



Site Systems Management Server

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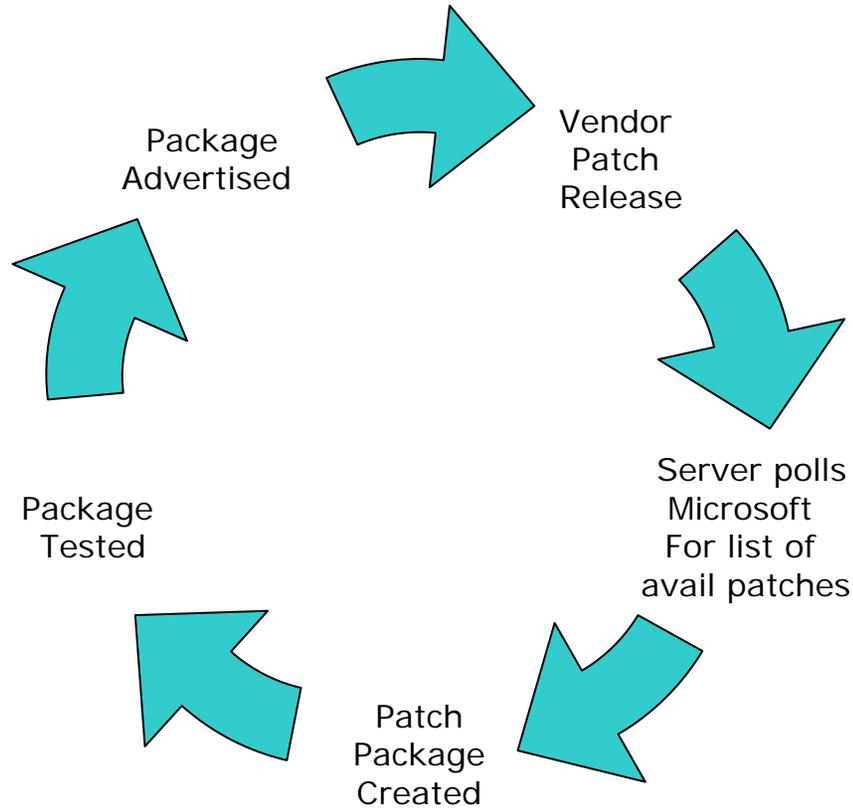
Systems Management Server

- What Is SMS?
- Fermi Design
- Fermi Rollout
- Early Results/Futures

What Is SMS?

- Patch Management
 - the ability to apply Microsoft and third party software patches to desktops and servers
- Software Distribution
 - the ability to install applications and updates and execute programs remotely on a user's workstation
- Remote Control Tools
 - the tools to effectively analyze hardware and software concerns on remote workstations.
- Inventory & Resource Management Reports
 - the ability to create and manage meaningful reports directly through the SMS Administrator Console
 - the ability to gather and maintain a workstation's hardware and software configuration in a central database that's easily accessible and interpreted.
- Cost Savings (Potential)
 - Consolidate multiple separate packages and hardware
 - Long term Microsoft support and direction
 - Scalable

Patch Management



*SMS presently only checks Microsoft for list of available patches



Patch Management

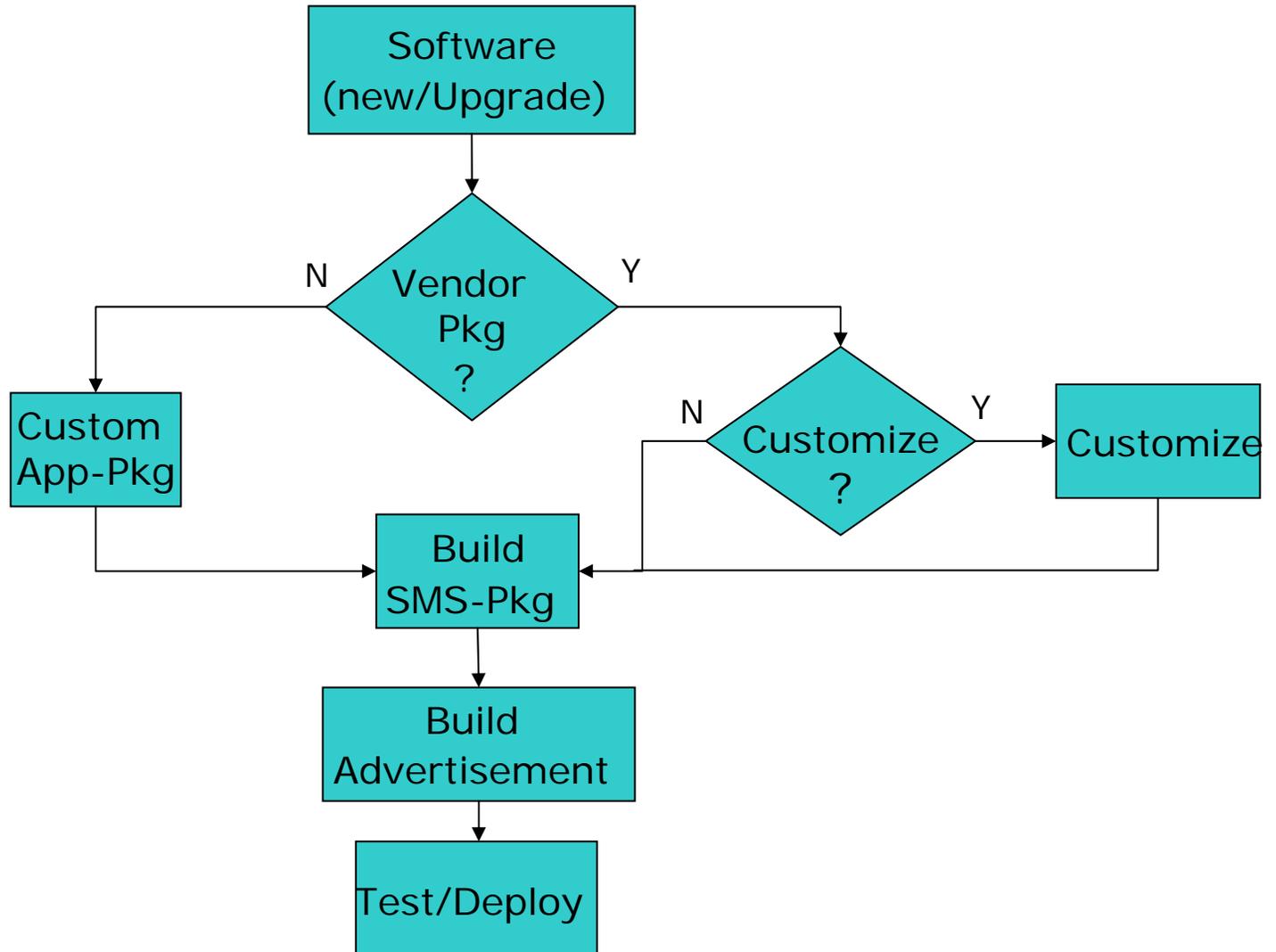
- Packages

- Can be compared to a group of hotfixes or an application like Symantec

- Advertisements

- Installation instructions for the specific package
 - Who to deploy to
 - When to deploy (configurable to day and time)

Software Distribution



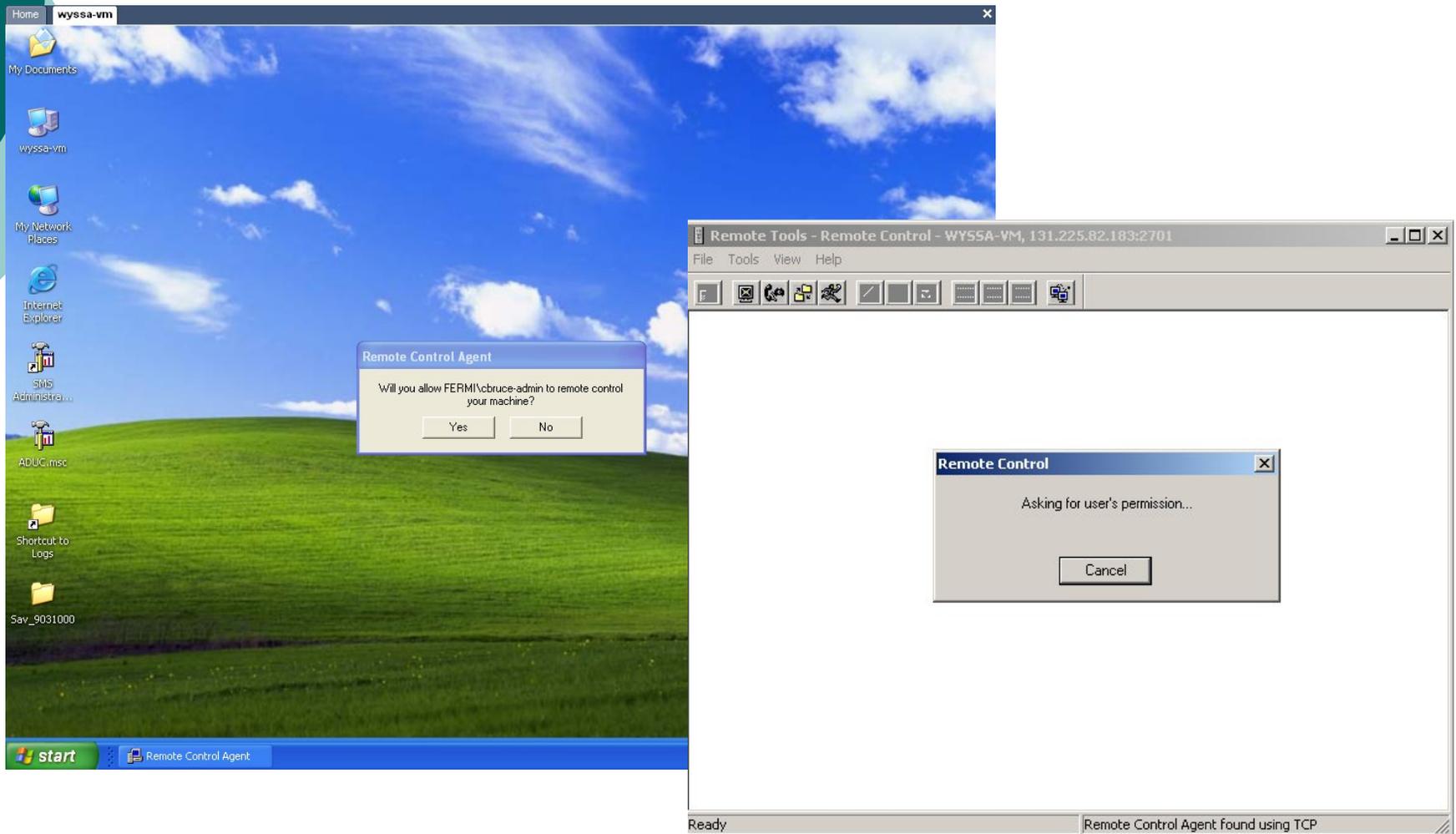
Software Distribution

- Application Package
 - Any application installer that can be run in a non-interactive mode can be used with SMS. (*MSI file, setup.exe, script...*)
 - Vendor supplied or locally created
 - Customizable
- SMS Package
 - Wrapper around the application package
 - Location of application package
 - Command line used to launch application package
 - Specify Windows OS to apply package to.

Remote Tools

- REMOTE CONTROL
 - access the client's desktop and files and perform mouse and keyboard functions as though you were physically at the client.
- REMOTE REBOOT
 - remotely shut down and restart a client
- REMOTE CHAT
 - when you initiate a chat session with the user, Remote Tools window becomes the chat window on your computer.
- REMOTE FILE TRANSFER
 - use Remote File Transfer to copy files between the computer on which you are running the SMS Administrator console and a selected client.
- REMOTE EXECUTE
 - run executable files on a remote client. You can also run any command-line statement to complete tasks, such as running a virus checker on the client.
- PING TEST
 - determine the reliability and speed of the Remote Tools connection to a client on your network and to test client connectivity with any network protocol.

Remote Tools





Reports

- Over 100 predefined reports
- Detailed Hardware and Software inventory
- Status of packages and advertisements
- Customizable. You can write your own!

Reports

The screenshot shows a web browser window with the following details:

- Address Bar:** http://fermi-sms/SMSReporting_CD1/Report.asp?ReportID=45&variable=3192
- Report Name:** Computers for a specific processor speed
- Category:** Hardware - Processor
- Comment:** Displays a list of computers that have a processor of a specified speed
- Parameters:** Processor Speed (Mhz) 3192

The report data is displayed in a table with the following columns: Netbios Name, Name, Max Clock Speed, and Device ID. The table contains 21 records, all showing Intel(R) Pentium(R) 4 CPU 3.20GHz processors with a Max Clock Speed of 3192.

Netbios Name	Name	Max Clock Speed	Device ID
CD-94870	Intel(R) Pentium(R) 4 CPU 3.20GHz	3192	CPU1
DIR-94333	Intel(R) Pentium(R) 4 CPU 3.20GHz	3192	CPU0
DIR-94334	Intel(R) Pentium(R) 4 CPU 3.20GHz	3192	CPU0
DIR-94335	Intel(R) Pentium(R) 4 CPU 3.20GHz	3192	CPU0
DIR-95861	Intel(R) Pentium(R) 4 CPU 3.20GHz	3192	CPU0
DIR-95861	Intel(R) Pentium(R) 4 CPU 3.20GHz	3192	CPU1
DIR-96318	Intel(R) Pentium(R) 4 CPU 3.20GHz	3192	CPU0
DIR-96318	Intel(R) Pentium(R) 4 CPU 3.20GHz	3192	CPU1
DIR-96488	Intel(R) Pentium(R) 4 CPU 3.20GHz	3192	CPU0
DIR-96488	Intel(R) Pentium(R) 4 CPU 3.20GHz	3192	CPU1
ESH-96199	Intel(R) Pentium(R) 4 CPU 3.20GHz	3192	CPU0
ESH-96199	Intel(R) Pentium(R) 4 CPU 3.20GHz	3192	CPU1
ESH-96200	Intel(R) Pentium(R) 4 CPU 3.20GHz	3192	CPU0
ESH-96200	Intel(R) Pentium(R) 4 CPU 3.20GHz	3192	CPU1
ESH-96201	Intel(R) Pentium(R) 4 CPU 3.20GHz	3192	CPU0
ESH-96201	Intel(R) Pentium(R) 4 CPU 3.20GHz	3192	CPU1
ESH-96202	Intel(R) Pentium(R) 4 CPU 3.20GHz	3192	CPU0
ESH-96202	Intel(R) Pentium(R) 4 CPU 3.20GHz	3192	CPU1
FESS-93027	Intel(R) Pentium(R) 4 CPU 3.20GHz	3192	CPU0
stegosaurus	Intel(R) Pentium(R) 4 CPU 3.20GHz	3192	CPU0
stegosaurus	Intel(R) Pentium(R) 4 CPU 3.20GHz	3192	CPU1

Cost

- SMS Server: \$5K
- SMS Server Software: \$398.36 (1 per server)
- SQL Server Software: \$589.41 (1 per server)
- SQL CAL: \$129.04 (1 per server)

- SMS CAL: \$29.69 – (1 per client system)

Pricing covers Year 2 true-up cost under the existing Enterprise Agreement.

Computing is looking at bootstrapping the cost of client CAL's.



Fermi Design

- Site Infrastructure
- Roles & Responsibilities

Site Infrastructure – CD1

FERMI-SMS



CD	DIR	AD	FESS	TD
FERMI computers				
Non-FERMI Computers				





Site Infrastructure

- FERMI-SMS: One central server running SMS and SQL maintained by Computing Division
- Patterned after Fermi Domain
 - Collections for each OU
 - Flexible delegation of systems management
- Supports both domain and non-domain FNAL-owned systems



Roles & Responsibilities

- SMS Admins
- SMS OU Admins
- SMS Helpdesk
- SMS Reporters



Roles & Responsibilities

○ SMS Admins

- Cele Bruce, Al Lilianstrom, Andy Romero
- Provide server and service support
- Build monthly Microsoft patch packages according to existing lab policy
- Work with SMS-OU-Admins to build packages/advertisements to deploy software



Roles & Responsibilities

- SMS Admins (cont)
 - Provide consulting on custom SQL queries and reports
 - Provide tools for installing clients
 - Run/create reports and DB queries for hardware/software inventory and patch/application installation status
 - Advertise packages with a definable timeline
 - Advertise patches/software



Roles & Responsibilities

- SMS OU Admins
 - Typically OU Managers
 - Install SMS clients to desktops
 - Run/create reports and DB queries for hardware/software inventory and patch/application installation status
 - Advertise packages with a definable timeline
 - Customize software packages to fit their needs
 - Remote control of supported desktops and systems. Less visits to the desktop!



Roles & Responsibilities

- SMS Helpdesk
 - Run/create reports and DB queries for hardware/software inventory and patch/application installation status
 - Use remote control tools to help users
- SMS Reporters
 - Run/create reports and DB queries for hardware/software inventory and patch/application installation status

Roles & Responsibilities

	SMS Reporter	SMS Helpdesk	SMS OU Admins	SMS Admins
Ready patch package				✓
Build software wrappers				✓
Customize software packages			✓	✓
Install clients			✓	✓
Run/Create Reports/Queries	✓	✓	✓	✓
Distribute patches/software			✓	✓
Remote Control		✓	✓	✓



SMS at Fermi

- Admin Console
- Client deployment
- Remote Control
- Reports
- Demo

Admin Console

- Most SMS management is handled through the SMS Admin console:
 - \\pseekits\DesktopTools\Microsoft\sms
 - Documentation:
<http://www-win2k.fnal.gov/private/sms>



Client Deployment

- Existing deployment methods
 - GPO
 - Designed for large domain desktop deployment
 - Script
 - Designed for servers and non-domain desktop deployment
 - Manual
 - Designed for as needed basis



Remote Control

- Remote Control
 - Prompt for access permission by default
 - Can be turned off by users or for servers/kiosks
 - Status icon on taskbar
- CST 'blessed' method



Reports

- Over 100 predefined reports
- View thru SMS Admin Console
- Requires IE and a system in the domain
- http://fermi-sms/smsreporting_cd1

Sample Customized Report

Report Name: Fermi-Workstations Missing patches

Category: Software Update - Compliance

Comment: This report lists all workstations that have patches missing. It is sorted by AD site name, Server name, then by product name.

Parameters:

5/4/2005 3:22:10 PM

(Num

Name	AD Site Name	Product Name	QNumber	Update ID	Status	Information	
CD-54041	Default-First-Site-Name	.NET FRAMEWORK 1.1	830348	MS04-028	Applicable	http://www.microsoft.com/technet/security/bulletin/MS04-028.msp	Buffer overrun in JPEG processing
CD-54041	Default-First-Site-Name	.NET FRAMEWORK 1.1 RTM	886904	MS05-004	Applicable	http://www.microsoft.com/technet/security/bulletin/MS05-004.msp	Vulnerability in ASP.Net May Lead
CD-54041	Default-First-Site-Name	INTERNET EXPLORER 6 SP1	890923	MS05-020	Applicable	http://www.microsoft.com/technet/security/bulletin/MS05-020.asp	Cumulative Security Update for Int
CD-54041	Default-First-Site-Name	MSXML 3.0 SP3	None	None	Applicable		SP5 (MSXML 3.0 SP3)
CD-54041	Default-First-Site-Name	WINDOWS 2000 SP4	885836	MS04-041	Applicable	http://www.microsoft.com/technet/security/bulletin/MS04-041.asp	Vulnerability in WordPad Could Allo



Demo

- Admin Console
 - Collections
 - Reports
 - Remote Control

Current Status

SMS Clients Installed as of May 24, 2005

CD	259
CD/ESE	37
DIR	58
ESH	77
FESS	3
LSS	58
SDSS	15
Total	507

Current Status

- Monthly patch rollout
 - April - CD, ESH
 - May – Package available
- Software updates
 - Mozilla, WMP, Symantec
- Remote control
 - CSS Desktop Support, Helpdesk



Future Growth

- Software requests will require SMS client on system for tracking
- Distribution Points (DP) created in key areas
 - Load balanced distribution



How To Get Started

- Website has lots of information!
<http://www-win2k.fnal.gov/private/sms>
- Working with the SMS Admins
 - Contact us (sms-admin@fnal.gov)
 - Meet to identify needs/requirements

Helpful Links

FNAL SMS Website

<http://www-win2k.fnal.gov/private/fermi-sms>

FNAL SMS Reports

http://fermi-sms/smsreporting_cd1

SMS Admin Console

\\pseekits\DesktopTools\Microsoft\sms

Microsoft Site

<http://www.microsoft.com/smsserver/>