



The Evolution of Managing Windows Computers at CERN

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Agenda

- ◆ Background
- ◆ Some Figures
- ◆ OS Installations & Computer Management Status
- ◆ The Evolution
 - - ◆ Windows in the Controls Community
- ◆ Computer Management Framework Project
- ◆ Demo
- ◆ Conclusion



Background

◆ November 2004

- ◆ **The controls community at CERN launched a working group to coordinate computing in the controls environment**
 - ◆ A request for a set of tools to manage Windows computers resulted in the creation of the “Computer Management Framework (CMF)” project

◆ January 2006

- ◆ **The scope of CMF was extended to all CERN computers**
 - ◆ Similar requirements between controls and desktop management
 - ◆ Limitations faced in the current desktop management
 - ◆ Re-usability of components



Some Figures

- ◆ **Active Desktop PCs**
 - ◆ **5100 Windows XP SP2**
 - ◆ **150 Windows XP SP1**
 - ◆ **500 Windows 2000 Professional**
- ◆ **Server infrastructure** ■
 - ◆ **180 Windows 2003 Server 32-bit**
 - ◆ **5 Windows 2003 Server 64-bit**
 - ◆ **3 Domain Controllers**



OS Installation Status

- ◆ **NICE* installation floppy**
 - ◆ **Booting under DOS**
 - ◆ **Connects to file server to start the OS installation**
- ◆ **Limitations**
 - ◆ **Lan Manager authentication**
 - ◆ **New PCs have no floppy anymore, no DOS network drivers**
 - ◆ **System partition must be FAT(32)**
 - ◆ **No automatic hardware recognition possible**
- ◆ **Not compliant with controls requirements**

*NICE = Windows at CERN



Application and Patch Management Status

- ◆ **System Management Server (SMS)**
 - ◆ Patch deployment
 - ◆ Majority of the application deployment
 - ◆ More information at HEPix 2005 Karlsruhe
- ◆ **Active Directory Group Policy Objects**
 - ◆ PC customizations, restrictions, ...
 - ◆ Eg. PCs in public area
 - ◆ Start-up and logon scripts
 - ◆ Application deployment bypassing SMS
 - ◆ Some applications (eg. Office)
 - ◆ Initial Microsoft strategy



Application and Patch Management Status

- ◆ **Limitations**
 - ◆ **In-depth SMS knowledge necessary to use the tool**
 - ◆ Complex scripting to deploy applications
 - ◆ **Little control on the deployment schedule**
 - ◆ **Limited messaging capabilities**
 - ◆ Additional home made pop-ups needed, confusing for the user
 - ◆ Is this NICE or a new virus ?
 - ◆ **Computer configuration partially lost after reinstallation**
 - ◆ Add/Remove programs
 - ◆ **Response time too slow (>1 day)**
 - ◆ **No application management outside CERN intranet**
 - ◆ **Management tools available only on Windows (no web interface)**
- ◆ **Unacceptable situation for the controls community**



Controls Community Requirements

- ◆ Be able to **reinstall** a computer and preserve its configuration
- ◆ “**Single click**” installation
- ◆ Be able to define **computer sets** at which packages can be assigned (defining computer roles)
- ◆ Be able to control the **schedule** at which these packages are delivered to computers
- ◆ Be able to control the **reboot actions** that are sometimes necessary
- ◆ Be able to **reuse** the packages made centrally for security patches and centrally managed applications
- ◆ Be able to **build packages** for control applications and distribute them in the same way used for centrally managed packages
- ◆ Management done from a **platform independent UI**
- ◆ In depth Windows **skills should not be necessary** to manage computer sets using pre-published packages



The Evolution

◆ Milestones

- ◆ **CMF launched late 2004 by the controls community**
- ◆ **Extension of the scope in Jan 2006**

A common technology for all Windows based activities at CERN, including the standard desktop service (NICE), control systems, public PCs, CAD Workstations, ...

◆ Project was organized in 2 components

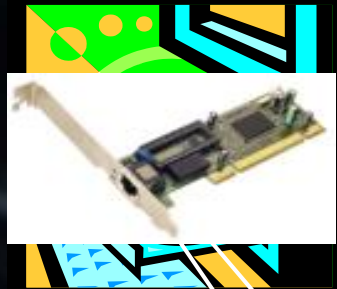
- ◆ **Improve the Installation Services**
- ◆ **Build a “Management Framework” where Windows administrators of locally and centrally managed activities can easily define and control the exact configuration of their computers sets**



OS Installation with CMF

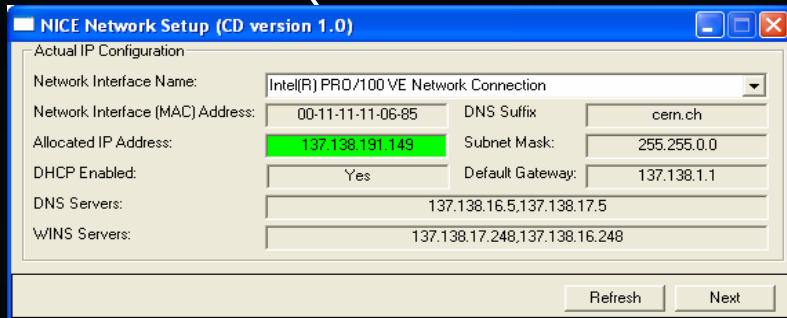
- ◆ **Floppy installation method replaced by network boot**
 - ◆ **No need anymore for floppies or images, just press F12 at boot**
 - ◆ **Based on the Windows Pre-Installation Environment (WinPE)**
 - ◆ A customized WinPE ISO image is downloaded in RAM from a Remote Installation Server (RIS) using PXE boot
 - ◆ **Intuitive GUI allows disk partitioning and formatting, OS version selection list based on HW detection**
 - ◆ **Computer name provided by DHCP server based on MAC address**
 - ◆ **Automated PC driver configuration based on HW detection**
 - ◆ Drivers dynamically injected during installation
- ◆ **Installation from CD version or PXE boot floppy for older hardware**

NICE Installation Services

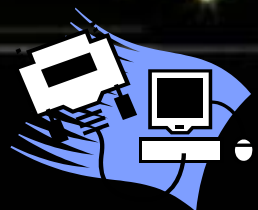


WinPE ISO download
in System RamDisk

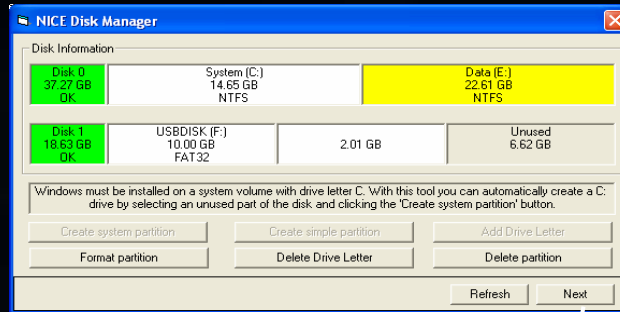
NetSetup app



R/W
Ramdisk
creation



WinPE network startup



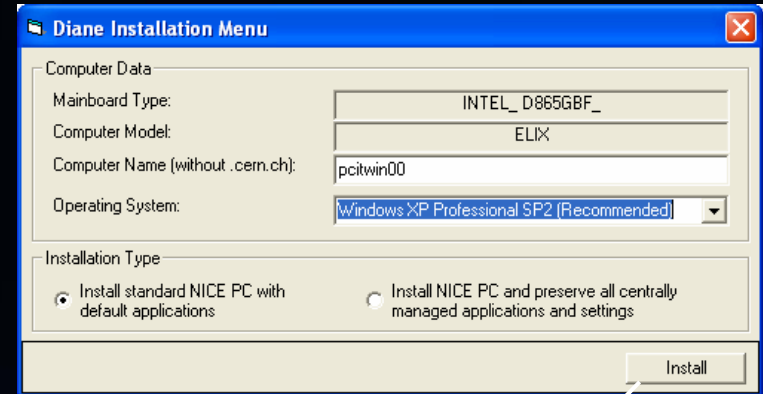
DiskMgt app

Save
Settings

Installation Sequence

Save
Settings

R/W RamDisk

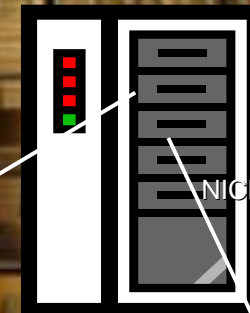


DianeMenu app

Configuration Data
(DianeMenu.ini)

Save
Settings

File Server



NICE OEMDrvs
and Windows
distribution files

Tools and Static
Configuration Data copy

Unattend patch

Data from saved settings
& configuration data

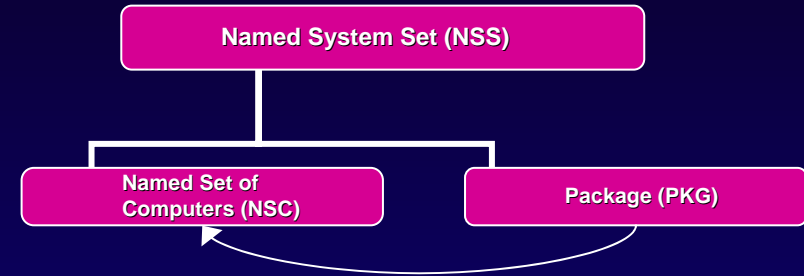


Windows Installation
process



Computer Management with CMF

- ◆ **Organized by activities (NSS)**
 - ◆ **Centrally managed activities**
 - ◆ Central NICE services
 - ◆ CAD and engineering support group
 - ◆ **Locally managed activities**
 - ◆ Empowers local admins to fully control their computers
- ◆ **Inside each activity, CMF allows to**
 - ◆ **group computers into sets, “Named Set of Computers” (NSC)**
 - ◆ A set defines a role, eg. Control Room PCs
 - ◆ Authorization verified with network database
 - ◆ **create or re-use shared packages (PKG)**
 - ◆ A package defines the action(s) to be performed
 - ◆ Security patches, applications, policy settings, tasks, ...
 - ◆ **define the deployment map and schedule**
 - ◆ By linking PKGs with NSCs





CMF Principal Functionality

- ◆ **Delegation Scheme of computer sets**
 - ◆ **Locally Managed NSC: The administrator has full control over the deployment map and schedule**
 - ◆ Receives information email for mandatory centrally deployed packages, eg. critical updates
 - ◆ Mostly used in the controls environment
 - ◆ **Centrally Managed NSC: The set receives by default all centrally managed packages, but the administrator can**
 - ◆ deny them on a individual base
 - ◆ add other packages to his set
 - ◆ Used by Public PCs, Engineering PCs,...
 - ◆ **Delegation possible on all levels (NSS-NSC-PKG)**



CM

nality

Named System Set (NSS) Administration

NSS Selection: ATLAS-DCS

NSS General Information

Unique Identifier: CMF_NSS_70

NSS Name: ATLAS-DCS

Description: ATLAS Detector Control System

Responsible Account Name: vfilimon

Responsible Full Name: Viatcheslav Filimonov, viatcheslav.filimonov@cern.ch

Delegated Administrators

mdobson (Marc Dobson, marc.dobson@cern.ch)
 unel (Gokhan Unel, gokhan.unel@cern.ch)

User Name:

General Settings

Packages in NSS are shareable

sets

s full control over

entrally deployed

Mostly used in the controls environment

◆ **Centrally Managed NSC: The set receives by default all centrally managed packages, but the administrator can**

- ◆ deny them on a individual base
- ◆ add other packages to his set

Used by Public PCs, Engineering PCs,...

◆ **Delegation possible on all levels (NSS-NSC-PKG)**



CMF

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◆ Delegation

◆ Local

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 unel (Gokhan Unel, gokhan.unel@cern.ch)

Named Set of Computers (NSC) Administration

NSS Selection: ATLAS-DCS NSC Selection: ATLAS_IC

Main Information | **NSC Memberships** | **Package Collections**

NSC General Information

Unique Identifier: CMF_NSC_166

NSC Name: ATLAS_IC

Description: Inner Detector computer set

Responsible Account Name: sandaker

Responsible Full Name: Heidi Sandaker, heidi.sandaker@cern.ch

Move NSC to NSS: ATLAS-DCS

Delegated Administrators

pferrari (Pamela Ferrari, pamela.ferrari@cern.ch)

User Name:

General Settings

NSC is Locally Managed Deny Advertisements Deny Restarts Deny Postpone

Prefer Installations when not logged on

Snapshots (Not yet implemented)

No Snapshots taken Snapshots can be bypassed Snapshots are mandatory



CM

nality

◆ Delegation

◆ Local

sets

as full control over

Named System Set (NSS) Administration

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Named Set of Computers (NSC) Administration

NSS Selection: ATLAS-DCS NSC Selection: ATLAS_IC

Main Information

NSC General Information

Unique Identifier: CMF_NSC_166
 NSC Name: ATLAS_IC
 Description: Inner Detector computer set
 Responsible Account Name: sandaker
 Responsible Full Name: Heidi Sandaker, heidi.sandaker@cern.ch
 Move NSC to NSS: ATLAS-DCS

Delegated Administrators

pferrari (Pamela Ferrari, pamela.ferrari@cern.ch)

User Name:

General Settings

NSC is Locally Managed Deny Advertisements Deny Restarts Deny P...
 Prefer Installations when not logged on

Snapshots (Not yet implemented)

No Snapshots taken Snapshots can be bypassed Snapshots are ma...

Package (PKG) Administration

NSS Selection: ATLAS-DCS PKG Selection: ATLAS_IC_POLICY

Main Information

Package General Information

Unique Identifier: CMF_PKG_254
 PKG Name: ATLAS_IC_POLICY
 Description: Common IS Settings
 Responsible Account Name: vfilimon
 Responsible Full Name: Viatcheslav Filimonov, viatcheslav.filimonov@cern.ch
 Contact Person or Email: Viatcheslav Filimonov
 Instructions URL:
 Move PKG to NSS: ATLAS-DCS

Delegated Administrators

sandaker (Heidi Sandaker, heidi.sandaker@cern.ch)

User Name:



CMF

◆ CMF provides

◆ Application

◆ MSI records

◆ Support

Package Type Selection

Application
 Patch
 Policy Settings
 Scheduled Task

Package Type Details

Application Name: Microsoft Office Professional Edition 2003

Install Command: msiexec.exe

Install Cmd Options: /qb /i \\cern.ch\dfs\Applications\Microsoft\Office2003SP2\PRO11.MSI TRANSFORMS=""\cern.ch\dfs\Ap

Install Working Directory:

Uninstall Command: msiexec.exe

Uninstall Cmd Options: /qb /x {90110409-6000-11D3-8CFE-0150048383C9}

Uninstall Working Directory:

Restart delay (mins): False Intermediate Restart delay (mins): False Silent (No announcement)

Product or Uninstall Key: {90110409-6000-11D3-8CFE-0150048383C9}

Product Version: 11.0.7969.0

Deployment Criteria: Custom Criteria

Custom Criteria: (vbs script)

```
' if Office 2000 or Office XP or Office 2003 SP1 installed, exit with
0 : not applicable else exit with 3 : rely on Product Key
on error resume next
Set wshShell = CreateObject("WScript.Shell")
SP1 = "0"
SP1 = WshShell.RegRead
("HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentV
ersion\Uninstall\{90110409-6000-11D3-8CFE-0150048383C9}
\Version")
O2K = "0"
```

Deployment Version:

This item depends on the previous items (will be reinstalled if previous items do)

Application Name: Microsoft Office FrontPage 2003

Install Command: msiexec.exe

Install Cmd Options: /qb /i \\cern.ch\dfs\Applications\Microsoft\Office2003SP2\FP2003\FP11.MSI TRANSFORMS=""\cern.ch\

Install Working Directory:

Uninstall Command: msiexec.exe

Uninstall Cmd Options: /qb /x {90170409-6000-11D3-8CFE-0150048383C9}

Uninstall Working Directory:

Restart delay (mins): False Intermediate Restart delay (mins): False Silent (No announcement)

Product or Uninstall Key: {90170409-6000-11D3-8CFE-0150048383C9}

Product Version: 11.0.7969.0

Deployment Criteria: Custom Criteria



CMF Principal Functionality

- ◆ CMF provides 3 types of packages
 - ◆ Application & patch Management
 - ◆ MSI recommended but can be setup.exe, .vbs items
 - ◆ Support for multiple items/package
 - ◆ Policy Settings
 - ◆ Eg. Logon restrictions, accessibility & control limitations

Package (PKG) Administration

NSS Selection: AB-CO PKG Selection: Policy settings

Main Information Package Details Deployment Dependencies

Package Type Selection

Application Policy Settings Scheduled Task

Package Type Details

GPOID: {23BC6B9F-EBBD-4A64-A535-63A2DF2D88A1}

Click the button to open the Group Policy Editor.

>>> Open the GPO Editor <<<

Click 'Open' and 'Run' on the upcoming dialog boxes.

You will also have to provide your password again in case this web site user is different from the local PC user.

Execution Context

System

Save PKG Duplicate PKG Delete PKG



CMF Principal Functionality

- ◆ CMF provides 3 types of packages
 - ◆ Application & patch Management
 - ◆ MSI recommended but can be setup.exe, .vbs items
 - ◆ Support for multiple items/package
 - ◆ Policy Settings
 - ◆ Eg. Logon restrictions, accessibility & control limitations
 - ◆ Scheduled Task

The screenshot shows the 'Package (PKG) Administration' window. At the top, there are two dropdown menus: 'NSS Selection' set to 'AVC' and 'PKG Selection' set to 'weekly reboot'. Below these are four tabs: 'Main Information', 'Package Details', 'Deployment', and 'Dependencies'. The 'Package Type Selection' section has three radio buttons: 'Application', 'Policy Settings', and 'Scheduled Task', with 'Scheduled Task' selected. The 'Package Type Details' section contains the following fields:

- Task Command Line: shutdown.exe
- Task Command Line Options: -r -f
- Days to run: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday (checked), Sunday
- Execution Start Time (hour-min): [] []
- Frequency (hours-mins): 0 [] 0 [] If empty, task will run once per day.
- Maximum Run Time (mins): 1 []

The 'Execution Context' section has three radio buttons: 'System' (checked), 'Console User', and 'All Users'. At the bottom right, there are three buttons: 'Save PKG', 'Duplicate PKG', and 'Delete PKG'.



CMF Principal Functionality

- ◆ Package deployment
 - ◆ Deployment methods (in reverse order of priority)
 - ◆ Published, Published and Pre-installed, Applied or Denied

Named Set of Computers (NSC) Administration

NSS Selection: ATLAS-DCS NSC Selection: ATLAS_DCS_TDAQ

Main Information NSC Memberships Package Collections

Deployment Configuration

Order	Package Name	Deployment	Date Applied	Postpone Days	Forced-Warning Date	
999	Adobe Acrobat Reader 7.0.5 (NICE)	Applied	2006-02-01-16:57:43			[Edit]
999	Atlas TDAQ Policy (ATLAS-DCS)	Applied	2006-02-01-17:03:51			[Edit]
999	CERN Phonebook 6.4 (NICE)	Applied	2006-02-01-16:58:08			[Edit]
999	CERN Printing Package 4.0 (multisite) (NICE)	Applied	2006-02-01-16:58:00			[Edit]
999	MS Remote Desktop Client 5.2 (NICE)	Applied	2006-03-15-18:07:25			[Edit]
999	Putty 0.58 (NICE)	Applied	2006-03-15-18:07:03			[Edit]
999	MS Visual Studio 2005 Standard Edition (NICE)	Published to NSC				[Edit]
999	Sun Java Runtime Environment v1.5.0.06 (NICE)	Published + Install				[Edit]
999	MS Windows Media Player 10 (NICE)	Denied				[Edit]

Available Packages (NSS)

NSS Filter: NICE Mandatory Packages Only

- MS Windows Media Player 10 (NICE)
- MS Windows Media Player 9 (NICE)
- MS Windows Support Tools (XP/ Server 2003) (NICE)
- MSDN Library April 2005 (NICE)
- MSDN Library for VS 2005 (NICE)
- MSDN Library January 2006 (NICE)
- Oracle Instant Client 10.2.0.1 (NICE)
- Putty 0.58 (NICE)**
- RealNetworks Real Player 8 Basic (NICE)
- Sun Java Runtime Environment v1.4.2.09 (NICE)
- Sun Java Runtime Environment v1.5.0.06 (NICE)
- Symantec Antivirus 10.0 (NICE)
- Windows Desktops Patches Base W2000 (NICE)

Publish Publish and Install Apply/Update Deny

Save NSC Duplicate NSC Delete NSC



CMF Principal Functionality

- ◆ Package deployment
 - ◆ Deployment methods
 - ◆ Published, Published and Pre-installed, Applied or Denied
 - ◆ Deployment timing
 - ◆ Postpone, no logon preference, forced in time

Named Set of Computers (NSC) Administration

NSS Selection: NICE NSC Selection: Default NICE Environment

Main Information NSC Memberships Package Collections

Deployment Configuration

Order	Package Name	Deployment	Date Applied	Postpone Days	Forced-Warning Date	
0	Macromedia Flash Player 8.0.22 Upgrade (NICE)	Applied	2006-02-17-16:44:35	5		[Edit]
0	MS .Net Framework 1.1 Service Pack 1 (NICE)	Applied	2005-11-09-16:38:07			[Edit]
0	MS Office Update (NICE)	Applied	2006-03-07-20:10:31			[Edit]
0	MS Windows Installer 3.1 (NICE)	Applied	2006-01-17-16:17:54			[Edit]
0	Windows Desktops Patches Base W2000 (NICE)	Applied	2005-11-09-10:49:56			[Edit]
0	Windows Desktops Patches Base WXP (NICE)	Applied	2005-11-09-10:49:59			[Edit]
0	Windows Desktops Patches Dec 05 (NICE)	Applied	2005-12-14-09:21:47		2005-12-19-10:00	[Edit]
0	Windows Desktops Patches Feb 06 (NICE)	Applied	2006-02-17-15:05:09			[Edit]
0	Windows Desktops Patches Jan 06 - Second Patch (NICE)	Applied	2006-01-11-14:02:41		2006-01-18-10:00	[Edit]
0	Windows Desktops Patches Jan 06 (NICE)	Applied	2006-01-06-10:24:11		2006-01-06-12:00	[Edit]
0	Windows Desktops Patches Mar 06 (NICE)	Applied	2006-03-22-20:11:21		2006-03-27-12:00	[Edit]



CMF Principal Functionality

- ◆ Package deployment
 - ◆ Deployment methods
 - ◆ Published, Published and Pre-installed, Applied or Denied
 - ◆ Deployment timing
 - ◆ Postpone, no logon preference, forced in time
 - ◆ Deployment criteria
 - ◆ WMI based & custom criteria

Package (PKG) Administration

NSS Selection: NICE PKG Selection: CERN Phonebook 6.4

Main Information | **Package Details** | **Deployment** | **Dependencies**

Deployment/Execution Timing

Package is Enabled Package is Mandatory Package is Private to NSS

Target Operating Systems

All Windows Versions (including not listed) Microsoft Windows 2000 Professional - Service Pack 4
 Microsoft Windows XP Professional Microsoft Windows XP Professional - Service Pack 1
 Microsoft Windows XP Professional - Service Pack 2 Microsoft(R) Windows(R) Server 2003, Standard Edition - Service Pack 1
 Microsoft® Windows Vista™ Ultimate Edition Version 6.0

Process Dependencies

List of Process (image name) that should not run (separated by ';'):
phone2000.exe

Special Conditions

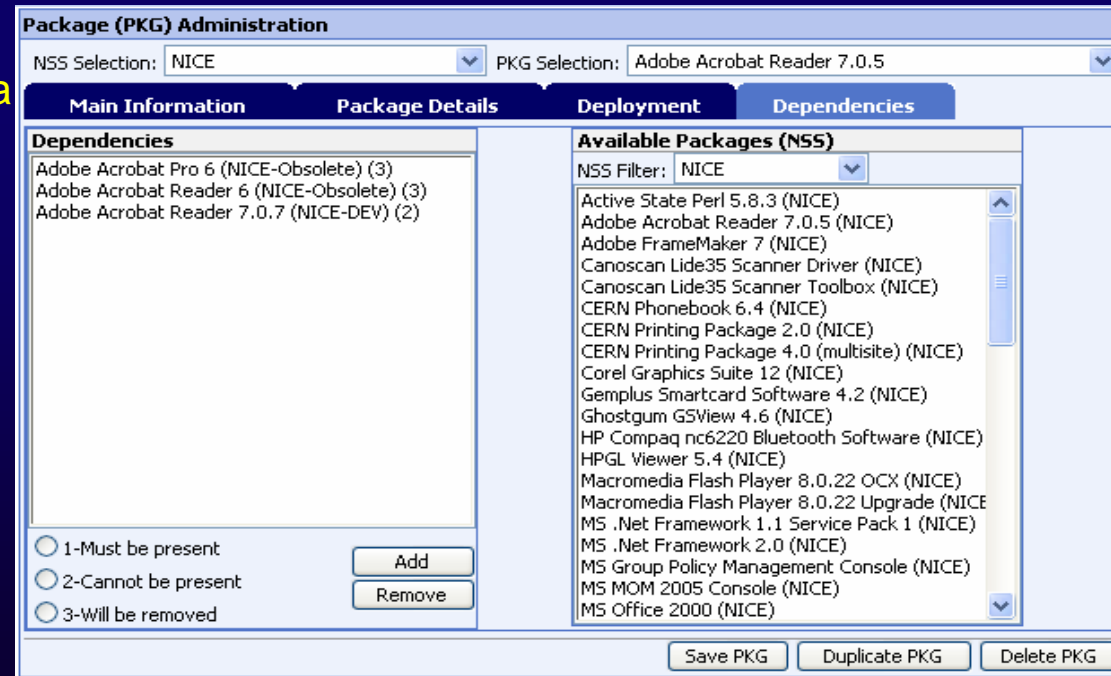
Criteria / WMI Class: File does not exist
Parameter / WMI DeviceID: phone2000.exe
Data: |
WMI Property: Logic: And Used During: All

Buttons: Add, Save PKG, Duplicate PKG, Delete PKG, Remove, Reset Error Counters



CMF Principal Functionality

- ◆ **Package deployment**
 - ◆ **Deployment methods**
 - ◆ Published, Published and Pre-installed, Applied or Denied
 - ◆ **Deployment timing**
 - ◆ Postpone, no logon preference, forced in time
 - ◆ **Deployment criteria**
 - ◆ WMI based & custom criteria
 - ◆ **Dependencies between packages**
 - ◆ Updates, applications conflicts





CMF Principal Functionality

- ◆ Package deployment
 - ◆ Deployment methods
 - ◆ Published, Published and Pre
 - ◆ Deployment timing
 - ◆ Postpone, no logon preference
 - ◆ Deployment criteria
 - ◆ WMI based & custom criteria
 - ◆ Dependencies between packages
 - ◆ Updates, applications conflicts
 - ◆ Consistency checks and corrective actions

Distribution Point Load		Last Update: 2006-04-05-15:20:53 (PC_Status_1)					
CERNCMF02 Clients:	1668						
CERNCMF03 Clients:	3065						
CERNCMF04 Clients:	2390						
Total CMF Installed Clients:	7123						
CMF Computers with Active Client:	4502						
PKG deployment errors (Active clients only)							
Computer Name	PKG Name	Deployment	Status	LastChecked	LatestPostpone	ErrorLevel	Comments
Global CMF errors (Active clients only)							
Computer Name	Status	Comments	Last Report				
abpc10433		No OSVersion info - .NET problem	2006-04-05-15:19:00				
abpc10500		No OSVersion info - .NET problem	2006-04-05-15:17:40				
abpc10536		No OSVersion info - .NET problem	2006-04-05-15:17:05				
abpc11088		No OSVersion info - .NET problem	2006-04-05-15:20:18				
alphalars		No OSVersion info - .NET problem	2006-04-05-15:18:01				
bis1		No OSVersion info - .NET problem	2006-04-05-15:19:11				
cspc01		No OSVersion info - .NET problem	2006-04-05-15:18:38				
emr01		No OSVersion info - .NET problem	2006-04-04-18:13:19				
german-x40		No OSVersion info - .NET problem	2006-04-04-17:41:19				
lappc-eu4		No OSVersion info - .NET problem	2006-04-05-15:18:34				
mish6		No OSVersion info - .NET problem	2006-04-05-15:19:10				
pc2sl139		No OSVersion info - .NET problem	2006-04-05-15:21:07				
pcaitdc03		No OSVersion info - .NET problem	2006-04-05-15:21:23				



CMF Principal Functionality

- ◆ Add/Remove web-based interface
 - ◆ “Published” packages appear in the web based interface
 - ◆ All selected PKGs will be re-installed after a OS re-installation

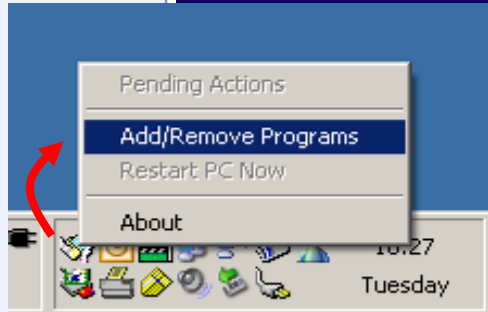
Add/Remove CMF Packages More Details

Computer Information

Computer Name: pcitis14 [\[View info from Network Database\]](#)
Operating System: Microsoft Windows XP Professional - Service Pack 2
Last Full Check: 2006-04-05-14:30:28
Locally Managed: No
Restart Pending: No
Current Activity: Installing *CERN Phonebook 6.4* in the System Context

Available Packages **Package Type:** Application **Category:** All Details

Package Name	Install	Current Status	Last Checked	
Active State Perl 5.8.3	<input type="checkbox"/>	Not Installed	2006-04-05-14:29:39	[Details]
Adobe Acrobat Professional 7.0.5	<input type="checkbox"/>	Not Installed	2006-04-05-14:29:41	[Details] [Help]
Adobe Acrobat Professional 7.0.5 (rev.1)	<input type="checkbox"/>	Not Installed	2006-04-05-14:29:39	[Details] [Help]
Adobe Acrobat Professional 7.0.7	<input type="checkbox"/>	Not Installed	2006-04-05-14:29:41	[Details] [Help]
Adobe Acrobat Reader 7.0.5	<input checked="" type="checkbox"/>	Installed	2006-04-05-14:29:31	[Details]
Adobe Acrobat Reader 7.0.7	<input type="checkbox"/>	Not Installed	2006-04-05-14:29:41	[Details]
Adobe FrameMaker 7	<input type="checkbox"/>	Not Installed	2006-04-05-14:29:39	[Details]
Apple QuickTime 7.0.4	<input type="checkbox"/>	Not Installed	2006-04-05-14:29:41	[Details]
BOINC 5.2.13	<input type="checkbox"/>	Not Installed	2006-04-05-14:29:41	[Details] [Help]
CERN Phonebook 6.4	<input type="checkbox"/>	Not Installed	2006-04-05-14:30:27	[Details]
CERN Phonebook 6.5	<input type="checkbox"/>	Not Installed	2006-04-05-14:29:51	[Details]
CERN Printing Package 2.0	<input checked="" type="checkbox"/>	Installed	2006-04-05-14:29:32	[Details]
CERN Printing Package 4.0 (multisite)	<input type="checkbox"/>	Not Installed	2006-04-05-14:29:39	[Details]
CERN SMS Remote Client	<input checked="" type="checkbox"/>	Installed	2006-04-05-14:29:35	[Details]
Corel Graphics Suite 12	<input type="checkbox"/>	Not Installed	2006-04-05-14:29:39	[Details] [Help]
Gemplus Smartcard Software 4.2	<input type="checkbox"/>	Not Installed	2006-04-05-14:29:39	[Details]





CMF Principal Functionality

- ◆ **Add/Remove web-based interface**
 - ◆ **“Published” packages appear in the web based interface**
 - ◆ **All selected PKGs will be re-installed after a OS re-installation**
- ◆ **Computer Status & Reporting**
 - ◆ **Detailed computer status feedback**

CERN Computer Management Framework (CMF)

User: deloouse (Forms authentication [details])

- Administration
- Configuration Details & Reporting
 - System Configuration Views
 - Global Overview
 - NSS Detailed View
 - NSC Configuration Details
 - NSC Inheritance Diagram
 - PKG Configuration Details
 - Computer Configuration & Reports
 - Computer Configuration & Status
 - Computer Action Log
 - Computer Software Metering Report
 - Computer Software Inventory
 - Computer Hardware Inventory
 - Computer File Inventory
 - Administrative Reports & Logs
 - Global Error Report
 - PKG Status & Error Report
 - Front-End User Action Log
 - Server Task Logs
 - Global CMF Reporting
 - Documentation

Computer Configuration & Status

Computer Name:

Details

Computer Name: pcitis14 [\[View info from Network Database\]](#)
Operating System: Microsoft Windows XP Professional - Service Pack 2
Last Full Check: 2006-04-03-13:47:48
Locally Managed: No
Restart Pending: No
Current Activity:

NSC Memberships

NSC Name	NSS Name	Deny Advertisements	Deny Restart	Deny Postpone	Locally Managed	Prefer Install At No Logon
Default: NICE Environment	NICE	No	No	No	No	No
Testing Applications	NICE-DEV	No	No	No	No	No

Packages

Package Name	NSS Name	PKG Type	Context	Enabled	Deployment	Current Status	Last Checked	ID	
Active State Perl 5.8.3	NICE	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:44	188	[Details]
Adobe Acrobat Professional 7.0.5	NICE-DEV	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:46	274	[Details]
Adobe Acrobat Professional 7.0.5 (rev.1)	NICE-Obsolete	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:44	170	[Details]
Adobe Acrobat Professional 7.0.7	NICE-DEV	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:47	245	[Details]
Adobe Acrobat Reader 7.0.5	NICE	Application	System	Yes	PublishInst	Installed	2006-04-03-13:47:42	171	[Details]
Adobe Acrobat Reader 7.0.7	NICE-DEV	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:47	246	[Details]
Adobe FrameMaker 7	NICE	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:44	78	[Details]
Apple QuickTime 7.0.4	NICE-DEV	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:48	150	[Details]
BOINC 5.2.13	NICE-DEV	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:48	251	[Details]
CERN Phonebook 6.4	NICE	Application	System	Yes	PublishInst	Installed	2006-04-03-13:47:42	9	[Details]
CERN Phonebook 6.5	NICE-DEV	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:48	285	[Details]
CERN Printing Package 2.0	NICE	Application	System	Yes	PublishInst	Installed	2006-04-03-13:47:42	204	[Details]
CERN Printing Package 4.0 (multisite)	NICE	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:44	88	[Details]
CERN SMS Remote Client	NICE-DEV	Application	System	Yes	PublishInst	Installed	2006-04-03-13:47:43	299	[Details]
Corel Graphics Suite 12	NICE	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:44	75	[Details]
Gemplus Smartcard Software 4.2	NICE	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:44	138	[Details]
Ghostgum GSView 4.6	NICE	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:44	192	[Details]
Hummingbird Exceed 2006	NICE-DEV	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:48	288	[Details]
Hummingbird Exceed3D 2006	NICE-DEV	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:48	205	[Details]
Macromedia Dreamweaver 8	NICE-DEV	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:48	179	[Details]
Macromedia Flash Player 8.0.22 Upgrade	NICE	Patch	System	Yes	Apply	Not Applicable	2006-04-03-13:43:52	206	[Details]
MS .Net Framework 1.1 Service Pack 1	NICE	Patch	System	Yes	Apply	Installed	2006-04-03-13:43:52	74	[Details]
MS Group Policy Management Console	NICE	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:44	122	[Details]
MS IE6 SP2 Patch 912945	NICE-DEV	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:48	259	[Details]
MS IE7 Beta 2	NICE-DEV	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:48	203	[Details]
MS MOM 2005 Console	NICE	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:44	187	[Details]
MS Office 2000	NICE	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:44	166	[Details]
MS Office 2003 SP2	NICE	Application	System	Yes	Publish + PublishInst + ManAdd	Installed	2006-04-03-13:47:41	260	[Details]
MS Office Update	NICE	Patch	System	Yes	Apply	Installed	2006-04-03-13:43:53	269	[Details]
MS Office XP	NICE	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:44	165	[Details]
MS Orca MSI Editor 3.1	NICE	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:44	119	[Details]
MS Project Professional 2003 SP2	NICE	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:45	261	[Details]
MS Proofing Tools for Office 2000	NICE	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:45	200	[Details]
MS Proofing Tools for Office 2003 SP2	NICE	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:45	262	[Details]
MS Proofing Tools for Office XP	NICE	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:45	199	[Details]
MS Remote Desktop Client 5.2	NICE	Application	System	Yes	Publish	Not Installed	2006-04-03-13:47:45	125	[Details]



CMF Principal Functionality

- ◆ **Add/Remove web-based interface**
 - ◆ **“Published” packages appear in the web based interface**
 - ◆ **All selected PKGs will be re-installed after a OS re-installation**
- ◆ **Computer Status & Reporting**
 - ◆ **Detailed computer status feedback**
 - ◆ **Generic reporting capabilities via predefined or custom queries**



Report Information

Report Name:

Computers where an specific application have been installed

Report Description:

Machines where an application has been installed

Run Query!

Parameters for this Query

@Name

Name of the application

CERN Printing Package 4.0 (multisite)

Total Number of retrieved records: 121

PCName	Operating System	Installed date	InstallStatus
aldcs002	Microsoft(R) Windows(R) Server 2003, Standard Edition -		Installed
aldcs006	Microsoft Windows XP Professional - Service Pack 2		Installed
aldcs020	Microsoft Windows XP Professional - Service Pack 2		Installed
alphacpc01	Microsoft Windows XP Professional - Service Pack 2		Installed
amphi-4	Microsoft Windows XP Professional - Service Pack 2		Installed
amphi-40a	Microsoft Windows XP Professional - Service Pack 2		Installed
amphi-6	Microsoft Windows XP Professional - Service Pack 2		Installed
amphi-864	Microsoft Windows XP Professional - Service Pack 2		Installed
atlmcp005	Microsoft Windows XP Professional - Service Pack 2		Installed
atlmcp008	Microsoft Windows XP Professional - Service Pack 2		Installed
atlmcp009	Microsoft Windows XP Professional - Service Pack 2		Installed
c1m269	Microsoft Windows XP Professional - Service Pack 2		Installed
c1n117	Microsoft Windows XP Professional - Service Pack 2		Installed
c1n351	Microsoft Windows XP Professional - Service Pack 2		Installed
c1n403	Microsoft Windows XP Professional - Service Pack 2		Installed
c1n472	Microsoft Windows XP Professional - Service Pack 2		Installed
c1n494	Microsoft Windows XP Professional - Service Pack 2		Installed
c1nx80	Microsoft Windows XP Professional - Service Pack 2		Installed
c1sb80	Microsoft Windows XP Professional - Service Pack 2		Installed
c1sb81	Microsoft Windows XP Professional - Service Pack 2		Installed
c1sba1	Microsoft Windows XP Professional - Service Pack 2		Installed
c1sba2	Microsoft Windows XP Professional - Service Pack 2		Installed
aldcs021	Microsoft Windows XP Professional - Service Pack 2		Installed
aldcs022	Microsoft Windows XP Professional - Service Pack 2		Installed
aldcs023	Microsoft Windows XP Professional - Service Pack 2		Installed
aldcs024	Microsoft Windows XP Professional - Service Pack 2		Installed
cwe-ba6-bt1	Microsoft Windows XP Professional - Service Pack 2		Installed
cwe-ccr-pic	Microsoft Windows XP Professional - Service Pack 2		Installed



CMF Secondary Functionality

- ◆ Hardware Inventory
 - ◆ Based on a list of components to monitor
- ◆ Software Metering
 - ◆ Based on a list of executables to monitor

PC Software Metering Report

Computer Name: pcap14

Computer Information

Computer Name: pcap14
Last Update: 2006-03-31-14:42:34

Metering Report

From: To:

Process Name	Version Filter	Description	Last Checked	Total Duration	Duration	Started	Stopped	User Name
calc.exe		Calculator	2006-03-23-17:10:34					
notepad.exe	5.*	Notepad	2006-03-31-14:15:14	06:56:59	04:19:43 02:36:44 00:00:32	2006-03-31-09:55:31 2006-03-30-10:10:43 2006-03-29-12:22:14	2006-03-31-14:15:14 2006-03-30-12:47:27 2006-03-29-12:22:46	CERN\pace CERN\pace CERN\pace



CMF Secondary Functionality

- ◆ **Hardware Inventory**
 - ◆ Based on a list of components to monitor
- ◆ **Software Metering**
 - ◆ Based on a list of executables to monitor
- ◆ **File Inventory**
 - ◆ Based on a list of files to monitor

The screenshot shows two overlapping windows. The foreground window is titled "PC File Inventory" and displays computer information and a file inventory report. The background window is titled "File Inventory Administration" and shows a list of files with edit and remove buttons.

PC File Inventory

Computer Name:

Computer Information

Computer Name: pcap14
Last Update: 2006-04-02-15:16:52

File Inventory Report

File Path	File Name	Creation Date	Modification Date	Version	Size (bytes)
C:\Program Files\CERN\CMF	cmfagent.exe	2005-12-15-11:32:10	2006-03-31-14:00:02	1.0.2281.23401	106496
C:\Program Files\CERN\CMF	cmfagentui.exe	2005-12-15-11:32:10	2006-03-31-10:03:38	1.0.2281.16309	81920
C:\Program Files\CERN\CMF\Scanner	mbsascanner.exe	2006-01-23-16:20:53	2006-03-31-12:46:03	1.0.2281.21180	77824
C:\Program Files\CERN\NiceAdminService	Runas.exe	2005-12-15-11:28:40	2006-02-13-17:25:04	1.0.2235.31352	49152
C:\Program Files\CERN\NiceAdminWin	NiceAdminWin.exe	2005-12-15-11:28:39	2006-02-21-12:22:24	1.0.2243.22272	110592
C:\Program Files\CERN\NiceAlerter	NiceAlerter.exe	2005-12-15-11:30:55	2006-01-16-14:32:11	1.0.2207.26165	319488

File Inventory Administration

	File Name		
\\CERN\CMF	cmfagent.exe	[Edit]	[Remove]
\\CERN\CMF	cmfagentui.exe	[Edit]	[Remove]
\\CERN\CMF\Scanner	mbsascanner.exe	[Edit]	[Remove]
\\CERN\NiceAdminService	Runas.exe	[Edit]	[Remove]
\\CERN\NiceAdminWin	NiceAdminWin.exe	[Edit]	[Remove]
\\CERN\NiceAlerter	NiceAlerter.exe	[Edit]	[Remove]

PC Software Inventory

Computer Name:

pcap14

Select

Computer Information

Computer Name:

pcap14

Last Update:

2006-04-02-15:16:45

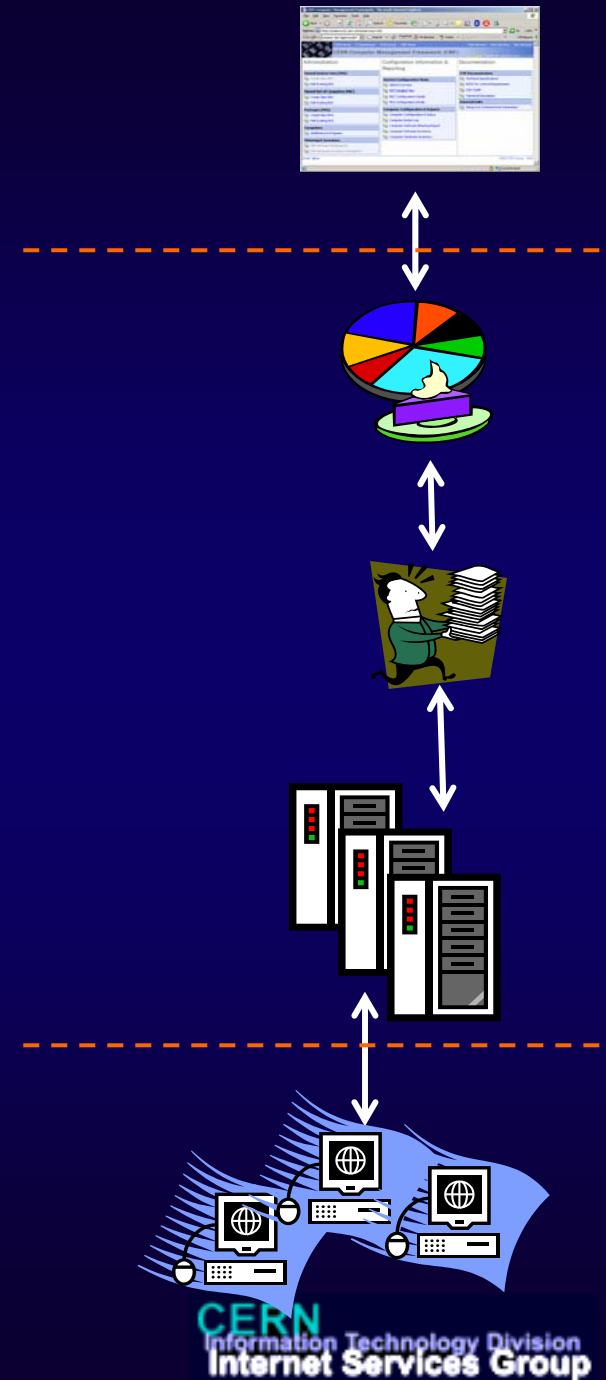
Installed Programs

Program Name	Version	Contact	Install Date	Product Key	CMF
2d3 SteadyMove for Adobe Premiere Pro	1.01.1401		20051216	{94118D5F-2D5D-4BF5-9F84-11FB8A97B566}	
ACDSee 6.0 PowerPack	6.0.3	Technical Support	20051216	{271B64EE-3E1B-4381-A8FE-012390050492}	
Adobe After Effects 6.5	6.5	Technical Support	20051216	{61CEB2D7-8D3B-4247-B75E-A95F6699B90A}	
Adobe Premiere Pro 1.5	1.5			{A14F7508-B784-40B8-B11A-E0E2EEB7229F}	
Adobe Reader 7.0.5	7.0.5	Helpdesk@cern.ch	20051215	{AC76BA86-7AD7-1033-7B44-A70000000000}	
Adobe Reader 7.0.5	7.0.5		20060126	{AC76BA86-7AD7-1033-7B44-A70500000002}	Yes
ATI - Software Uninstall Utility	6.14.10.1012			All ATI Software	
ATI Control Panel	6.14.10.5154			{0BEDBD4E-2D34-47B5-9973-57E62B29307C}	
ATI Display Driver	8.133.2-050525a-024243C-IBM			ATI Display Driver	
Aurigma AVI Processor				Aurigma AVI Processor_is1	
AutoUpdate	1.1			{18D10072035C4515918F7E37EAFACFC}	
CERN Client Printing Package	2.0.0.0000		20051215	{67B6B8DC-5C9C-4B95-B8CF-2244210722B4}	Yes
CERN CMF Agent Package	1.0		20060314	{EDF4C69A-1FB8-4F4C-980D-CBAD15B3F13C}	
CERN Phonebook	6.5	Djilali MAMOUZI - CERN/IT	20060324	{9F9C82BA-66D1-44a6-9EE3-85B89088C3F6}	Yes
CERN Windows Administration Kit	1.1.0.0015		20051215	{DF7D0D83-C024-445B-B118-E98B1C7BD8C0}	
Certificate_Registration_Tool	2.0	Customer Support Department	20051216	{C5E7D24C-8DEE-4843-AE78-7FF62640D26A}	
CorelDRAW Graphics Suite 12	12.0.0.536	Helpdesk@cern.ch	20051215	{505AFDC0-5E72-4928-8368-5DEA385E3647}	Yes
Cryptographic_Service_Provider_Module	2.0	Customer Support Department	20051216	{B0159A01-3D5C-47A9-8442-0BD9CCE67855}	
Cycore Effects 1.0				Cycore Effects	
DivX	6.1			{7B63B2922B174135AFC0E1377DD81EC2}	
DivX Player	6.0			{8ADFC4160D694100B588A22DE9DCABD9}	
Documentation_Module	1.0	Customer Support Department	20051216	{385032CF-F2DC-470D-88BF-ED03342C2609}	
DVD Decrypter (Remove Only)				DVD Decrypter	
Gemplus	4.2.0	Customer Support Department	20051216	{ED1C80D0-8E2E-4DA7-A6F3-4DBC5502C274}	Yes
Gemplus Smart Card Reader Tools				Gemplus Smart Card Reader Tools	
GemSafe Libraries 4.2.0 SP2	4.2.0	Customer Support Department	20051216	InstallShield_{ED1C80D0-8E2E-4DA7-A6F3-4DBC5502C274}	
GemSafe_Generic_Module	1.0	Customer Support Department	20051216	{ED3E9AE1-2E5C-41B0-B8AE-04F16DA1B558}	
Google Toolbar for Internet Explorer				{2318C2B1-4965-11d4-9B18-009027A5CD4F}	
GSLIB_Core Module	1.1	Customer Support Department	20051216	{A09F1C49-E0A4-4705-A377-4E962893791A}	
GSLIB_User_Module	1.0	Customer Support Department	20051216	{3CCF0EC2-702B-4C51-A5E5-5597768B8DBF}	
Hotfix for Windows XP (KB895200)	1		20051215	KB895200	Yes
IBM ThinkPad Battery MaxiMiser and Power Management Features	1.38			Power Features	
Intel(R) PRO Network Connections Drivers				PROSet	
Intel(R) PROSafe for Wired Connections				{403EF592-953B-4794-BCEF-ECAB835C2095}	
Intel(R) PROSet for Wired Connections	7.10.0000	Intel Customer Support	20051215	{16906D21-0656-4F8B-9A01-C3D24B5401FC}	



3 Tier Architecture

- ◆ **Front-End Layer (UIs)**
 - ◆ **Web based User Interfaces for administration**
 - ◆ CMF integrated MS GP Editor
- ◆ **Middle Layer (CMF Servers)**
 - ◆ **Central Database, placeholder for**
 - ◆ Configuration data from FE
 - ◆ Reporting Data from BE
 - ◆ **Management Services**
 - ◆ Various jobs acting as interface between the database and distribution points
 - ◆ **Distribution Points (3 servers for 6000 PCs)**
 - ◆ Configuration data and client feedback
- ◆ **Back-End Layer (Client Software)**
 - ◆ **Running on each participating Windows PC**
 - ◆ **Performs the appropriate actions and sends reports back to distribution points**
 - ◆ **Only OS dependant component**





Demo

- ◆ The “Management Framework” is available at <http://cern.ch/cmfi>

Global View - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Refresh

Address <https://webcmf01.cern.ch/winservices-cmf-dev/ComputerFramework/GlobalView> Go Links CERN Intranet CMF Dev Deloosse's Family Google WinServices site

Package Name (Count)	Description
Deny Adobe Acrobat Reader (172)	Computers where Acrobat Reader is denied - Michel Christaller
Deny CERN Phonebook (178)	Computers where CERN Phonebook is denied - Michel Christaller
Deny CERN Printing Package (177)	Computers where CERN Printing Package is denied - Michel Christaller
Deny MS Office 2000 (203)	Computers where MS Office 2000 is denied - Michel Christaller
Deny MS Office 2003 (205)	Computers where MS Office 2003 is denied - Michel Christaller
Deny MS Office XP (204)	Computers where MS Office XP is denied - Michel Christaller
Deny MS Windows Media Player (174)	Computers where Windows Media Player is denied - Michel Christaller
Deny RealNetworks Real Player (176)	Computers where Real Player is denied - Michel Christaller
Deny Symantec Antivirus (175)	Computers where Symantec Antivirus is denied - Michel Christaller
Active State Perl 5.8.3 (188)	Perl Programming Language / Runtime - Build 809 - Michel Christaller
Adobe Acrobat Reader 7.0.5 (171)	For reading PDF files - Djilali Mamouzi
Adobe FrameMaker 7 (78)	For Publishing Documents - Michel Christaller
Canoscan Lide35 Scanner Driver (58)	Driver for the Canon Canoscan Lide35 Scanner - Alberto Pace
Canoscan Lide35 Scanner Toolbox (59)	Application Software for Canoscan Lide35 Scanner - Alberto Pace
CERN Phonebook 6.4 (9)	CERN Phonebook allows to find people phone numbers and more - Djilali Mamouzi
CERN Printing Package 2.0 (204)	CERN Printer Wizard allows to print on CERN network printers - Ivan Deloosse
CERN Printing Package 4.0 (multisite) (88)	CERN Printer Wizard allows to print on CERN network printers - Ivan Deloosse
Corel Graphics Suite 12 (75)	For creating graphics - includes Corel Draw and Corel Photo Paint - Djilali Mamouzi
Gemplus Smartcard Software 4.2 (138)	Software for Gemplus smartcard reader - Alberto Pace
Ghostgum GSView 4.6 (192)	For viewing postscript files (.PS, .EPS) - Michel Christaller
HP Compaq nc6220 Bluetooth Software (172)	Bluetooth Addon for HP Compaq nc6220 - Christian Isnard
HPGL Viewer 5.4 (111)	For viewing HPGL files - Guy Boch
Macromedia Flash Player 8.0.22 OCX (102)	Flash 8 Player ActiveX - Michel Christaller
Macromedia Flash Player 8.0.22 Upgrade (206)	Macromedia Flash Player 8.0.22 Upgrade - Michel Christaller
MS .Net Framework 1.1 Service Pack 1 (74)	.Net Framework 1.1 Service Pack 1 - Michel Christaller
MS .Net Framework 2.0 (266)	.Net Framework 2.0 - Michel Christaller
MS Group Policy Management Console (122)	For managing Group Policies - Ivan Deloosse
MS MOM 2005 Console (187)	For managing Windows Servers : Microsoft Operations Manager 2005 Console - Michel Christaller
MS Office 2000 (166)	MS Office 2000 - Djilali Mamouzi
MS Office 2003 SP2 (260)	MS Office 2003 (Word/Excel/PowerPoint/Access/FrontPage) - Djilali Mamouzi
MS Office Update (269)	Updates for MS Office - Michel Christaller
MS Office XP (165)	MS Office XP (Word/Excel/PowerPoint/Access/FrontPage) - Djilali Mamouzi
MS Orca MSI Editor 3.1 (119)	Database table editor for creating and editing Windows Installer packages - Djilali Mamouzi
MS Project Professional 2003 SP2 (261)	For planning projects - Microsoft Project Professional 2003 SP2 - Djilali Mamouzi
MS Proofing Tools for Office 2000 (200)	Microsoft Proofing Tools for Office 2000 - Djilali Mamouzi
MS Proofing Tools for Office 2003 SP2 (262)	Microsoft Proofing Tools for Office 2003 SP 2 - Djilali Mamouzi
MS Proofing Tools for Office XP (199)	Microsoft Proofing Tools for Office XP - Djilali Mamouzi
MS Remote Desktop Client 5.2 (125)	Terminal Server client application - Ruben Domingo Gaspar Aparicio
MS Shadow Copy Client (154)	For restoring network files - Michel Christaller
MS Visio Professional 2003 SP2 (80)	Microsoft Visio Professional 2003 SP2 - Djilali Mamouzi
MS Visual Studio 2003 .Net Enterprise Architect (158)	Development environment (VB .Net, C#, C++, J#) - Michel Christaller
MS Visual Studio 2005 Standard Edition (267)	Development environment (VB .Net, C#, C++, J#). Install also "MSDN Library for VS 2005" - Michel Christaller
MS Windows Administration Tools (XP/ Server 2003) (186)	Administration Tools (XP/ Server 2003) - for administrators - Michel Christaller
MS Windows Installer 3.1 (155)	Windows Installer 3.1 - Michel Christaller
MS Windows Media Player 10 (157)	Standard media player on Windows (for Win XP) - Michel Christaller
MS Windows Media Player 9 (161)	Standard media player on Windows (for Win 2000) - Michel Christaller
MS Windows Support Tools (XP/ Server 2003) (184)	Windows Support Tools (XP/ Server 2003) - for administrators - Michel Christaller
MSDN Library April 2005 (82)	Documentation for Visual Studio developers - Djilali Mamouzi
MSDN Library for VS 2005 (268)	Documentation for Visual Studio developers - Djilali Mamouzi
MSDN Library January 2006 (273)	Light client with Oracle Drivers - Ruben Domingo Gaspar Aparicio
Oracle Instant Client 10.2.0.1 (234)	SSH utility for Windows - Andreas Wagner
Putty 0.58 (131)	For playing Real Audio files (.RA, .RAM) - Michel Christaller
RealNetworks Real Player 8 Basic (162)	Formerly called Java Virtual Machine - Alberto Pace
Sun Java Runtime Environment v1.4.2.09 (175)	Formerly called Java Virtual Machine - Alberto Pace
Sun Java Runtime Environment v1.5.0.06 (174)	CERN Managed Antivirus - Sebastien Dellabella
Symantec Antivirus 10.0 (143)	Patches for Windows 2000 desktops (Base of Sept 05) - Michel Christaller
Windows Desktops Patches Base W2000 (87)	Patches for Windows XP desktops (base of Sept 05) - Michel Christaller
Windows Desktops Patches Base WXP (73)	Patches (December 05) for Windows desktops - Michel Christaller
Windows Desktops Patches Dec 05 (134)	Patches (February 06) for Windows desktops - Michel Christaller
Windows Desktops Patches Feb 06 (220)	Patches (January 06) for Windows desktops - Michel Christaller
Windows Desktops Patches Jan 06 (141)	Patches (January 06) for Windows desktops - Second Patch - Michel Christaller
Windows Desktops Patches Jan 06 - Second Patch (147)	Patches (March 06) for Windows desktops - Michel Christaller
	Patches (November 05) for Windows desktops - Michel Christaller
	Patches (October 05) for Windows desktops - Michel Christaller
	Updates for Windows desktops - Michel Christaller
	For managing compressed files (.ZIP) - Djilali Mamouzi

Packages (PKG):

CERN Computer Management Framework (CMF)

User: **deloouse** (Forms authentication [details])

- Administration**
- Named System Sets (NSS)**
 - Create New NSS
 - Edit Existing NSS
- Named Set of Computers (NSC)**
 - Create New NSC
 - Edit Existing NSC
- Packages (PKG)**
 - Create New PKG
 - Edit Existing PKG
- Computers**
 - Add/Remove CMF Packages
- Metering & Inventory**
 - Edit Software Metering List
 - Edit Hardware Inventory Parameters
 - File Inventory Parameters
- Configuration Details & Reporting**
- System Configuration Views**
 - Global Overview
 - NSS Detailed View
 - NSC Configuration Details
 - NSC Inheritance Diagram
 - PKG Configuration Details
- Computer Configuration & Reports**
 - Computer Configuration & Status
 - Computer Action Log
 - Computer Software Metering Report
 - Computer Software Inventory
 - Computer Hardware Inventory
 - Computer File Inventory
- Administrative Reports & Logs**
 - Global Error Report
 - PKG Status & Error Report
 - Front-End User Action Log
 - Server Task Logs
- Global CMF Reporting**
- Documentation**

Front End Action Log		From:		To:			
DateTime	UserName	Page	ActionName	Details	Result	SrvAck	
2006-04-03-15:02:04	niceris	Recreate	Recreate	pctstcc2:2	explain		
2006-04-03-14:13:08	psadm	Recreate	Recreate	abpc11159:1	explain	2006-04-03-14:13:47	
2006-04-03-13:54:57	admisnar	NSSCreate	SaveEntry	176:Deny RealNetworks Real Player:NSC record successfully saved!	explain	2006-04-03-13:55:39	
2006-04-03-13:47:02	sercocp	Recreate	Recreate	pcest1800e42:2	explain	2006-04-03-13:47:45	
2006-04-03-13:22:09	faidel	Recreate	Recreate	pcworkshop1:2	explain	2006-04-03-13:22:48	
2006-04-03-11:51:38	dmitrif	Recreate	Recreate	pcitco151:1	explain	2006-04-03-11:54:00	
2006-04-03-11:45:37	tcarvao	AddRemove	SaveEntry	pcitis24:259>1	explain	2006-04-03-11:45:38	
2006-04-03-11:44:46	isnard	AddRemove	SaveEntry	pcitis27:258>2	explain	2006-04-03-11:44:48	
2006-04-03-11:39:27	ACHRISTO	Recreate	Recreate	PCEDG001:2	explain	2006-04-03-11:40:23	
2006-04-03-11:34:50	tcarvao	AddRemove	SaveEntry	pcitis24:203>2	explain	2006-04-03-11:34:51	
2006-04-03-11:31:00	srvavat	NSSCreate	SaveEntry	140:MCP_DS:NSC record successfully saved!	explain	2006-04-03-11:31:46	
2006-04-03-11:30:58	isnard	AddRemove	SaveEntry	pcitis28:212>1	explain	2006-04-03-11:31:00	
2006-04-03-11:29:59	pca	NSSCreate	SaveEntry	140:CCC SPS:NSC record successfully saved!	explain	2006-04-03-11:30:50	
2006-04-03-11:28:53	srvavat	NSSCreate	SaveEntry	140:MCP_DS:NSC record successfully saved!	explain	2006-04-03-11:29:35	
2006-04-03-11:26:48	peron	AddRemove	SaveEntry	pcitudstest2:	explain	2006-04-03-11:26:49	
2006-04-03-11:26:43	peron	AddRemove	SaveEntry	pcitudstest2:285>1	explain	2006-04-03-11:26:44	
2006-04-03-11:21:05	nalmeida	Recreate	Recreate	hpuno1:2	explain	2006-04-03-11:22:44	
2006-04-03-11:11:17	deloouse	AddRemove	SaveEntry	pcitcox3:202>1	explain	2006-04-03-11:11:17	
2006-04-03-11:08:51	deloouse	AddRemove	SaveEntry	pcitcox3:202>2	explain	2006-04-03-11:08:52	
2006-04-03-11:06:36	tcarvao	AddRemove	SaveEntry	pcitis24:131>1	explain	2006-04-03-11:06:37	
2006-04-03-11:02:56	nalmeida	Recreate	Recreate	hpuno1:2	explain	2006-04-03-11:03:42	
2006-04-03-11:01:16	deloouse	AddRemove	SaveEntry	cerncmf01:201>2	explain	2006-04-03-11:01:17	
2006-04-03-10:58:36	deloouse	NSSCreate	SaveEntry	176:Deny RealNetworks Real Player:NSC record successfully saved!	explain	2006-04-03-10:59:21	
2006-04-03-10:56:44	deloouse	AddRemove	SaveEntry	cerncmf01:	explain	2006-04-03-10:56:45	
2006-04-03-10:56:33	deloouse	AddRemove	SaveEntry	cerncmf01:	explain	2006-04-03-10:56:35	
2006-04-03-10:51:54	deloouse	PKGCreate	SaveEntry	201:Error Script:PKG record successfully saved!	explain	2006-04-03-10:52:40	
2006-04-03-10:28:04	sercocp	Recreate	Recreate	pccms08:2	explain	2006-04-03-10:28:47	
2006-04-03-10:25:14	dmitrif	Recreate	Recreate	pcitco151:1	explain	2006-04-03-10:25:58	
2006-04-03-10:23:57	deloouse	AddRemove	SaveEntry	cerncmf01:201>1	explain	2006-04-03-10:24:01	
2006-04-03-10:22:09	swolff	NSSCreate	SaveEntry	112:Testbench:NSC record successfully saved!	explain	2006-04-03-10:23:41	
2006-04-03-10:21:33	deloouse	AddRemove	SaveEntry	cerncmf01:201>2	explain	2006-04-03-10:21:34	
2006-04-03-10:18:51	deloouse	AddRemove	SaveEntry	cerncmf01:201>1	explain	2006-04-03-10:18:54	
2006-04-03-10:17:11	deloouse	PKGCreate	SaveEntry	201:Error Script:PKG record successfully saved!	explain	2006-04-03-10:18:19	
2006-04-03-10:14:58	jpawelcz	Recreate	Recreate	jarek pawelczyk:2	explain	2006-04-03-10:17:32	
2006-04-03-10:14:50	niceris	Recreate	Recreate	pcitcox1:2	explain	2006-04-03-10:15:31	
2006-04-03-10:10:10	deloouse	AddRemove	SaveEntry	cerncmf01:201>2	explain	2006-04-03-10:10:12	
2006-04-03-10:06:25	swolff	AddRemove	SaveEntry	pcitcox1:247>2	explain	2006-04-03-10:06:27	
2006-04-03-10:05:33	deloouse	AddRemove	SaveEntry	pcitcox3:202>1	explain	2006-04-03-10:05:37	
2006-04-03-10:04:36	slueders	AddRemove	SaveEntry	pcitcox1:247>1	explain	2006-04-03-10:04:37	
2006-04-03-09:56:32	swolff	AddRemove	SaveEntry	pcitcox3:224>2	explain	2006-04-03-09:56:32	
2006-04-03-09:51:23	swolff	AddRemove	SaveEntry	pcitcox3:224>1	explain	2006-04-03-09:52:27	
2006-04-03-09:50:52	niceris	Recreate	Recreate	pcitcox4:2	explain	2006-04-03-09:52:22	
2006-04-03-09:45:21	swolff	AddRemove	SaveEntry	pcitcox4:241>2	explain	2006-04-03-09:46:12	
2006-04-03-09:44:56	swolff	NSSCreate	SaveEntry	112:Testbench:NSC record successfully saved!	explain	2006-04-03-09:46:07	
2006-04-03-09:39:56	swolff	AddRemove	SaveEntry	pcitcox3:202>2	explain	2006-04-03-09:40:01	



Current Status & Plans

- ◆ **CMF Network based OS Installation**
 - ◆ **In production since July 2005**
 - ◆ **“Single click” installation support foreseen for June 2006**
 - ◆ Disk partitioning, OS version and Installation Type will be saved into the CMF database
 - ◆ On individual machine base or by NSC membership
 - ◆ **64-bit support also foreseen for June 2006**
 - ◆ Additional WinPE based ISO image
 - ◆ **<http://cern.ch/WinServices/Help/?kbid=100001>**



Current Status & Plans

- ◆ **CMF Desktop Management**
 - ◆ **Under heavy test by the controls community and in IT department since Q4 2005**
 - ◆ The agent is running on all CERN PCs since Jan 2006
 - ◆ **Migration from SMS & GPO to CMF is planned to start this month**
 - ◆ **CMF will also be used for server management later this year**
 - ◆ **Patch management for CERN PCs outside CERN network**
 - ◆ **Future possible extensions**
 - ◆ Java version of the CMF agent for MacOS and Linux
 - ◆ CMF deployment wizard to setup a CMF infrastructure
 - ◆ Common package database



Conclusion

- ◆ **Integrated and compatible with commercial technologies**
 - ◆ **Active Directory, MSI packages, standard registry entries for application detection**
- ◆ **Flexibility**
 - ◆ **Adapted to specific needs and meets the controls requirements**
 - ◆ **Request for changes, improvements and bug fix rapidly implemented**
- ◆ **Responsiveness**
 - ◆ **Significantly improved compared to current desktop technology**
 - ◆ **Maximum 5 minutes for a round trip**
- ◆ **Easy packaging**
 - ◆ **No specific and complex scripting anymore required to deploy applications**
 - ◆ **Eg. Office, Adobe installations and upgrades**
 - ◆ **As before, knowledge is required for building MSI packages**
- ◆ **Easily extensible to other platforms**
 - ◆ **Only the back-end layer is hardware dependant**