

Windows Desktop Applications Life-cycle Management

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Agenda

- Components of the Windows application management activity at CERN
 - Application pool
 - Deployment tools
 - Monitoring tools
 - Managing updates and communicating with the users community
- Case Studies
 - Acrobat Reader : responding to vulnerability disclosures
 - Microsoft Office : follow up of the product evolution
 - Java : how to manage unmanaged?

- Snapshot of the environment
 - ~ 6000 managed Windows machines
 - 95% of Windows XP Sp2
 - 5% of Windows Vista
 - ~40 different sets of computers
 - Having different sets of applications
 - “Local administrators” can manage them using a delegation mechanism
 - Typical managed computers have access to 20 core applications
 - ~100 applications are available “on demand”
 - In addition: updates, service packs or patches



Application Support Levels

- Examples

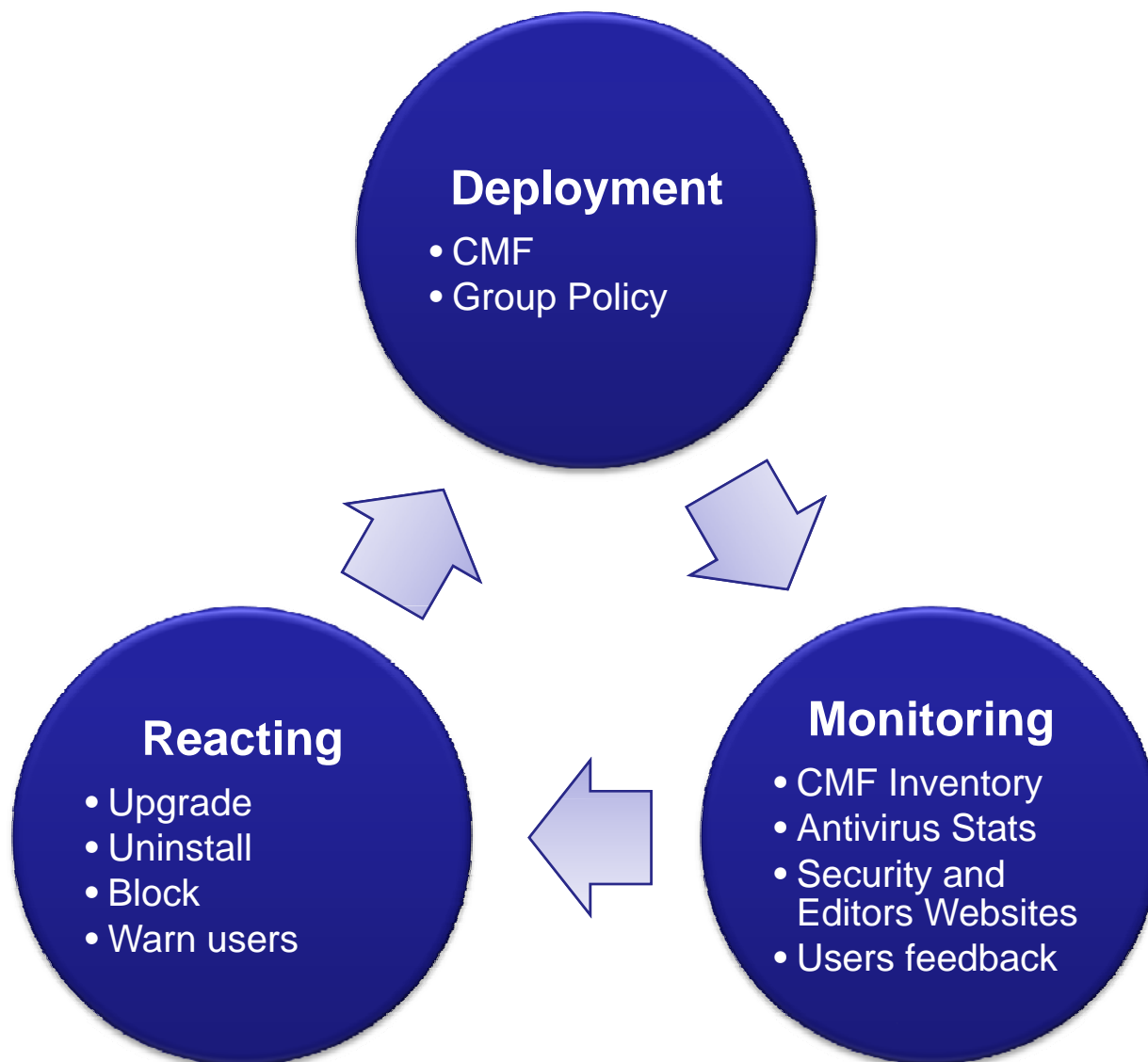
	Installation	Usage	Forced Updates	Optional Updates	E-mail Notifications
Microsoft Office	X	X	X		
Hummingbird Exceed	X	X		X	
Adobe Flash Player	X		X		
Sun Java	X			X	X
Apple QuickTime					X

Application Support Levels

- Examples

	Installation	Usage	Forced Updates	Optional Updates	E-mail Notifications	Monitoring
Microsoft Office	X	X	X			X
Hummingbird Exceed	X	X		X		X
Adobe Flash Player	X		X			X
Sun Java	X			X	X	X
Apple QuickTime					X	X

Processes and Tools



- CMF: Computer Management Framework
 - Application deployment system used at CERN
 - Address requirements of Control community in context of CNIC
 - More flexible than previously used solution (especially for delegation)
 - Used to deploy all applications at CERN
- Group Policies
 - Used to deploy all settings and preferences
 - CMF client is deployed using Group Policies

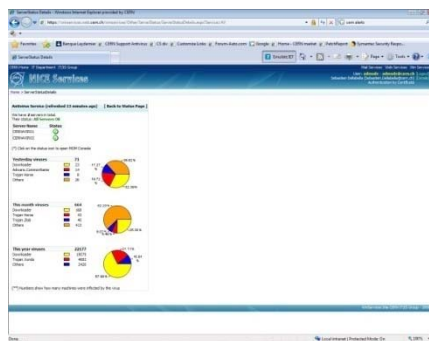


Monitoring Tools

- Key components of our monitoring activity



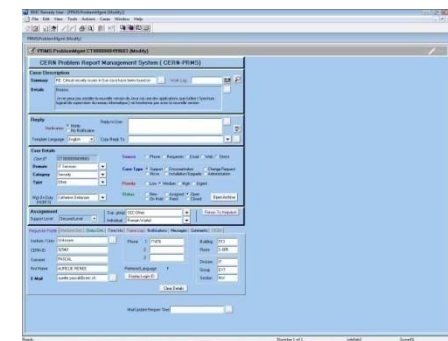
CMF Inventory



Statistics



Websites



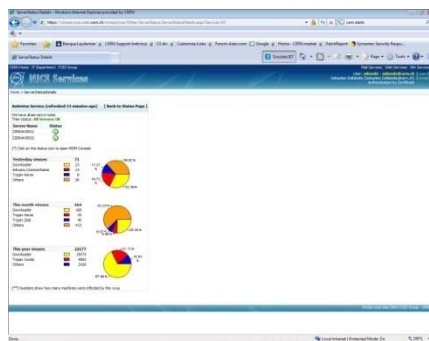
Users Feedback

Monitoring Tools

- Key components of our monitoring activity



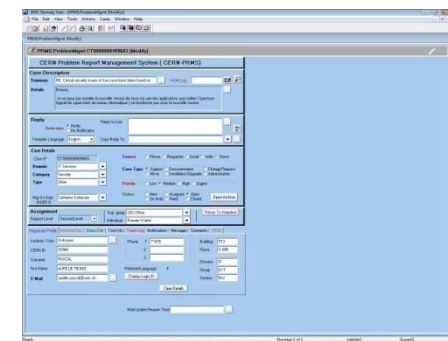
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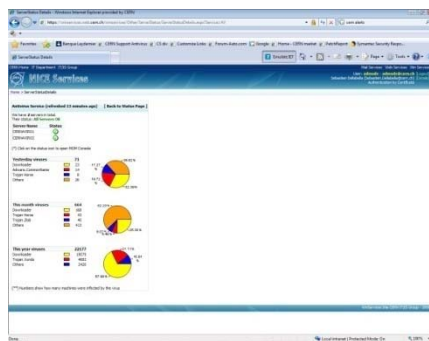
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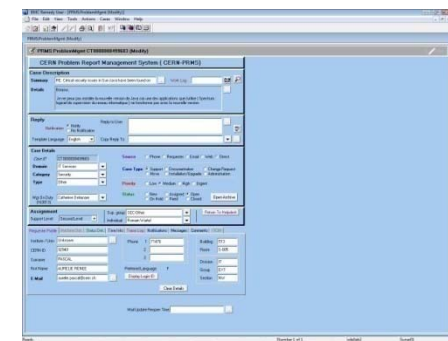
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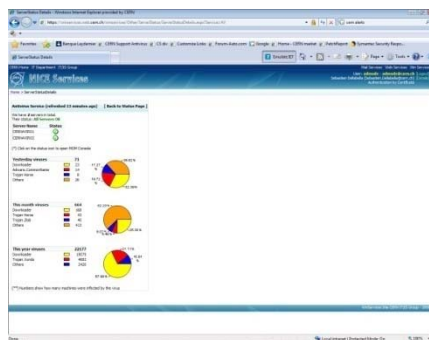
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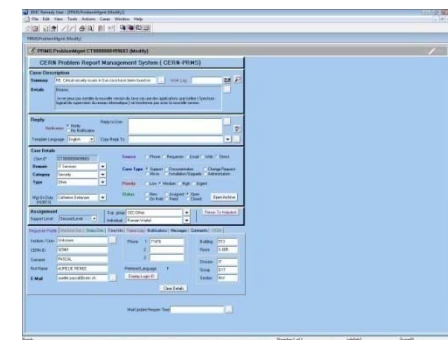
CMF Inventory



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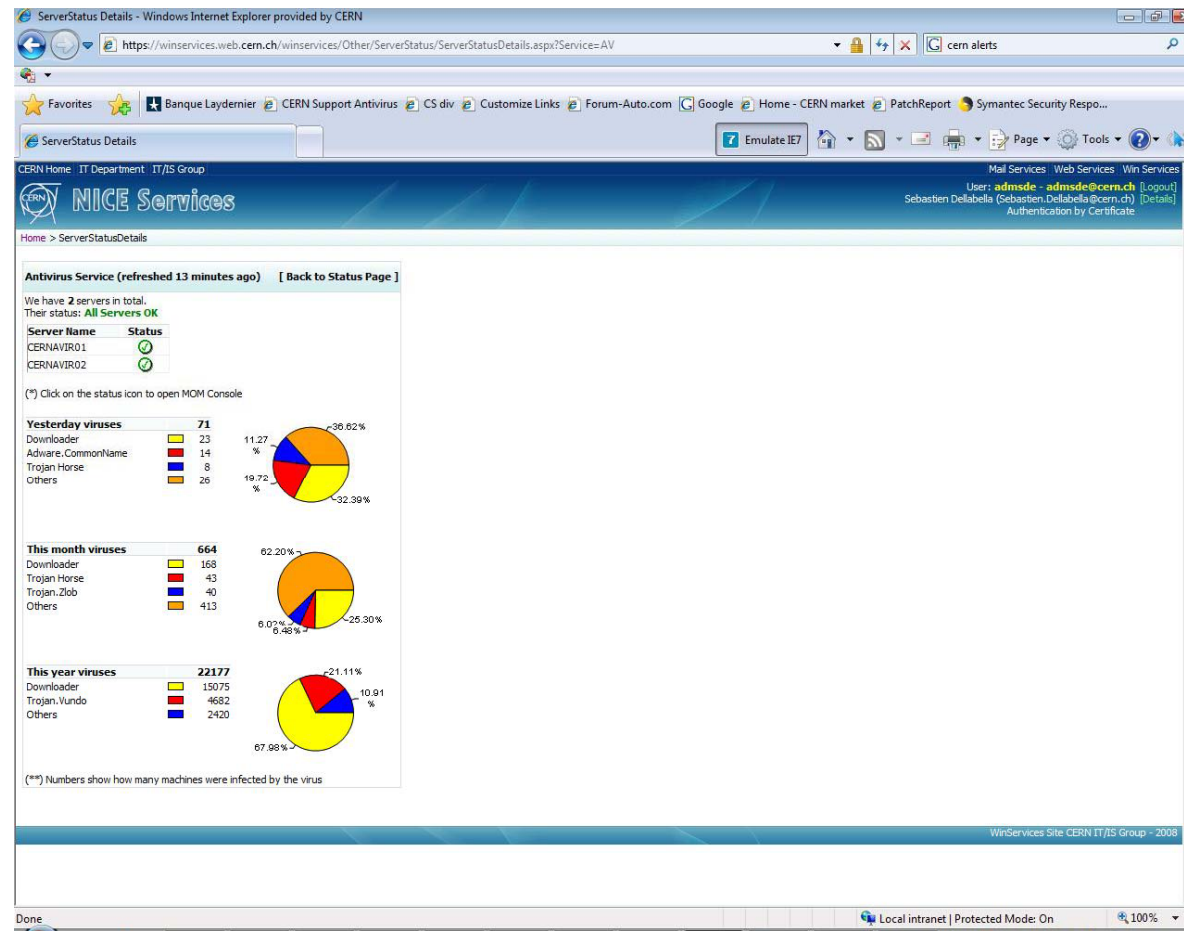
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Users Feedback

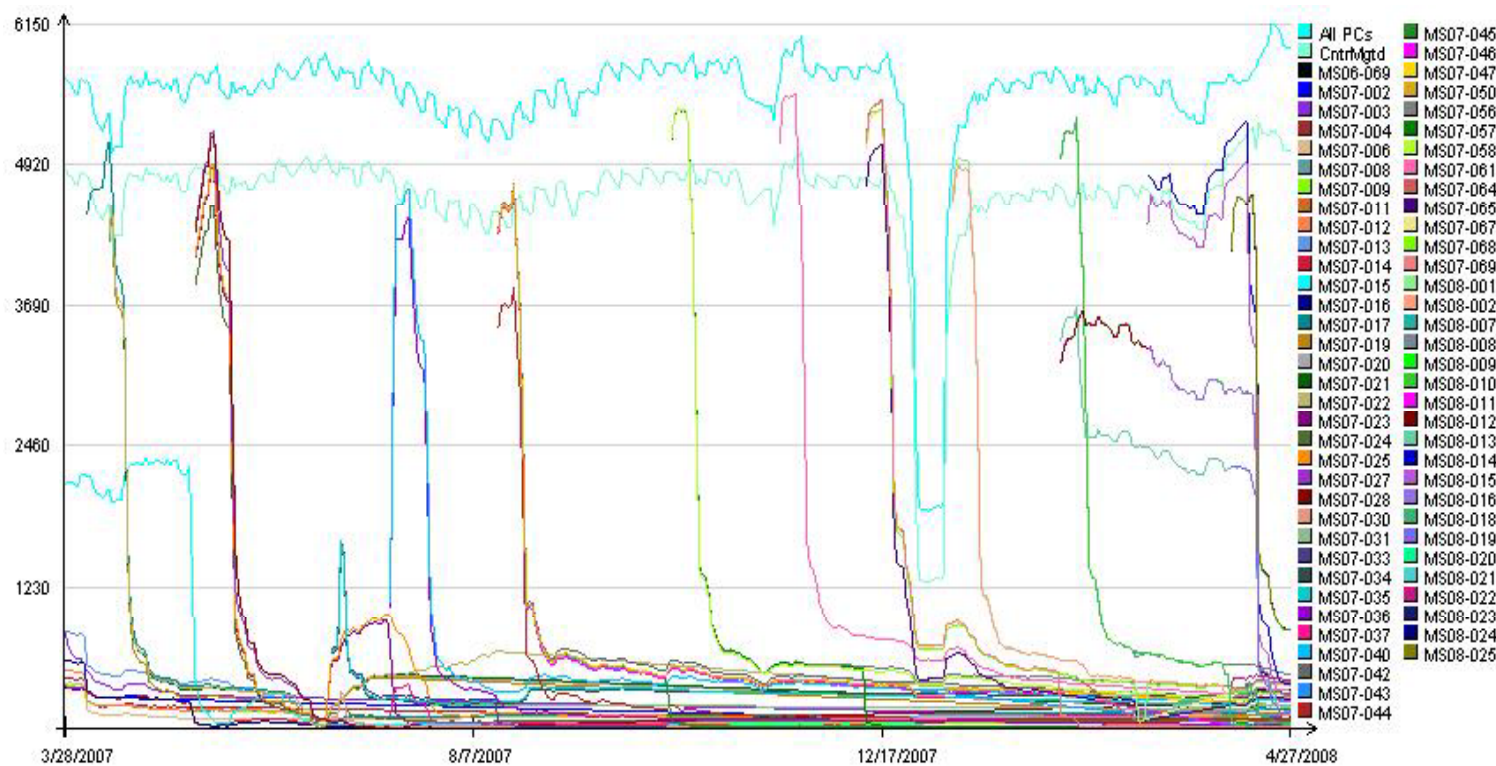
Monitoring Tools

- Statistics



Monitoring Tools

- Statistics (2)





SEVERITY

- Upgrade smoothly:
 - We group mandatory updates every month
 - Optional updates may be published anytime
 - Progressive deployment
- Send email alert and/or schedule update:
 - If an exploit is in the wild for a monitored software (i.e. Java)
- Block an installed software:
 - If a vulnerability is widely exploited and no update available

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 - Java : how to manage unmanaged?



Case Studies

Acrobat Reader: Reacting to vulnerabilities

- Deployment
 - Supported application preinstalled on each Windows computer by default
- Monitoring
 - **Arbitration to stay with version 7.0.9 and being able to upgrade to version 8.0 if required.**
 - **Version 7.0.9 was working fine but:**
 - 4 critical vulnerabilities since 01-2007
 - **Version 8.0 solved vulnerabilities but:**
 - Printing problem with version > 7.0.9
 - Only first page of the document printed when Postscript driver used
- Reacting
 - Decided to upgrade to version 8 at the end of 2007
 - Migrate Postscript drivers to PCL first



Case Studies

Microsoft Office (in 2007): Product evolution

- Deployment at CERN (2007)
 - Office 2003 as default Office suite preinstalled on each new computer
 - Office XP still supported and installed widely at CERN
- Monitoring
 - **Microsoft released Office 2007 (11-2006)**
 - Big change in functionality
 - Suitable only for powerful computers (> 1GB of memory)
 - Increasing user demands for the new version
 - “Wild” installations started to appear
- Reacting
 - In order to limit number of supported Office suites
 - Office 2007 deployment combined with Office XP phase out
 - Package for Office 2007 has been prepared and optional upgrade announced
 - New training courses were organized
 - After some time (08-2007) Office 2007 became the default Office suite preinstalled on all computers having at least 1 GB of RAM



Case Studies

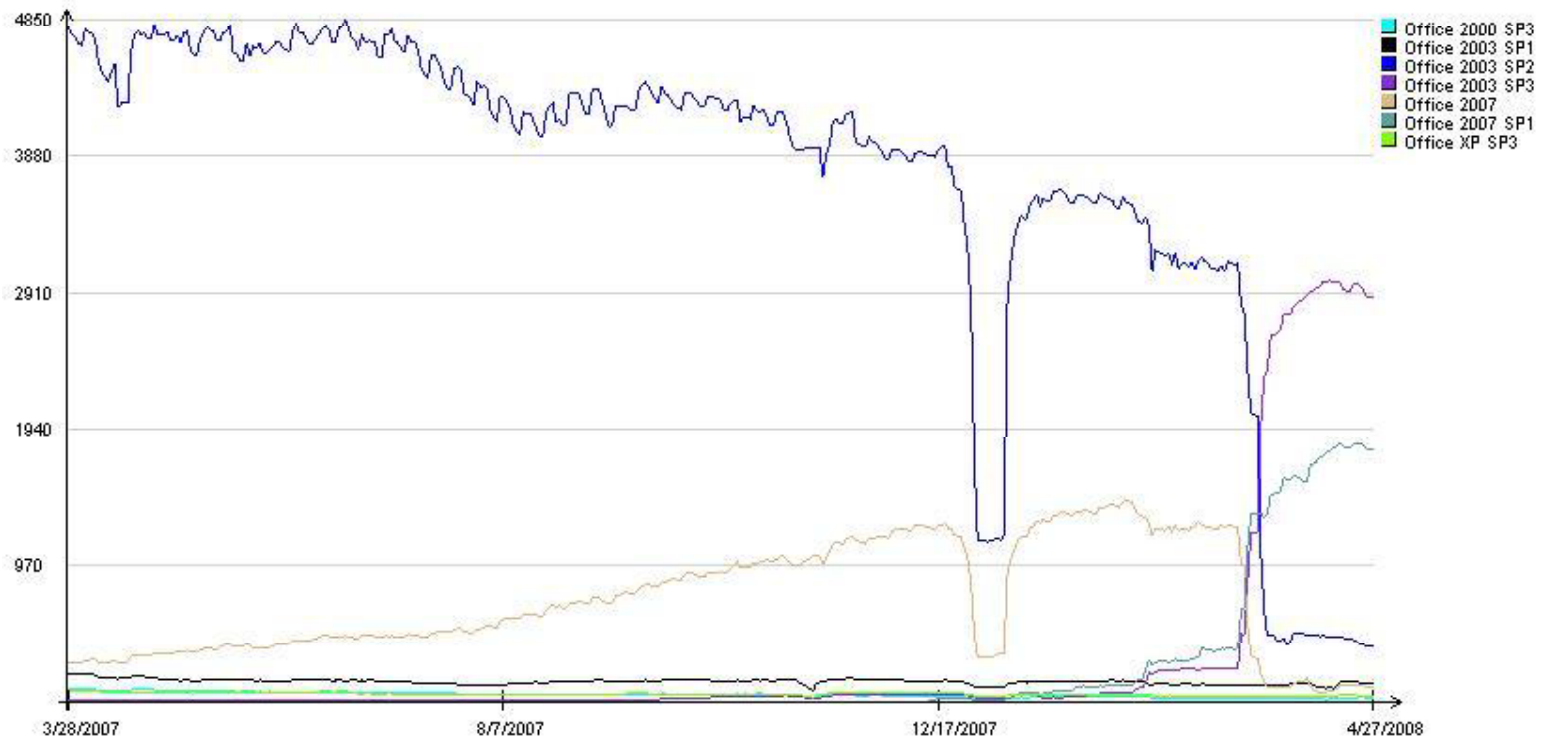
Microsoft Office (in 2008): Product evolution

- Deployment at CERN (2008)
 - Office 2007 default Office suite on new computers (03-2008)
 - Office 2003 SP2 installed on 80% of computers
- Monitoring
 - Microsoft releases monthly security patches
 - **Microsoft released Office 2003 SP3 and Office 2007 SP1 (09-2007)**
- Reacting
 - Gradual deployment of Service Packs on centrally managed computers
 - Updates proposed to “local administrators” to schedule them according to their needs

Case Studies

Microsoft Office (in 2008): Follow-up evolution

- Deployment progression of MS Office



Case Studies

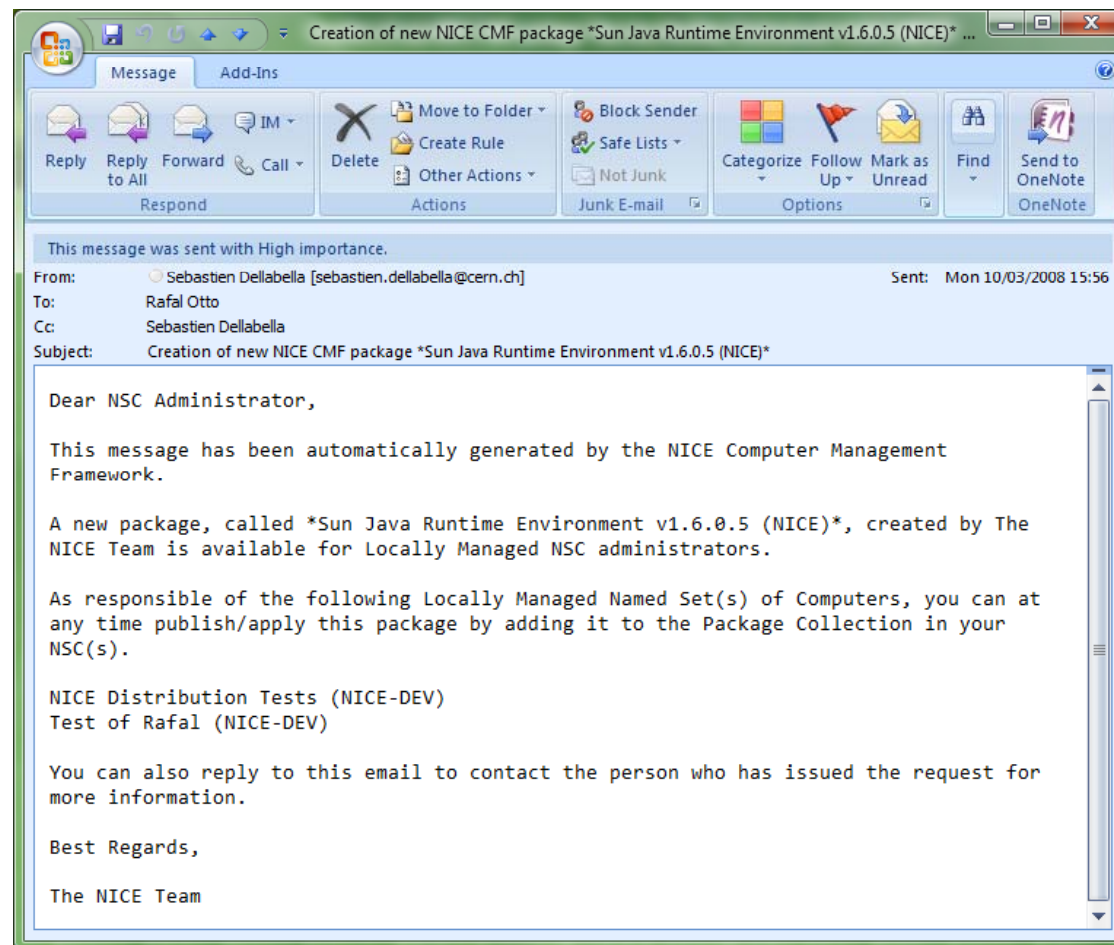
Sun Java: manage the unmanaged

- Deployment
 - Three branches of Java are packaged by us and made available for installation (1.4.x, 1.5.x and 1.6.x)
- Monitoring
 - Computers very often have multiple versions of Java installed
 - **We cannot force updates**
 - Many critical experiment applications require a particular version of Java
 - **Vulnerabilities are disclosed almost every month!**
- Reacting
 - Packages for each new version are created
 - E-mail notifications are sent automatically to owners of vulnerable computers
 - E-mail notifications are sent automatically to “local administrators” encouraging them to deploy new packages

Case Studies

Sun Java: manage the unmanaged

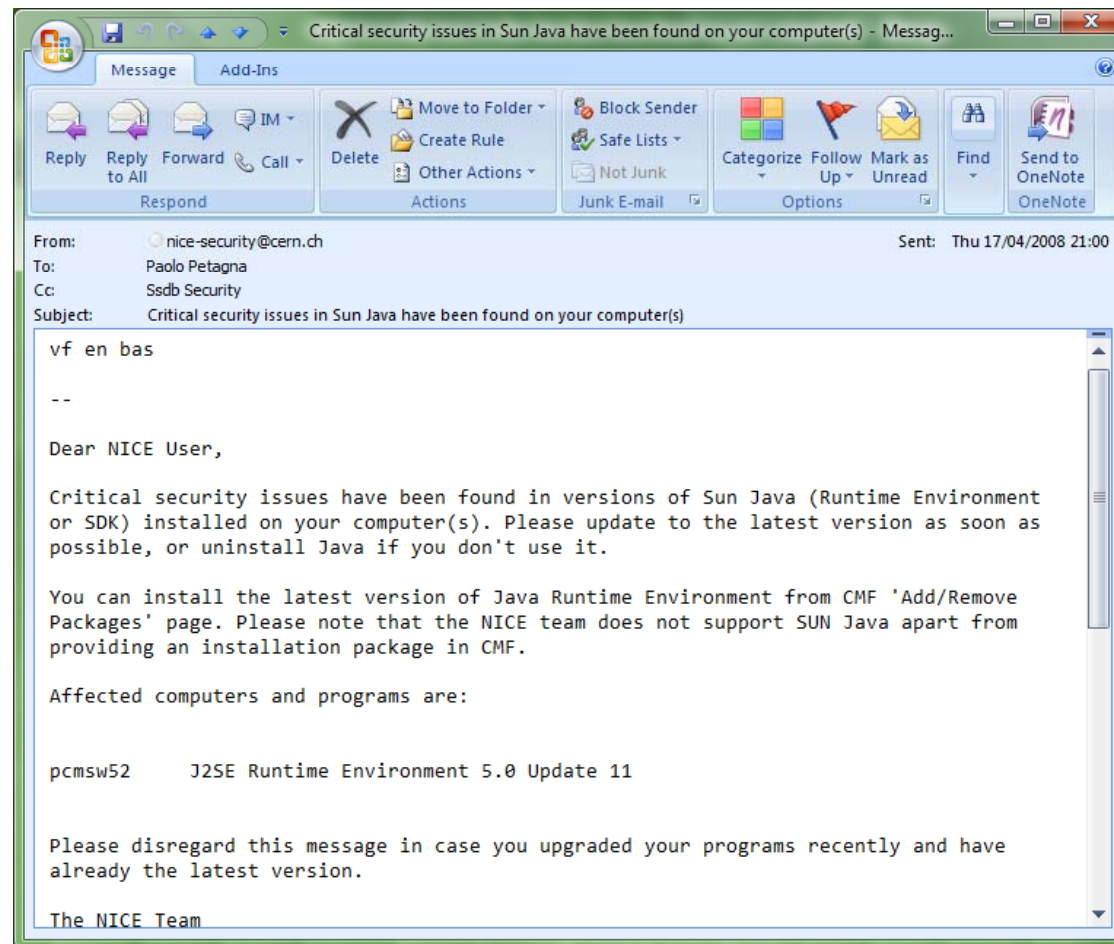
- Mail sent to “Local administrators”



Case Studies

Sun Java: manage the unmanaged

- Mail sent to computer's owners



- Application lifecycle management
 - Application monitoring activity increased over the years
 - Statistics, Websites, RSS Feeds, etc.
 - Monitoring is now focused on security rather than application improvement.
 - Deployment is easier
 - Packaging technologies are now mature
 - Our tools allow us to react fast and with modularity
 - Making a package and deploying it CERN wide is possible in 30min !

Questions ?

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Presentation title - 24

