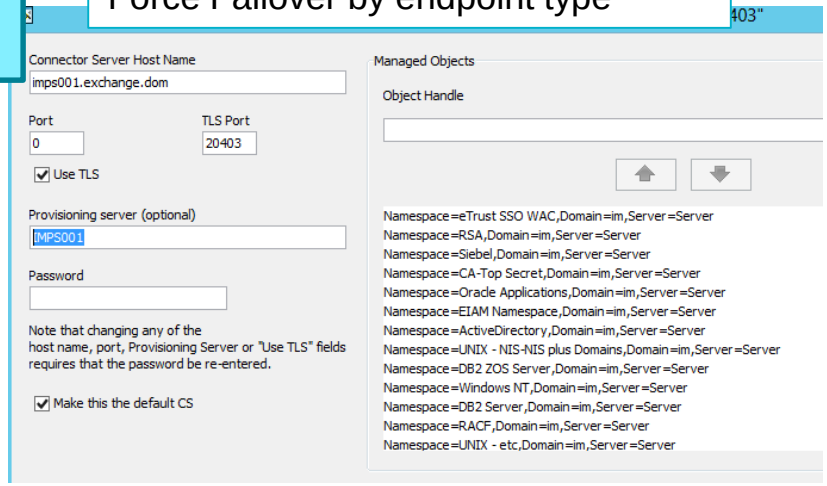
RAM Size: min 2GB
Recommend 4GB for use with JCS JVM of 1 GB.

Increase minimal pool of CCS connections to endpoints from 2 to 20





Use ConnectorXpress to update CCS
Default IMPS Server = **null**
Force Failover by endpoint type



Rate of Updates = **15-17 /sec**

No LB feature in CA IM r12.0/5 framework for CCS; only Failover

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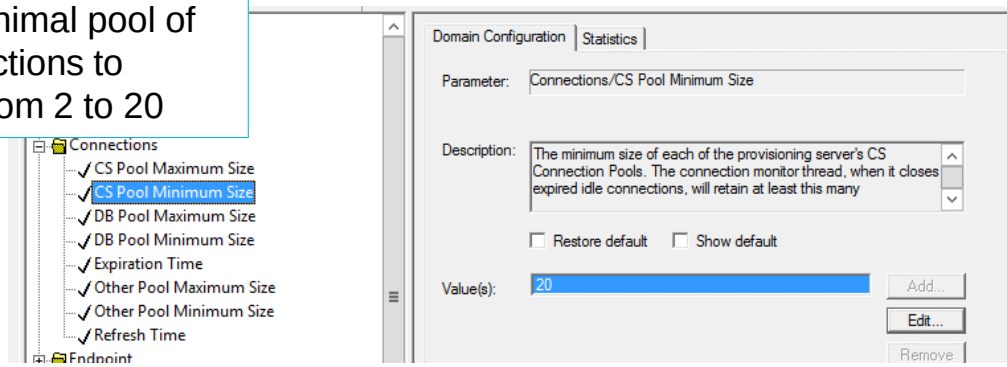
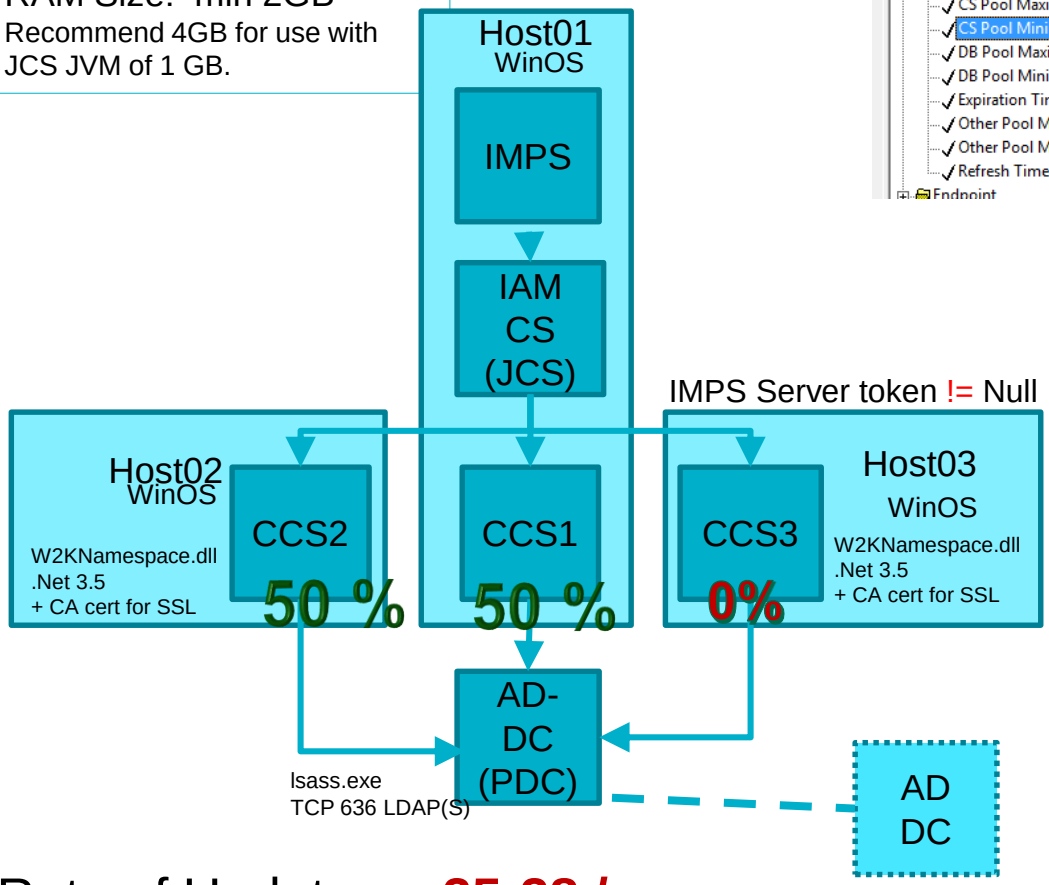
Increase IMPS to Endpoint Performance with IAM CS (JCS) as a router (CA IM r12.6 framework)

Increase vCPU from 1 to 2

RAM Size: min 2GB
Recommend 4GB for use with JCS JVM of 1 GB.

Increase minimal pool of CCS connections to endpoints from 2 to 20





Use ConnectorXpress to update CCS
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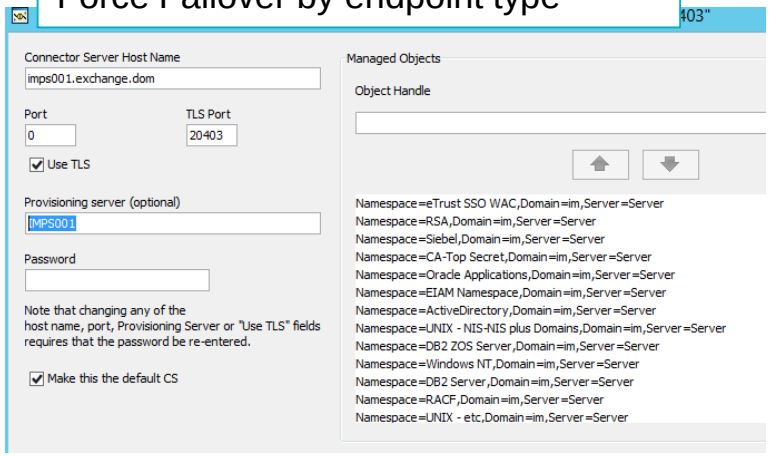
Force Failover by endpoint type



Rate of Updates = **25-28 /sec**

with two (2) CCS + IAM CS => LoadBalancing in IM r12.6 framework

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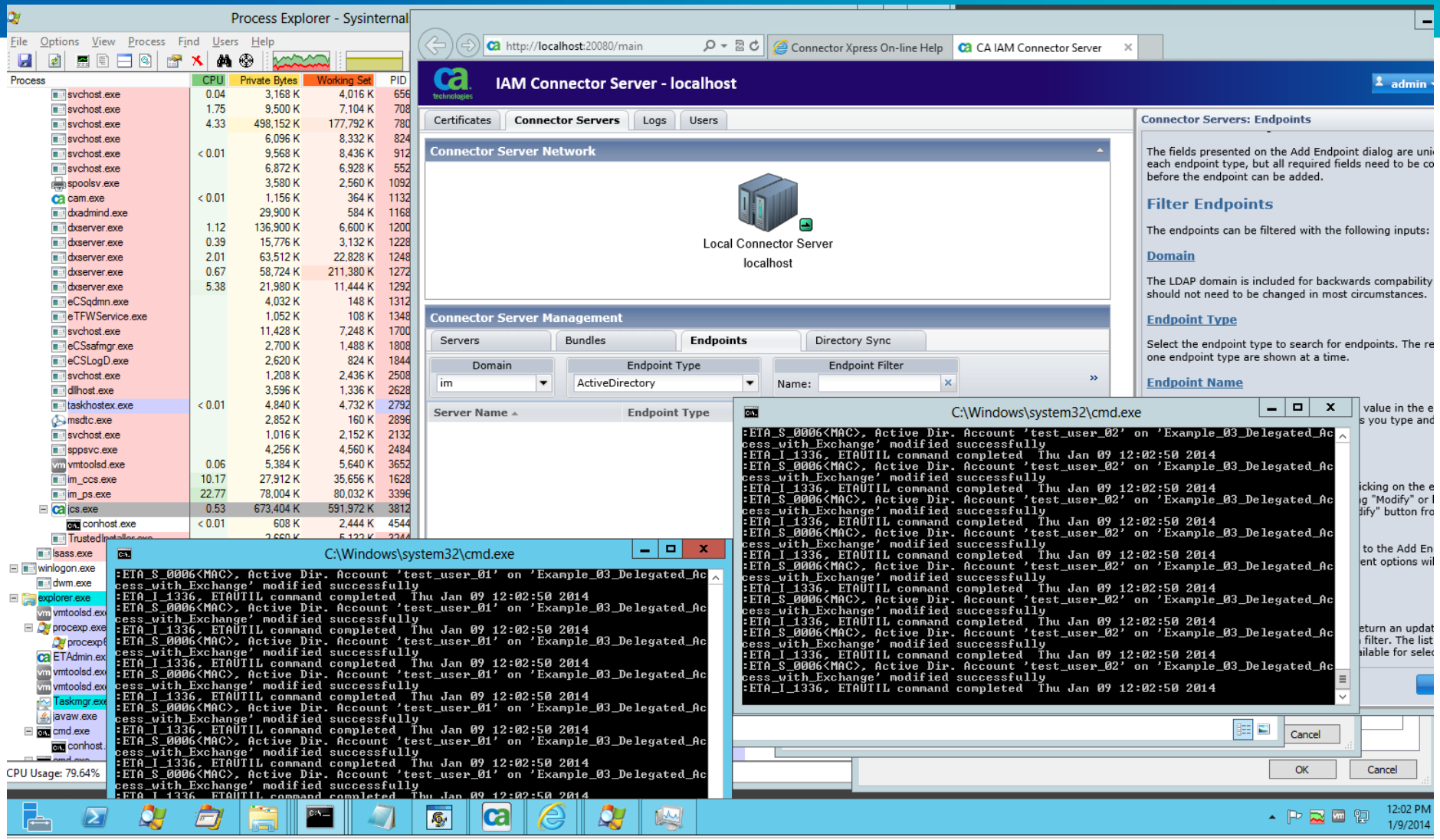
CA IMPS server with IAMCS service + im_ccs service



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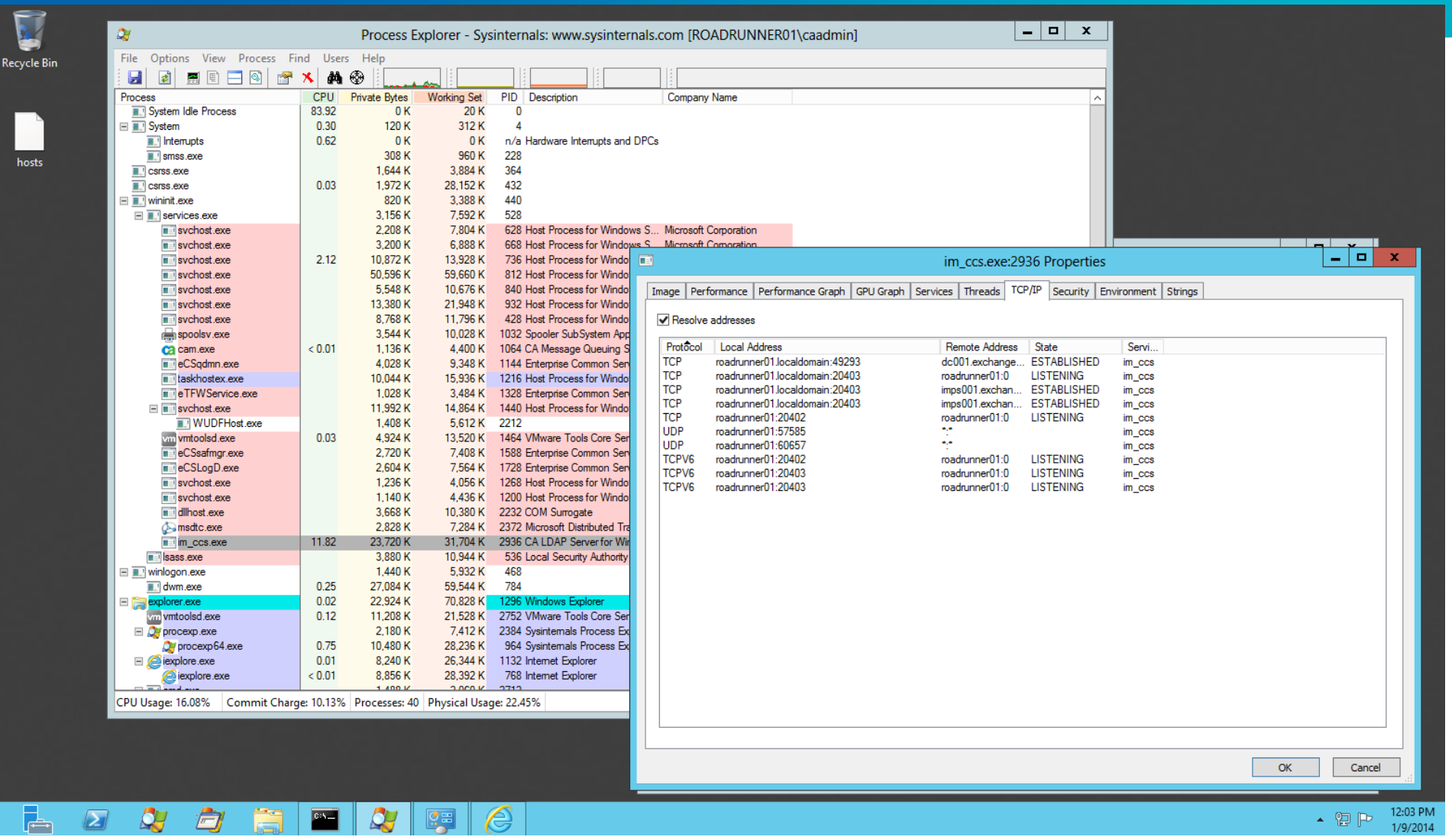
Server 2 with local im_ccs service managed by remote IAMCS



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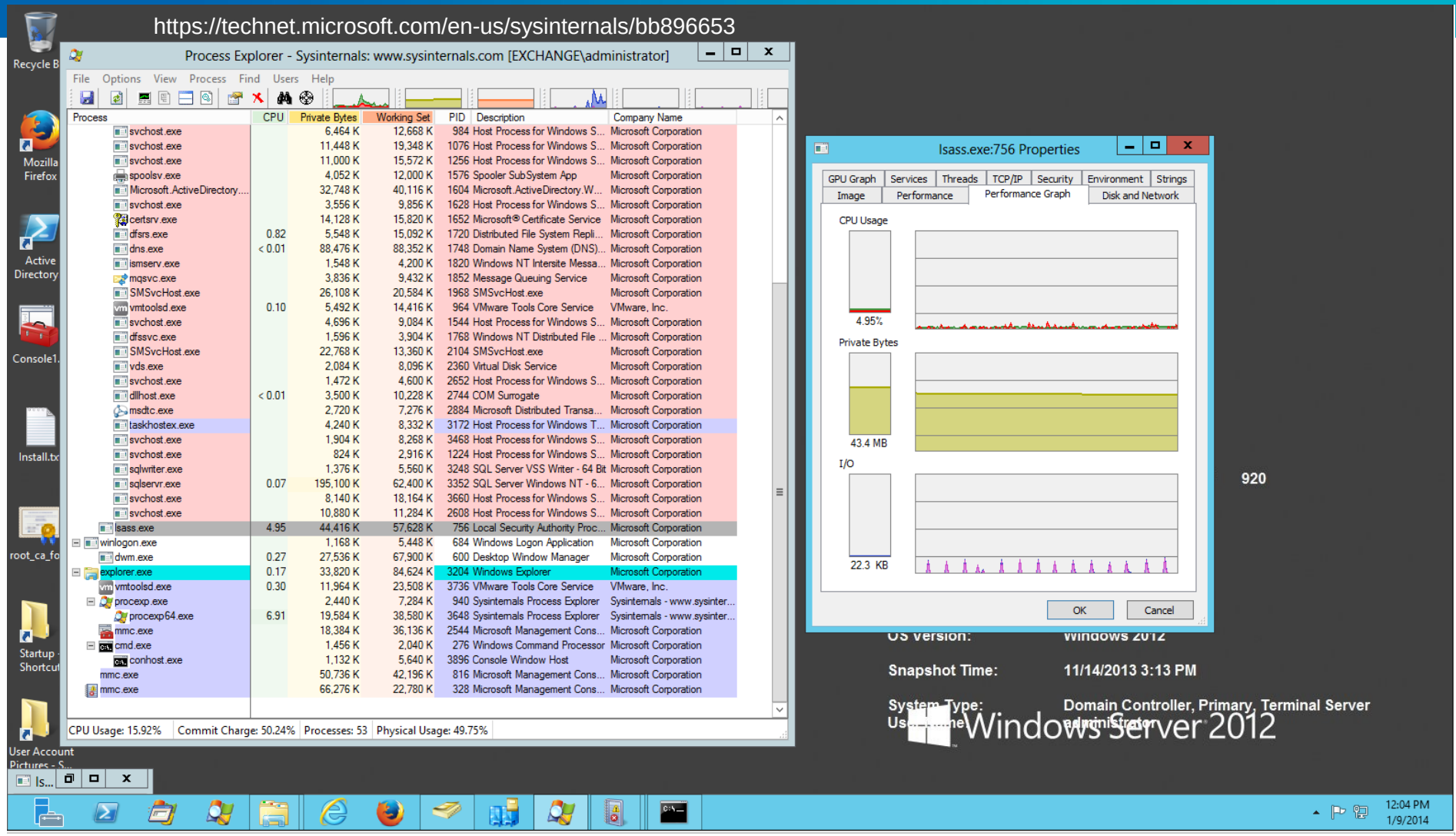
Active Directory server: lsass service manages the LDAP(s) communication to ADS Less that 5% CPU hit

https://technet.microsoft.com/en-us/sysinternals/bb896653



Script to emulate PX framework; and determine maximum rate from IMPS and CCS to Active Directory for group modifications to AD accounts.

```
@echo on

"C:\Program Files (x86)\CA\Identity Manager\Provisioning Server\bin\etautil.exe" -o -d im -u etaadmin -p Password01 -f test03.txt

pause
```

Created input file with these two (2) lines copied 10K times

```
update
'eTADSOrgUnitName=Office_002,eTADSOrgUnitName=CompanyABC_Users_OU,eTADSDirectoryName=Example_03_Delegated_Access_with_Exchange,eTNa
mespaceName=ActiveDirectory,dc=im' eTADSAccount  eTADSAccountName=test_user_01 to -eTADSmemberOf='CN=Help Desk,OU=Microsoft Exchange
Security Groups,DC=exchange,DC=dom';
update
'eTADSOrgUnitName=Office_002,eTADSOrgUnitName=CompanyABC_Users_OU,eTADSDirectoryName=Example_03_Delegated_Access_with_Exchange,eTNa
mespaceName=ActiveDirectory,dc=im' eTADSAccount  eTADSAccountName=test_user_01 to eTADSmemberOf='CN=Help Desk,OU=Microsoft Exchange
Security Groups,DC=exchange,DC=dom';
update
```

Default setup: No changes to IMPS server: log level =3
IMPS 2GB RAM: 99% CPU utilization on 1 CPU (i7) for etautil CLI until file is read; then 5% execution for etautil + 5% for console CLI window.
NOTE: less than 1% CPU utilization for for im_ccs, im_ps, im_jcs, dxserver services during loading; then 25% for im_ccs and im_ps during execution.
AD 2GB RAM, <5% CPU utilization on 1 CPU (i7) for lsass process (which is used for LDAP(S) communication on AD)

Rate: max of 15-17 mods / second for Add AD group / Remove AD group from same account via etautil via CCS connector strings; based on number of entries in the IMPS etatrans logs for successful update/delete of the memberOf attribute.

Improve Performance for MS Exchange Powershell API by increase the default throttle limit from 18 to 100

1. Create a throttle limit to be used exclusively by the CA IdentityMinder service account. Set the limit to 100 concurrent connections. For example:

New-ThrottlingPolicy MaxPowershell -PowerShellMaxConcurrency 100

2. Apply the new policy to the CA IdentityMinder service account on the Exchange server. For example:

Set-Mailbox "User Name" -ThrottlingPolicy MaxPowershell where "User Name" = service account to manage AD & Exchange accounts for CA IM

Justification: Scenario: 2000 creations from IME BLC.
Exchange able to create user mailbox in 20 seconds. Timeouts bumped to 600 seconds
18 session pool: 2000 * 20 / 18 = 40,000 seconds / 18 = 2222 seconds = < 40 minutes (Expect 5-10% failure due to timeout over 600 seconds)
100 session pool: 2000 * 20 / 100 = 40,000 seconds / 100 = 400 seconds = < 5 minutes [Expect no failures]

3. Increase the default timeouts of the CA IdentityMinder Exchange Agent to 600 seconds.

a. On the Exchange server, increase the agent timeout as follows:

HKEY_LOCAL_MACHINE\SOFTWARE\ComputerAssociates\Identity Manager\Ex2k7AgentTimeout = 600 (seconds)

b. On Provisioning servers (ALL of them), set the environmental variables as follows:

ADS_E2K_SEND_DC = 1 & **ADS_CONFIRM_MAILBOX** = 600 (seconds)

4. Restart the im_ccs service.

Ref: http://cookbooks.ca.com/cagovernanceminder/2014/02/14/solution-for-microsoft-exchange-performance-problems/

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