

# Administration.Samples

Do you know what happens if you change one of the values?

Which setting has the most impact to my system?

Does it support IPV6?

The screenshot displays the 'EnterpriseLink Cluster Server Configuration' web interface. The browser window title is 'EnterpriseLink Cluster Server Configuration - Microsoft Internet Explorer'. The address bar shows 'C:\Temp\elcs-bin\elcs.html'. The page content includes several configuration sections:

- EnterpriseLink Cluster Server Configuration:** Cluster Server at host 127.0.0.1 port 4125 nodes. Fields include IP Address (127.0.0.1), Listen Port (4125), Adapter, Subnet Mask, Load Balancing (uniform selected), Session ID (enterpriseLink cookie selected), Session Marker (str/), EnterpriseLink Project Prefix, Licensing (use license server unchecked), License Key (604B417F6460635249EEB), Logging Level (Errors), and Log File (C:\Temp\elcs-bin\cluster.log).
- Cluster Server Communications:** Broadcast Network (255.255.255.255), Broadcast Port (3344), Broadcast Setting (200), Broadcast Session (100 sec), Heartbeat (5 sec), Fall Over (25 sec), and Primary Monitor (5 sec).
- Web Server Communications:** Check URL (istdocs), Check Interval (60 sec), On Connection Failure (offline selected), Check Pattern, Connect Timeout (800), and Check Action (offline if not matched).
- Browser Communications:** Session Timeout (1800 sec) and Session Check (1800 sec).

Below the configuration sections are two tables:

- Web Server Nodes:** A table with columns for Host, Port, Configured, Online, Currently, and Last Heard From. The first row shows 'localhost' on port 30, with 'Configured' checked, 'Online' checked, 'Currently' checked, and 'Last Heard From' empty.
- Cluster Server Peers:** A table with columns for Host, Port, Configured, Online, Currently, and Last Heard From. The first row shows 'localhost' on port 30, with 'Configured' checked, 'Online' checked, 'Currently' checked, and 'Last Heard From' empty.

# Administration.Samples

Wireless Control System

Access Points: 1, 0, 16

User: wcs-test @ Virtual Domain: root

### Severity Configuration

Administration > Settings > Severity Configuration

Severity level changes will only apply to the newly generated alarms. Existing alarms will remain unchanged.

Entries 1 - 50 of 151

<input type="checkbox"/>	Alarm Condition	Alarm Category	Configured Severity
<input type="checkbox"/>	AP Authorization Failure	Access Points	▲
<input type="checkbox"/>	AP Detected Duplicate IP	Security	▲
<input type="checkbox"/>	AP IP fallback	Access Points	●
<input type="checkbox"/>	AP associated with controller	Access Points	■
<input type="checkbox"/>	AP attempted to join Controller with licensed AP count exceeded	Controllers	▲
<input type="checkbox"/>	AP big nav DOS attack	Security	▲
<input type="checkbox"/>	AP contained as rogue	Access Points	▲
<input type="checkbox"/>	AP disassociated from controller	Access Points	▲
<input type="checkbox"/>	AP functionality license expired	Controllers	▲
<input type="checkbox"/>	AP has no radios	Access Points	▲
<input type="checkbox"/>	AP impersonation detected	Security	▲
<input type="checkbox"/>	AP maximum rogue count exceeded	Access Points	▲
<input type="checkbox"/>	AP reboot reason	Access Points	■
<input type="checkbox"/>	AP regulatory domain mismatch	Access Points	▲
<input type="checkbox"/>	Access point crash	Access Points	■
<input type="checkbox"/>	Access point not supported	Controllers	■
<input type="checkbox"/>	Adhoc Rogue auto contained	Security	▼
<input type="checkbox"/>	Adhoc Rogue detected	Adhoc Rogue	●
<input type="checkbox"/>	Adhoc Rogue detected contained	Adhoc Rogue	●
<input type="checkbox"/>	Adhoc Rogue detected on network	Adhoc Rogue	▲
<input type="checkbox"/>	Air Quality Traps	Performance	●
<input type="checkbox"/>	Alarm table auto cleanup done	WCS	■
<input type="checkbox"/>	Attempt to use an unlicensed Controller feature	Controllers	▲
<input type="checkbox"/>	Audit status difference	WCS	●
<input type="checkbox"/>	Authentication failure reported by controller	Security	●
<input type="checkbox"/>	Autonomous AP Admin Status Down	Access Points	■
<input type="checkbox"/>	Autonomous AP Link Down	Access Points	▲
<input type="checkbox"/>	Autonomous AP Oper Status Down	Access Points	▲
<input type="checkbox"/>	CPU RX Multicast queue full	Controllers	▲
<input type="checkbox"/>	Client Associated to Diagnostic Channel	Clients	■
<input type="checkbox"/>	Client Traps are disabled on controllers	WCS	●
<input type="checkbox"/>	Client WEP key decryption error	Security	●
<input type="checkbox"/>	Client WPA MIC error counter activated	Security	▲
<input type="checkbox"/>	Client associated failure with AP	Clients	■
<input type="checkbox"/>	Client associated to AP	Clients	■
<input type="checkbox"/>	Client authenticated	Clients	■
<input type="checkbox"/>	Client authentication failure	Clients	■
<input type="checkbox"/>	Client deauthenticated from AP	Clients	■
<input type="checkbox"/>	Client decrypt error occurred	Security	●
<input type="checkbox"/>	Client disassociated from AP	Clients	■
<input type="checkbox"/>	Client excluded	Security	●
<input type="checkbox"/>	Cold start trap from controller	Controllers	■
<input type="checkbox"/>	Configuration backup failed	Controllers	◆
<input type="checkbox"/>	Configuration backup succeeded	Controllers	■
<input type="checkbox"/>	Configuration saved	Controllers	■
<input type="checkbox"/>	Controller Detected Duplicate IP	Security	▲
<input type="checkbox"/>	Controller down	Controllers	▲
<input type="checkbox"/>	Country code changes	Controllers	■
<input type="checkbox"/>	Enforcement on config group failed	WCS	▲
<input type="checkbox"/>	Enforcement on config group succeeded	WCS	●

Entries 1 - 50 of 151

08/01/2012 21:08

How would you replicate the list of settings on a second system?

How to get a diff between 2 systems?

How to do it on 50 systems?

# Administration.Samples

PacketiX VPN Server "s1" の管理

このサーバーがホストしている仮想 HUB (2):

仮想 HUB 名	状態	種類	ユーザー	グループ	セッション	MAC テーブル	IP テーブル
DEFAULT	オンライン	スタンダード	2	0	23499	0	0

仮想 HUB の管理 (A)   オンライン(O)   オフライン(F)   状態の表示(S)   仮想 HUB の作成(C)   プロパティ(P)   削除(D)

リスナーの管理(L)  
リスナー一覧 (TCP/IP ポート) (P):

ポート番号	状態
TOP 992	動作中
TOP 8888	動作中

新規作成(B)   削除(D)   開始(Q)   停止(F)

サーバー情報の参照および設定 (N)

- 暗号化と通信関係の設定 (E)
- クラスタリング構成 (M)
- サーバー状態の表示 (V)
- クラスタリング状態 (Z)
- PacketiX VPN Server に関する情報 (B)
- TCP/IP コネクション一覧の表示 (Y)
- ライセンスの追加と削除 (L)
- Config 編集 (D)

ローカルブリッジ設定 (B)   レイヤ 3 スイッチ設定 (Z)   最新の状態に更新 (U)   閉じる (X)

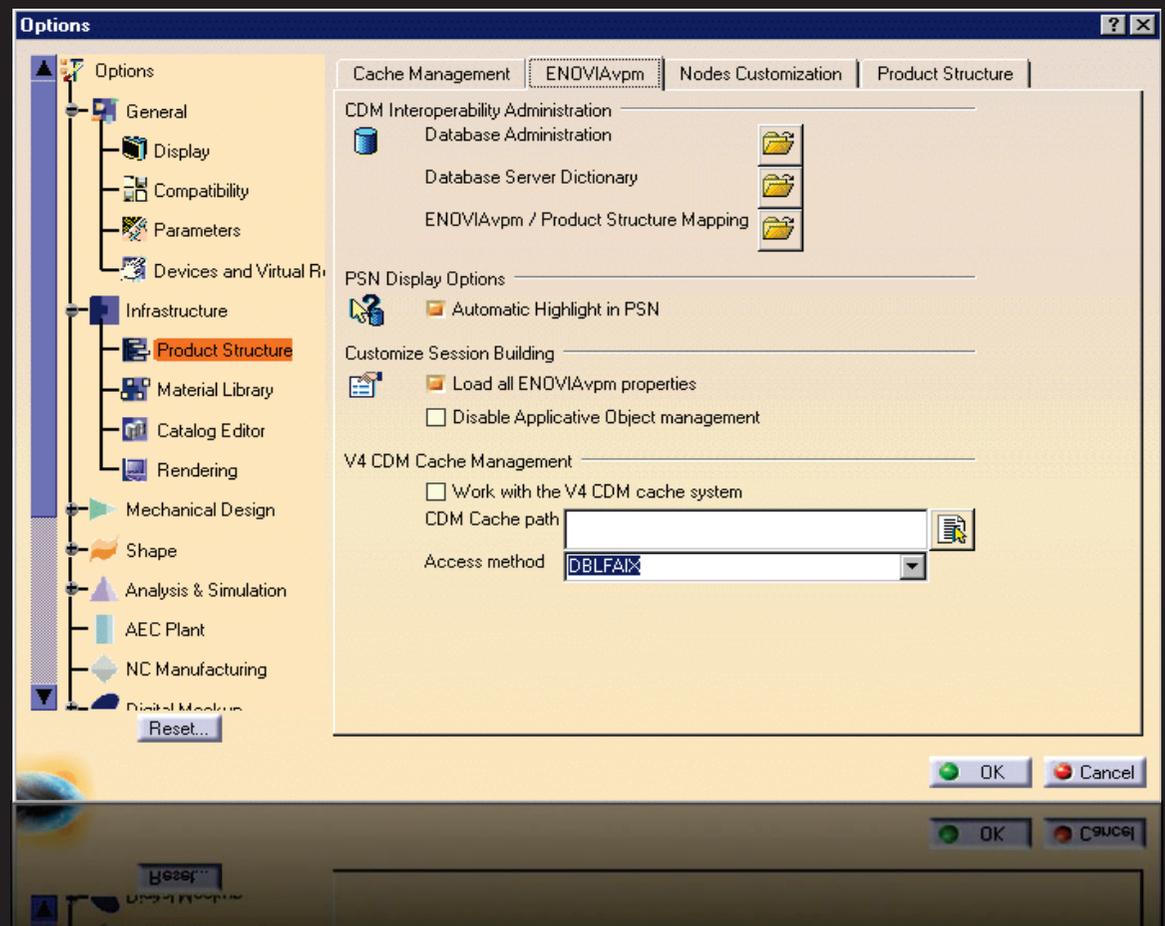
Can I combine the steps I'm doing here with another system?

I need an additional action in that context – how to do it?

Do I really need to enter my 200 entries here?

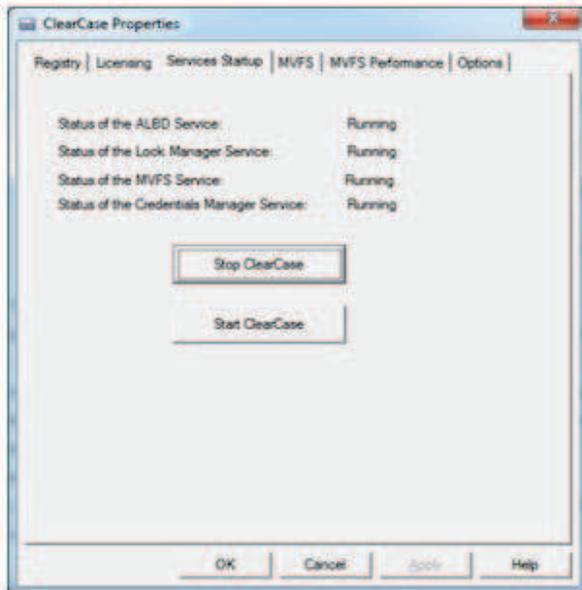
# Administration.Samples

Which settings did I change?  
How can I undo the changes?  
What happens if I click OK?



# Administration.Samples

Lastly please stop and start ClearCase from the ClearCase control panel under the services tab



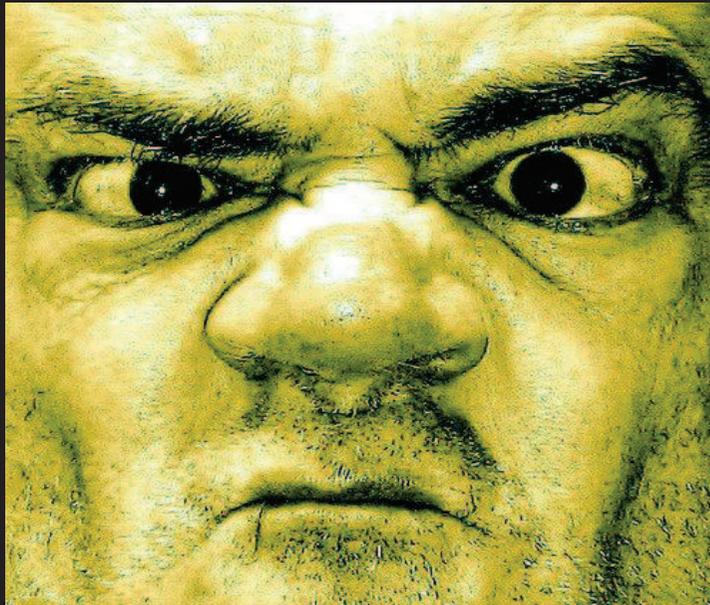
Support:

[submit service call](#)

click on the disk to save this path to your Qualification Shortcuts

if this is not working please [call ...](#)

# Admin.CurrentState.What



Admins



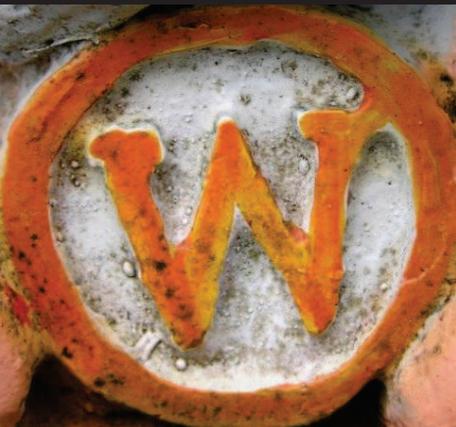
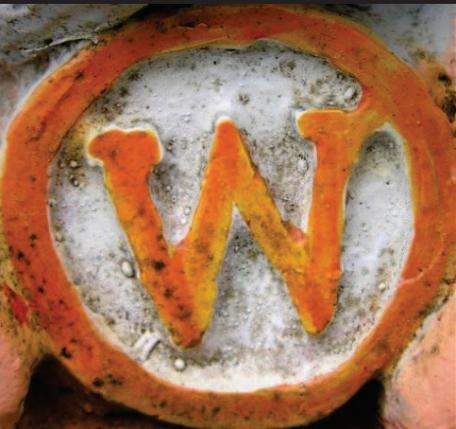
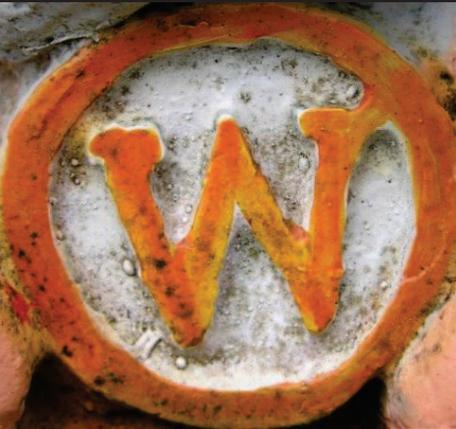
Users

-> Next -> Next ... yadda yadda ... I agree -> Next -> Next -> Next -> Install... -> Finish .

-> If it looks like this (100 ClearCase, 80 Multisite) then all is ok ..

if this is not working please call ...

# Admin.CurrentState.What



- ✓ Scattered Management Landscape
- ✓ Can't be automated, doesn't scale
- ✓ Development delivers the wrong tools to Operations
- ✓ No or outdated documentation for management features
- ✓ Toolset in Dev and in Operations is different

# Admin.CurrentState.Why

- ✓ ...because we always did it this way
- ✓ Product Owners are domain experts (hopefully), but not admins
- ✓ Customer value is seen to narrowed
- ✓ Dev and Operations don't talk
- ✓ Admin in house vs Customer Admin
- ✓ Operations is 10 years too late in agile



To : Dev, Tester, ProductOwner  
Subject: Know the Admin Space

---

- ✓ Which parts in the SW lifecycle are subject to administrative tasks?
- ✓ How does administration fit into the SW value chain?
- ✓ Do you care for the whole lifecycle?
- ✓ Isn't it IT that drives more and more purchasing decisions?

# Admin.Roles.Involved

---

## Developers

- Setup, Teardown for Integration Tests
- Development Environment, Debugging

## Testers

- Setup, Teardown for Integration Tests
- Smoke Tests, specific configs/states

## Consultants

- (re)configure, extend, integrate, migrations

## User/Customer

- Application Configuration
- Verification, Validation (IQ,OQ,PQ)

## Phone Support

- Inventory, Analysis, Troubleshooting

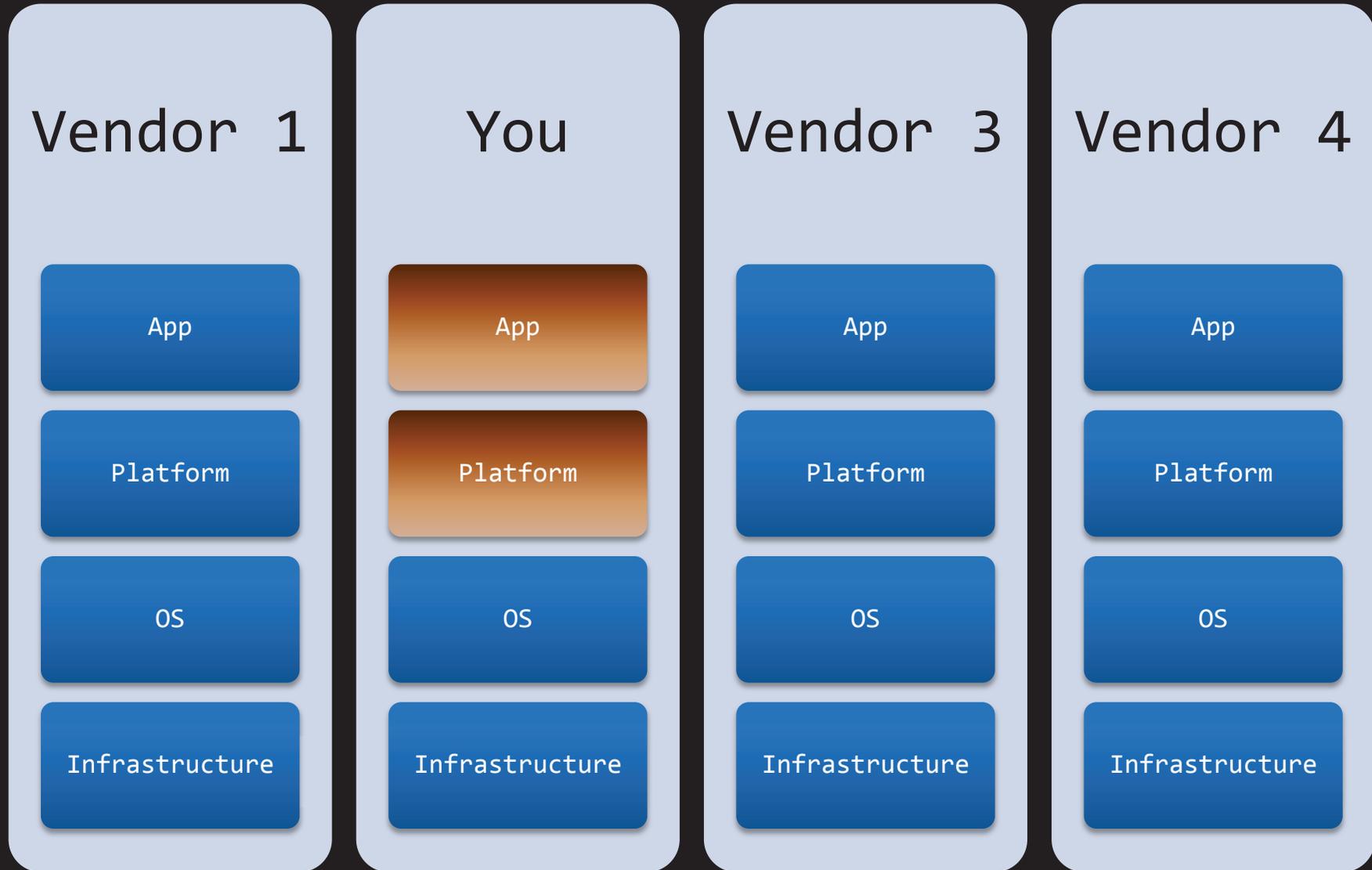
## Field Eng.

- Install, migrate, configure the system

## Administrator

- everything...
-

# Admin. Dimensions



# Admin.Drivers.Legal | Security | Trust

---



- ✓ More complicated stacks lead to more challenges in security.
- ✓ Anonymous might say Hello!
- ✓ What is your attack surface?
- ✓ Compliance requirements in Finance, Pharma etc. will not go away!

# Admin.Drivers.Cloud|Virtualization

- ✓ Virtualization/IaaS (host) -> automation needed
- ✓ PaaS (build)
  - > more division of labor -> need for (de)composable admin tools
- ✓ SaaS (consume)
  - > admin is in house
  - > easier to build cross functional teams



# Admin.Drivers.Development

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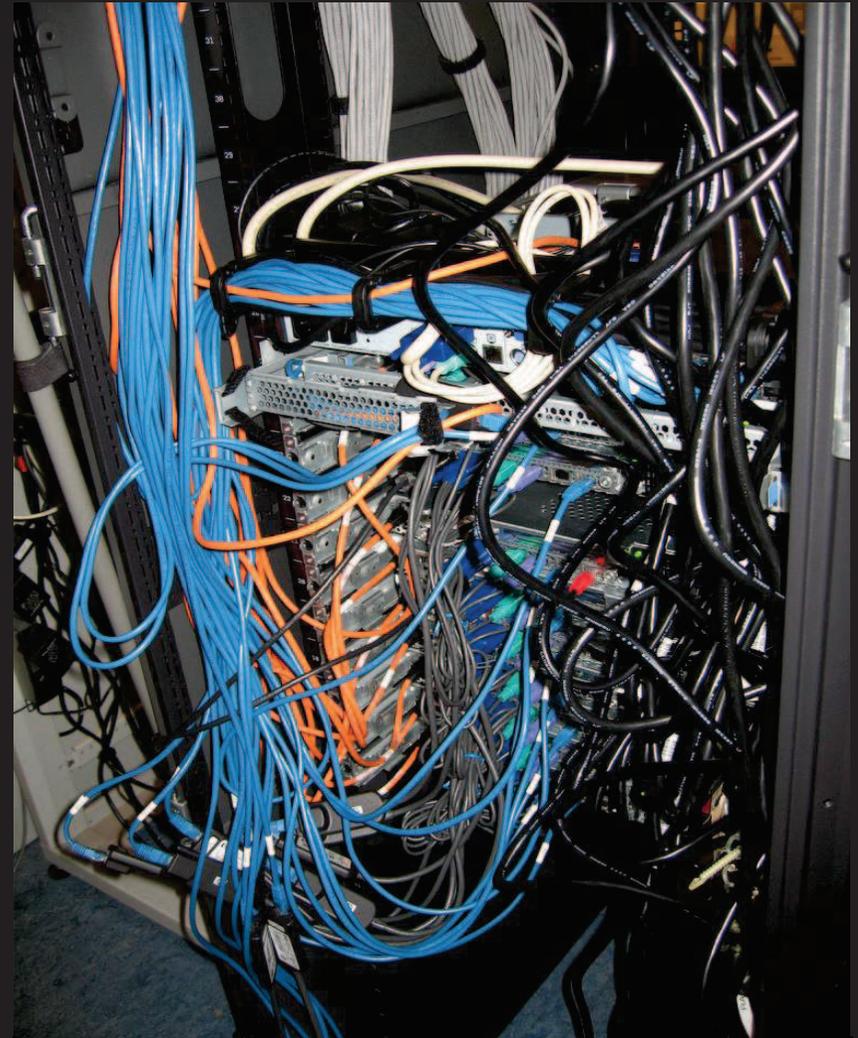
- ✓ Funny new frameworks and systems every other year
- ✓ Higher Technology Stacks
- ✓ Faster release cycles, no better migrations(?)
- ✓ More integrations required, more external systems involved.

# To : Dev, Tester, ProductOwner

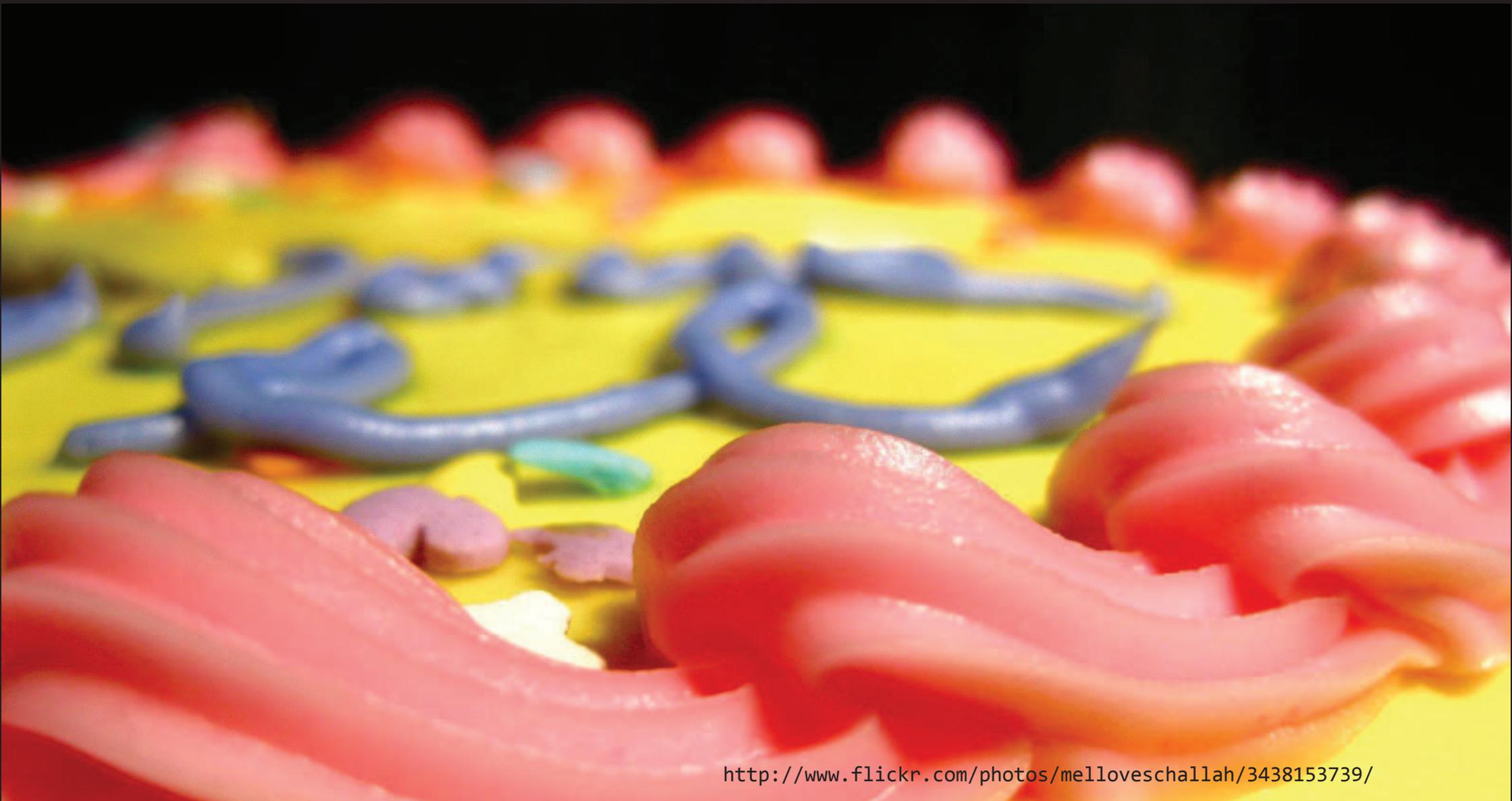
## Subject: Know the Admin Mindset

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- ✓ NOT interested in the bells and whistles of your app
- ✓ (more and more) techies (like you!)
- ✓ is lazy (like you!)
- ✓ thinks in backups (and recovery!), logs, network - not in apps



“Web interfaces and GUI tools are nice and can be considered the icing on the cake.”



“A true manageable application allows for consistent and repeatable actions in an easy to maintain structure...”



DON'T make the administrative interface a GUI. System administrators need a command-line tool for constructing repeatable processes.



BOOGIE  
REPEAT

Procedures are best documented by providing commands that we can copy and paste from the procedure document to the command line. We cannot achieve the same repeatability when the instructions are: "Checkmark the 3rd and 5th options, but not the 2nd option, then click OK."



Sysadmins  
do not want  
a GUI that  
requires 25  
clicks for  
each new  
user.





# Admin.Tools.PlSqlDeveloper

Edit table EMP

General Columns Keys Checks Indexes Privileges Partitions

Type owner:  Name:

Name	Virtual	Type	Nullable	Default/Expr.	Storage	Comments
EMPNO	<input type="checkbox"/>	NUMBER(4)	<input type="checkbox"/>			The 4-digit number of the employee
ENAME	<input type="checkbox"/>	VARCHAR2(10)	<input checked="" type="checkbox"/>			The last name of the employee
JOB	<input type="checkbox"/>	VARCHAR2(9)	<input checked="" type="checkbox"/>	'CLERK'		The job of the employee
MGR	<input type="checkbox"/>	NUMBER(4)	<input checked="" type="checkbox"/>			The employee number of the manager
HIREDATE	<input type="checkbox"/>	DATE	<input checked="" type="checkbox"/>	trunc(sysdate)		The date on which the employee was hired
SAL	<input type="checkbox"/>	NUMBER(7,2)	<input checked="" type="checkbox"/>			The salary of the employee
COMM	<input type="checkbox"/>	NUMBER(7,2)	<input checked="" type="checkbox"/>			The commission of the employee
DEPTNO	<input type="checkbox"/>	NUMBER(2)	<input checked="" type="checkbox"/>			The 2-digit number of the department
EMAIL	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	ename    '@acme.com'		The e-mail address of the employee
*	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			

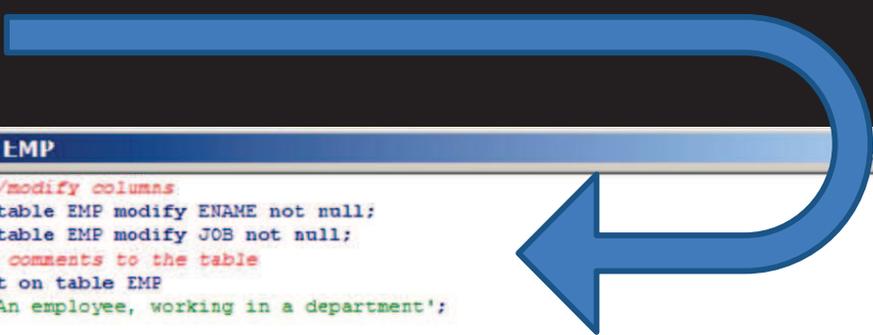
Apply Refresh Close Help Query... View SQL

scott@o111

Edit table EMP

```
1 -- Add/modify columns
2 alter table EMP modify ENAME not null;
3 alter table EMP modify JOB not null;
4 -- Add comments to the table
5 comment on table EMP
6   is 'An employee, working in a department';
```

Apply Refresh Close Help Query... View SQL



# Admin.Tools.OracleEnterpriseManager

Oracle Enterprise Manager - Create User

Show SQL Cancel OK

General Roles System Privileges Object Privileges Quotas Consumer Groups Switching Privileges Proxy Users

\* Name

Profile

Authentication

For External choice, the role is authorized by the operating system, network, or other external source.

Default Tablespace

Temporary Tablespace

Status  Locked  Unlocked

Oracle Enterprise Manager 10g Database Control

Setup Preferences Help Logout Database

Database Instance: OMFDATA > Users > Create User Logged in As SYS

Show SQL

```
CREATE USER "SAPNA" PROFILE "DEFAULT" IDENTIFIED EXTERNALLY DEFAULT
TABLESPACE "USERS" TEMPORARY TABLESPACE "TEMP" ACCOUNT UNLOCK
GRANT "CONNECT" TO "SAPNA"
```

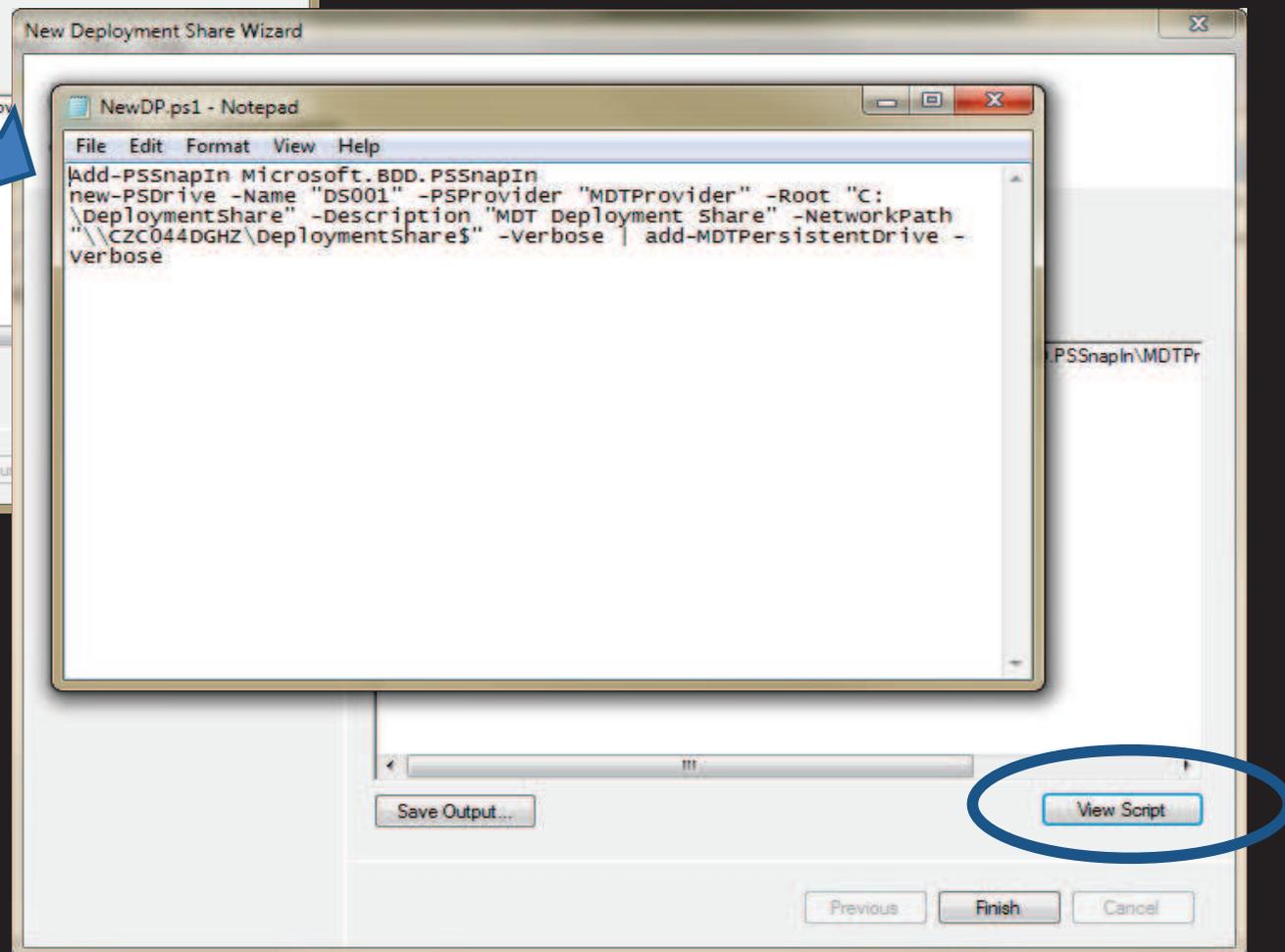
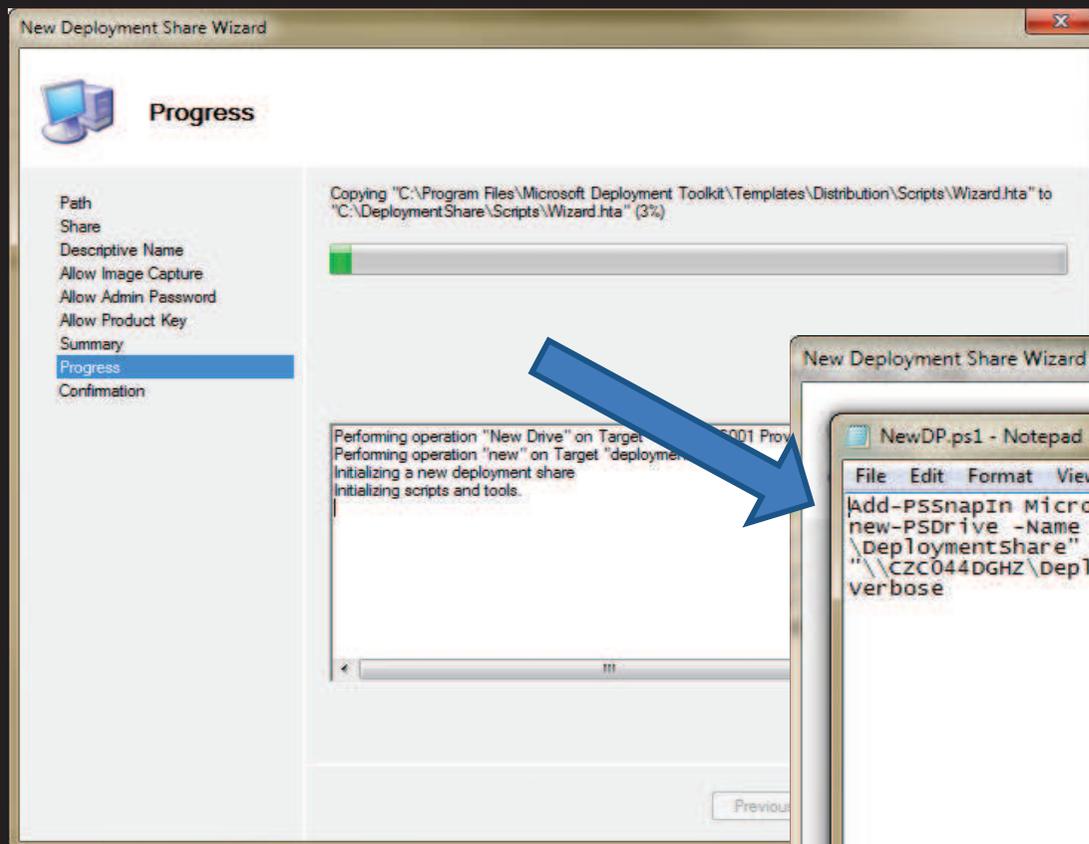
Return

Return

Database | Setup | Preferences | Help | Logout

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About Oracle Enterprise Manager 10g Database Control

# Admin.Tools.Mdt2012



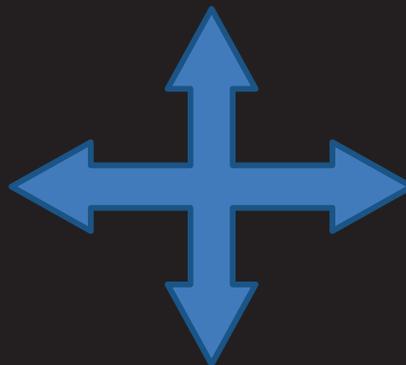
# Admin.Tools.PowerGui

PowerGUI Pro Script Editor

```
1 $Processes = Get-Process notepad
2 $Processes | Stop-P
```

Synopsis:  
Stops one or more running processes.

Definition:  
Stop-Process -Id <Int32[]> [-PassThru <SwitchParameter>] [-Force <SwitchParameter>] [-WhatIf <SwitchParameter>]  
Stop-Process -Name <String[]> [-PassThru <SwitchParameter>] [-Force <SwitchParameter>] [-WhatIf <SwitchParameter>]  
Stop-Process [-PassThru <SwitchParameter>] [-Force <SwitchParameter>] -InputObject <Process[]> [-WhatIf <SwitchParameter>]



Stop Properties

Command: Stop-Process

Synopsis:  
Stops one or more running processes.

Resources	Prompt	Value	Description
Confirm	<input checked="" type="checkbox"/>	True	Prompts you for confirmation before executing...
Debug	<input type="checkbox"/>		
ErrorAction	<input type="checkbox"/>		
ErrorVariable	<input type="checkbox"/>		

Back

Processes

- Services
- Event Logs
- Network Configuration
- Registry
- Drives
- Shares
- Local Users and Groups
- WMI Browser

Navigation

Records

Actions & Details

Messages

PowerGUI Pro Administrative Console (Authoring Mode)

Navigation Tree

- PowerGUI Pro Administrative Console
  - Active Directory
  - Local System
    - Processes
    - Services
    - Event Logs
    - Network Configuration
    - Registry
    - Drives
    - Shares
    - Local Users and Groups
    - WMI Browser
    - Network
    - MobileShell Administration

Results

WS(K)	VM(M)	CPU(s)	Id	ProcessName	
2004	2500	66	1.64	4648	adclist
283756	332572	1127	31.11	7424	AdminConsole
1196	200	23		2008	AEADISRV
76604	29648	805	81.06	3892	Agent
7920	3216	98		2036	AgentService
2472	1140	63		2504	apUpdate
1988	1708	63		1228	aticbox
1416	660	33		968	atiesnox

PowerShell Script

```
Clear All
```

#region \*\*\*\*\* Execution started - TreeNode: Processes \*\*\*\*\*

```
Get-Process | Select-Object -property 'Handles', 'NPM(K)', 'PM(K)', 'WS(K)', 'VM(M)', 'CPU(s)', 'Id', 'Pro
```

#endregion \*\*\*\*\* Execution completed - TreeNode: Processes \*\*\*\*\*

#region \*\*\*\*\* Execution started - TreeNode: Processes \*\*\*\*\*

```
Get-Process | where { $_.Name -eq 'adclist' } | Stop-Process -Confirm
```

#endregion \*\*\*\*\* Execution stopped - TreeNode: Processes \*\*\*\*\*

Operation aborted by user

# Admin.Tools.PowerWF

The screenshot shows the PowerWF Studio interface. The main workspace displays a 'Sequential Workflow' containing a 'pipelineSequence' activity. Inside this sequence, there are two activities: 'getProcess' and 'stopProcess'. A context menu is open over the 'stopProcess' activity, listing various actions such as 'View Results...', 'Edit PowerShell...', 'View PipelineSequence', 'View Cancel Handler', 'View Fault Handlers', 'Create Parameter', 'Cut', 'Copy', 'Paste', 'Delete', 'Delete All', 'Tracking', 'Breakpoints', 'Disable', 'Collapse', 'Add Workflow to Project', and 'Properties'. The 'Properties' window on the right shows the configuration for the selected 'stopProcess' activity, including its name, description, and output settings.

The screenshot shows the PowerShell script editor for the 'stopProcess' activity. The script contains the following code:

```
1 Get-Process -Name notepad |
2 Stop-Process -
```

The 'Stop-Process' activity is expanded to show its properties, including:

- Confirm
- Debug
- ErrorAction
- ErrorVariable
- Force
- Id
- InputObject
- Name
- OutBuffer
- OutVariable

The 'Properties' window on the right shows the configuration for the 'Stop-Process' activity, including its description, output types, and property details. The 'Id' property is set to 'System.Int32[]'. The console window at the bottom shows the command prompt with the following text:

```
PS C:\Users\thkrause\Documents\PowerWF Studio\Samples\dataToSCOM>
```

# Admin.Tools.Monitoring



```
# Service definition
define service{
    use                               generic-service      ; Name of service template

    hostgroup_name                     http-servers-dept22
    service_description                HTTP
    is_volatile                         0
    check_period                       24x7
    max_check_attempts                 3
    normal_check_interval               3
    retry_check_interval                1
    contact_groups                     admins,http-admins-dept22
    notification_interval              30
    notification_period                24x7
    notification_options                w,u,c,r
    check_command                       check_http
}
```

A screenshot of the Nagios web interface. A blue arrow points from the service definition code above to the "Service Status Totals" table in the interface. The interface shows a sidebar with navigation links and a main content area with status tables and a host details table.

**Current Network Status**  
Last Updated: Wed Sep 22 10:26:10 PDT 2004  
Updated every 90 seconds  
Nagios® - www.nagios.org  
Logged in as nagiosadmin

Host Status Totals				Service Status Totals				
Up	Down	Unreachable	Pending	Ok	Warning	Unknown	Critical	Pending
4	0	0	0	4	0	0	0	0
<a href="#">All Problems</a>		<a href="#">All Types</a>		<a href="#">All Problems</a>		<a href="#">All Types</a>		

Host Status Details For All Host Groups				
Host	Status	Last Check	Duration	Status Information
webserv1	UP	09-22-2004 02:53:11	0d 16h 59m 4s	PING OK - Packet loss = 0%, RTA = 0.41 ms
webserv2	UP	09-21-2004 17:27:51	0d 16h 58m 19s	(Host assumed to be up)
webserv3	UP	09-21-2004 17:28:36	0d 16h 57m 34s	(Host assumed to be up)
webserv4	UP	09-21-2004 17:29:21	0d 16h 56m 49s	(Host assumed to be up)

4 Matching Host Entries Displayed

# Admin.Tools.Configuration



# Chef

```
package { 'openssh-server':  
  ensure => installed,  
}  
  
file { ['/etc/ssh/sshd_config':  
  source => 'puppet:///modules/sshd/sshd_config',  
  owner  => 'root',  
  group  => 'root',  
  mode   => '640',  
  notify => Service['sshd'], # sshd will restart whenever you  
                           # edit this file.  
  require => Package['openssh-server'],  
}  
  
service { 'sshd':  
  ensure => running,  
  enable => true,  
  hasstatus => true,  
  hasrestart => true,  
}
```



The screenshot shows the Puppet Dashboard interface for node `client2.example.com`. The interface includes a navigation menu on the left with options for Nodes, Class, and Group. The main content area displays the node's status, including a 'Daily run status' bar chart showing successful runs over the last 30 days, a 'Run Time (ms)' line graph showing the elapsed time in milliseconds for each run, and a 'Recent reports (34)' table.

Reported at	Total	Failed	Runtime
2010-10-18 11:03 UTC	16	1	0:00
2010-10-18 11:01 UTC	12	0	0:00
2010-10-18 11:01 UTC	15	0	0:00
2010-10-18 11:02 UTC	19	1	0:00

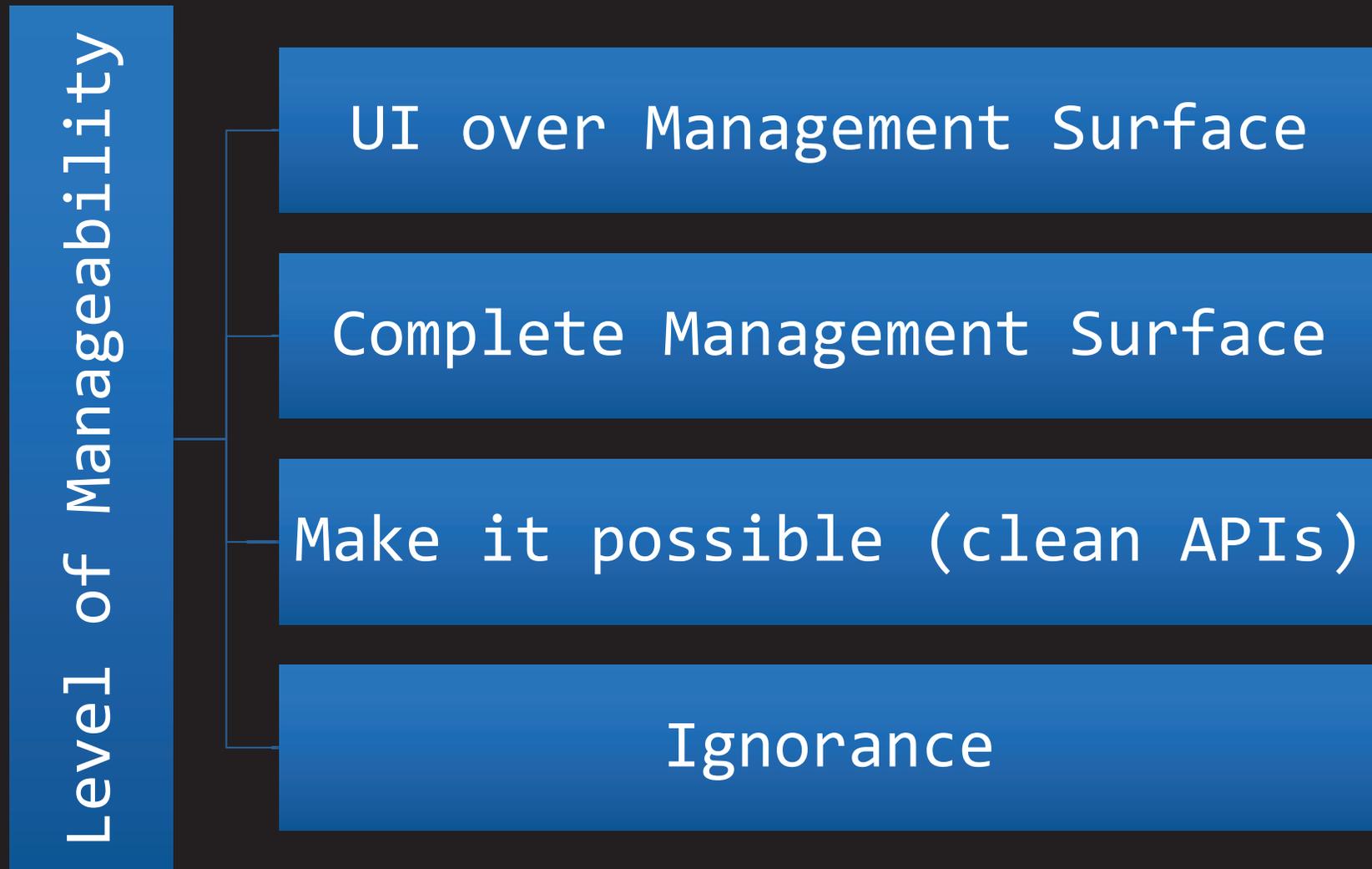
# Admin.Tools.Patterns

- ✓ Show before/after execution
- ✓ 2 way – text/graphical
- ✓ (text based) languages create systems or flows
- ✓ Python, Ruby, PowerShell, Groovy, Bash
- ✓ Designed for consistency, extensibility, scriptability



# Dev.Practices.ManageableSystems

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# To : Developers

## Subject: Call to Action

---

- ✓ Now it's getting complicated...
- ✓ Uncut from <http://queue.acm.org/detail.cfm?id=1921361>

A Plea to Software Vendors from Sysadmins - 10 Do's and Don'ts



# To : Developers

## Subject: Call to Action

---

- ✓ DO have a "silent install" option.
- ✓ DON'T make the administrative interface a GUI.
- ✓ DO have a configuration file that is an ASCII file, not a binary blob.
- ✓ DO include a clearly defined method to restore all user data, a single user's data, and individual items



To : Developers

Subject: Call to Action

---

- ✓ DO instrument the system so that we can monitor more than just, “Is it up or down?”
- ✓ DO tell us about security issues.
- ✓ DON'T scribble all over the disk.
- ✓ DO publish documentation electronically on your Web site.



To : Administrators  
Subject: Call to Action

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- ✓ Realize that developers CAN change the system
- ✓ Realize that you are a customer (or part of the team)
- ✓ Share your experiences with the system, pain points, the tools you're using, the way you monitor and troubleshoot



To : Administrators  
Subject: Call to Action

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- ✓ Demand better documentation.
  - ✓ Talk to Developers!
  - ✓ Demand proper administrative interfaces. Explain, what you need and why.
  - ✓ Unify systems management across apps and layers!  
Automate, test, code!  
-> Infrastructure as code
-