



# Enforcing Configuration Automation to improve TCO and Reporting Value.

Chris Armstrong - CISSP

# Enforcing Configuration Automation to improve TCO and reporting value



## > **perotsystems™**

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- Led by Ross Perot, perotsystems has become one of the top 10 best performing IT services firms and ranked the No. 2 information technology services company on Fortune magazine's list of America's most admired companies for 2006.
- perotsystems manages more than 150,000 desktops, laptops, and servers around the world.

# Enforcing Configuration Automation to improve TCO and reporting value



## › Presenter:

- Chris Armstrong,  
Perot Systems Government Services  
Consultant  
[Chris.Armstrong@psgs.com](mailto:Chris.Armstrong@psgs.com)

Configuration Automation User Group (CM-UG)  
<http://www.CM-UG.com>  
[Chris@CM-UG.com](mailto:Chris@CM-UG.com)

# Enforcing Configuration Automation to improve TCO and reporting value



## › Abstract:

- Chris show tips and tricks on how to make agents (tuners) hard to remove
- Deploy infrastructure on BMC partner Celestix Linux appliances
- Methods to extend BMC CM collected data.
- CM-UG information

# Enforcing Configuration Automation to improve TCO and reporting value



## › Enforcing Tuner installations

### – Technical:

- Remove the Tuner from Add/Remove menu in control panel.
- Renaming “Marimba” service making the tuner less obvious.
- Using AD to enforce monitor and enforce tuner installations.

### – Policy

- Ensure desktop and service desk checks for tuner icon on each touch.

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> Remove the Tuner from Add/Remove menu in control panel.

– HideTuner-addremovemenu.vbs

```
Const HKEY_LOCAL_MACHINE = &H80000002
```

```
strComputer = "."
```

```
Set oReg=GetObject("winmgmts:{impersonationLevel=impersonate}!\\" & _  
strComputer & "\root\default:StdRegProv")
```

```
strKeyPath = "SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\{2B9C70FA-F4C8-AC0C-EA96-007DD8F34163}"  
strKeyPath1 = "SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\{431457D0-9264-637C-9CC6-C03695D08651}"  
strKeyPath2 = "SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall\{74970D8A-B54F-86AB-D2FB-9061AB8C18A1}"
```

```
oReg.DeleteKey HKEY_LOCAL_MACHINE, strKeyPath  
oReg.DeleteKey HKEY_LOCAL_MACHINE, strKeyPath1  
oReg.DeleteKey HKEY_LOCAL_MACHINE, strKeyPath2
```

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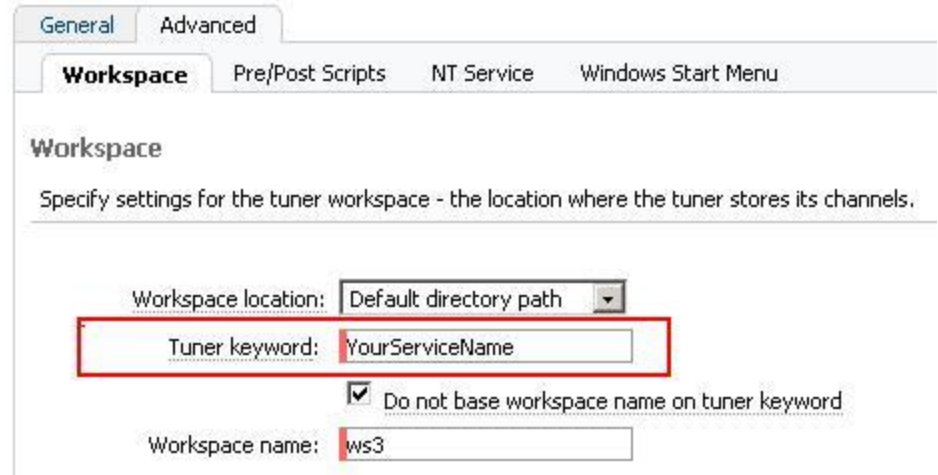


## › Renaming “Marimba” service making the tuner less obvious.

### – Deploying new tuners using with ambiguous service names:

- Infrastructure Setup > Select Profile > Create Installer > Windows Platform > Advanced > Workspace > Select the checkbox “Do not base the workspace name on the tuner keyword” The Keyword will be the Windows service name.

This is especially helpful where end-users are also local administrators.



### – RenameTunerService.vbs

```
CreateObject("WScript.Shell").RegWrite "HKLM\SYSTEM\CurrentControlSet\Services\TUNERPROFILE\DisplayName", "Remote Management Provider", "REG_SZ"
CreateObject("WScript.Shell").RegWrite "HKLM\SYSTEM\CurrentControlSet\Services\TUNERPROFILE\Description", "Provides a common interface and object model to access management information about operating system, devices, applications and services. If this service is stopped, most Windows-based software will not function properly. If this service is disabled, any services that explicitly depend on it will fail to start.", "REG_SZ"
```

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## › Using AD to monitor and enforce tuner installations.

### – Use AD to deploy CM Tuners.

- Deploy Tuners to all valid clients via AD GPO.

### – Where possible use other tools to validate CM inventory:

- LDAP
- Antivirus clients
- Encryption clients
- Email / Software clients
- Any other software that may allow you to validate live machines.



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## › Ensure desktop and service desk checks for functioning Tuners during each desktop visit.

This method is “low Tech” yet important. Ensure your techs also know how to fix or who to escalate malfunctioning tuners to.

### Desktop Services SOP Sample

- Verify BMC CM is installed using one of the methods below:

1. Verify the satellite dish icon is in the system tray.



2. Launch web browser and enter <http://YourTX:5282/> for the URL. A web page with a “Master Transmitter” banner should appear.
3. Start->Settings->Control Panel->Add/Remove Programs. Verify “YOUR TUNER” is listed.
4. Right-click My Computer and select Manage. Expand Services and Applications. Select Services. Scroll down and verify YOUR TUNER is Started and set to Automatic startup type.
5. Run task manager and verify java and tuner processes are running.

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## › Celestix Linux Appliance

### **Celestix Networks, Inc.**

48001 Fremont Boulevard  
Fremont, California 94538  
Phone: 510.668.0700  
E-mail: [info@celestix.com](mailto:info@celestix.com)



<http://www.celestix.com/>

- 1u rack mount server: ability to select CPU, HDD, Memory, etc.
- Custom Celestix OS created specifically to run the Tuner, includes restore and remote console abilities.

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## › Celestix Linux Appliance

- Advantages
  - Dedicated CCM hardware
  - Simple easy to deploy device
  - Preloaded with all components
  - Limited host OS security & configuration concerns
- Disadvantages
  - Single purpose device, cannot be shared for other uses.

Topics	
<a href="#">Machine Summary</a>	
▼ <a href="#">Hardware</a>	
<a href="#">Input Devices</a>	
<a href="#">Memory</a>	
<a href="#">Modems</a>	
<a href="#">Network Cards</a>	
<a href="#">Printers</a>	
<a href="#">Processors</a>	
<a href="#">Storage</a>	
<a href="#">Video Cards</a>	
▶ <a href="#">Software</a>	
▶ <a href="#">Operating System</a>	
▶ <a href="#">BMC CM Infrastructure</a>	
▶ <a href="#">Diagnostics</a>	

<b>Hostname</b>	ccm-rpt- <del>XXXXXXXXXX</del>
<b>Manufacturer</b>	
<b>Model</b>	Intel 2.7 GHz Celeron
<b>Serial Number</b>	
<b>Asset Tag Number</b>	
<b>Installed Memory (MB)</b>	1025
<b>Memory Capacity (MB)</b>	
<b>Total Memory Slots</b>	
<b>Available Memory Slots</b>	
<b>Virtual Memory (MB)</b>	1433.599609375
<b>Number of Processors</b>	1
<b>Last Boot Time</b>	May 2, 2007 10:22:18 PM GMT-05:00
<b>Domain</b>	
<b>Machine Domain</b>	<del>XXXXXXXXXX</del>
<b>Description</b>	i686
<b>Aliases</b>	CCM-RPT- <del>XXXXXXXXXX</del>

# Enforcing Configuration Automation to improve TCO and reporting value



## › Extend BMC CA Reporting ability

- Quick data collection (store data in environment variables)
- FSRK tools (Registry Key and Pluggable Scanner)
- Creating tools to gather extended data via user input
- Reporting on the extended data
- Who or what installed the Tuner
- Tuner installation date and time
- Image version of host (Gold image?)
- Other?

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## > Quick data collection (store data in environment variables)

'Collect - Installation Time/Date & User

'Add System Environment Variables including Time/Date, User, Location.

'Chris Armstrong / 1-23-2007

'

on error resume next

```
set objShell = WScript.CreateObject("WScript.Shell")
```

```
Set colSystemEnvVars = objShell.Environment("System")
```

```
colSystemEnvVars("CCM_Location_Data_Site") = "Mobile"
```

```
colSystemEnvVars("CCM_Installation_Date") = Now
```

```
Dim objWMIService, objComputer, colComputer, strComputer  
strComputer = "."
```

```
Set objWMIService = GetObject("winmgmts:" _  
& "{impersonationLevel=impersonate}!\\" _  
& strComputer & "\root\cimv2")
```

```
Set colComputer = objWMIService.ExecQuery _  
("Select * from Win32_ComputerSystem")
```

```
For Each objComputer in colComputer  
colSystemEnvVars("CCM_Installation_User") = objComputer.UserName  
Next
```

14656	CCM_INSTALLATION_DATA_TIME	3/29/2007 11:18:48 AM
14656	CCM_INSTALLATION_DATA_USER	Marcos [REDACTED]
15451	CCM_INSTALLATION_DATA_TIME	4/13/2007 1:59:35 PM
15451	CCM_INSTALLATION_DATA_USER	Marcos [REDACTED]

15451 Dell Computer Corporation Microsoft Windows XP Professional  
Last updated Oct 5, 2007 7:14:18 AM GMT-05:00 Dimension 2400 1022 MB RAM

Environment Variables previous 1-18 of 18 next

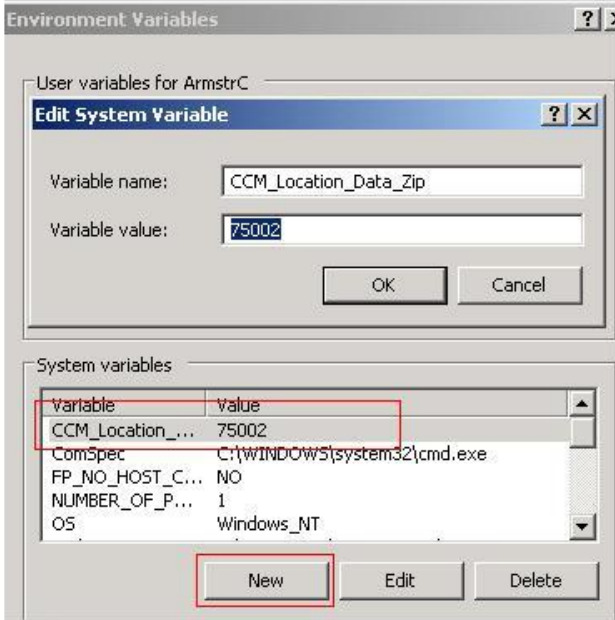
Topics	Name	Value
Machine Summary	CCM_INSTALLATION_DATA_USER	Marcos [REDACTED]
Hardware	TMP	%USERPROFILE%\Local Settings\Temp
Software	CCM_INSTALLATION_DATA_TIME	4/13/2007 1:59:35 PM
Operating System	PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH
Environment Variables	CLASSPATH	C:\oracle\OraLite9\Mobile\bin\olite40.JAR
Logged In Users	TEMP	%USERPROFILE%\Local Settings\Temp
Network Connections	PROCESSOR_ARCHITECTURE	x86
OS Details	PROCESSOR_REVISION	0209
Patches - Effectively Installed	windir	%SystemRoot%
Patches - Installed	PROCESSOR_LEVEL	15
Patches - Missing	PROCESSOR_IDENTIFIER	x86 Family 15 Model 2 Stepping 9, GenuineIntel
Patches - Missing Never Tried	CCM_LOCATION_DATA_DESCRIPTION	[REDACTED]
Patches - Missing Tried and Failed	OS	Windows_NT
Patches - Reboot Pending	ComSpec	%SystemRoot%\system32\cmd.exe
Scheduled Jobs	Path	C:\oracle\OraLite9\Mobile\bin\C:\oracle\ora81\bin\C:\oracle\OraLite9\Mobile\bin\
Services	NUMBER_OF_PROCESSORS	1
BMC CM Infrastructure	FP_NO_HOST_CHECK	NO
Diagnostics	CCM_LOCATION_DATA_SITECODE	LOB/ATO/ESA/PR/ZSU_CERAP/Computers/Secured_Systems/Desktops

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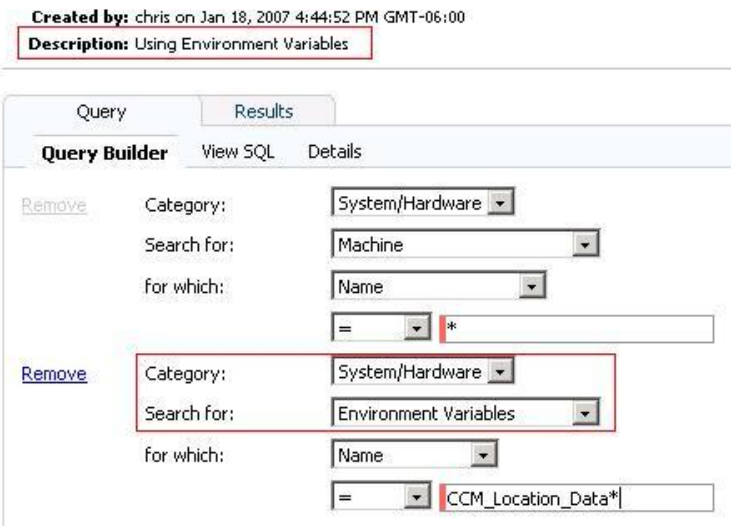


## > FSRK tools (Registry Key and Pluggable Scanner)

### 1. Set Variable name and value.



### 2. Create Report on Variable



### 3. View report details

	Name	Name	Value
1	<a href="#">perot-7c0730406</a>	CCM_Location_Data_Address	1238798 HJj;falkjdfk jjwjk jaskjdfkjas;ldfk
2	<a href="#">perot-7c0730406</a>	CCM_Location_Data_Zip	75002
3	<a href="#">perot-7c0730406</a>	CCM_Location_Data_State	TX
4	<a href="#">perot-7c0730406</a>	CCM_Location_Data_Sitecode	AXFD
5	<a href="#">perot-7c0730406</a>	CCM_Location_Data_City	Dallas

# Enforcing Configuration Automation to improve TCO and reporting value



## > Create tools to gather user input

**Wolters Kluwer Asset Inventory Application**  
Version 2.0.7 CMS Installed: ●

Complete the four steps below

- Name:** 
  
Address:  Floor/Suite: 
  
State:  ZIP:  City:  Country:
- Business Unit:**
- Phone Number:**
- Notes:**

**Wolters-Kluwer Inventory Tool 1.01**

<b>Site Information</b> Name: <input type="text" value="WLS CT Corp AK Juneau"/> Address: <input type="text" value="801 W 10th St. Ste 300"/> Floor: <input type="text"/> City: <input type="text" value="Juneau"/> State: <input type="text" value="AK"/> ZIP: <input type="text" value="99801"/> Country: <input type="text" value="USA"/>	<b>Own / Lease</b> <input checked="" type="radio"/> Owned <input type="radio"/> Leased Financial Responsibility: <input type="text" value="w/k"/> Lease Holder: <input type="text"/> Lease Term: <input type="text"/>
<b>User</b> Business Unit: <input type="text" value="Aspen-KLI"/> End-User Phone: <input type="text"/> <input type="text"/> <input type="text"/>	
<b>Third-Party Maintenance Vendor</b> <input checked="" type="radio"/> Perot Systems <input type="radio"/> Other Vendor: <input type="text"/> Contact: <input type="text"/> Address: <input type="text"/> City: <input type="text"/> State: <input type="text"/> ZIP: <input type="text"/> Country: <input type="text" value="USA"/>	<b>Workstation</b> Asset Tag: <input type="text"/> Ownership Date: <input type="text" value="9/20/2005"/> In-Service Date: <input type="text" value="9/20/2005"/> <input checked="" type="radio"/> Standard <input type="radio"/> Non-Standard Switch/Hub Port: <input type="text"/> Mission Critical: <input type="text" value="NO"/>
<b>Network Printers</b> <input type="text"/> <b>Comments</b> <input type="text"/>	
<input type="button" value="Ok"/> <input type="button" value="Cancel"/>	

**STANFORD HOSPITAL & CLINICS** Date / Time: 9/13/2005 9:56:56 AM [Help / About](#)

Building:  Room:  Floor:

**Computer Details**

Model:  Tag:  Serial #:  Jack #:

Monitor:  Serial #:

Tech ID:

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## › Reporting on the extended data

- Report Center > Configuration > Additional Views > YourViewName
- Query Builder > Category > Other > YourViewName

### New Query



Use the Query Builder's drop-down lists to build a query. You can use an asterisk (\*) as a wildcard character. Click Refine Query if you want to run a query on the results that a query returns.

Remove Category: Other

Search for: INV\_PEROT\_LOCATION

for which: (Select One)

- Office Building Name
- Cube Number
- Phone Number
- Employee ID
- District
- Cost Center
- Etc

Refine Query

Preview Results Preview SQL Save Query Cancel



# Enforcing Configuration Automation to improve TCO and reporting value



## › Configuration Automation User Group

### CM-UG Website includes:

- Discussion Forums to ask questions and share you tips and tricks
- Monthly user group meeting information
- Past user group meeting minutes
- Local user meetings

### Download / Upload:

- Channels
- Screenshots
- Scripts and other files

Forum	Topics	Posts	Last Post
CM-UG Meetings & Information			
<input type="checkbox"/> <b>General Information</b> Updates, Notes, and general info for all CM-UG members	4	4	Tue Oct 09, 2007 11:48 am Chris Armstrong →

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## › Configuration Management - User Group

<http://www.CM-UG.com>

**Monthly CM-UG Meetings – Provide Date & Time**

**Contact – [Chris@CM-UG.com](mailto:Chris@CM-UG.com)**

# Enforcing Configuration Automation to improve TCO and reporting value



› Questions?