

Policy-based Configuration Management

Darren Mar-Elia
President & CTO
SDM Software, Inc.

Agenda

- Windows Group Policy as a configuration technology
- Managing non-Windows systems using Group Policy
- CMDBs—the future of configuration management?

What is Windows Group Policy?

- Group Policy is the configuration management technology built into Active Directory
- Allows per-user and per-computer configuration of thousands of Windows configuration items
- Applies to both servers and desktops

How is Group Policy Used Today?



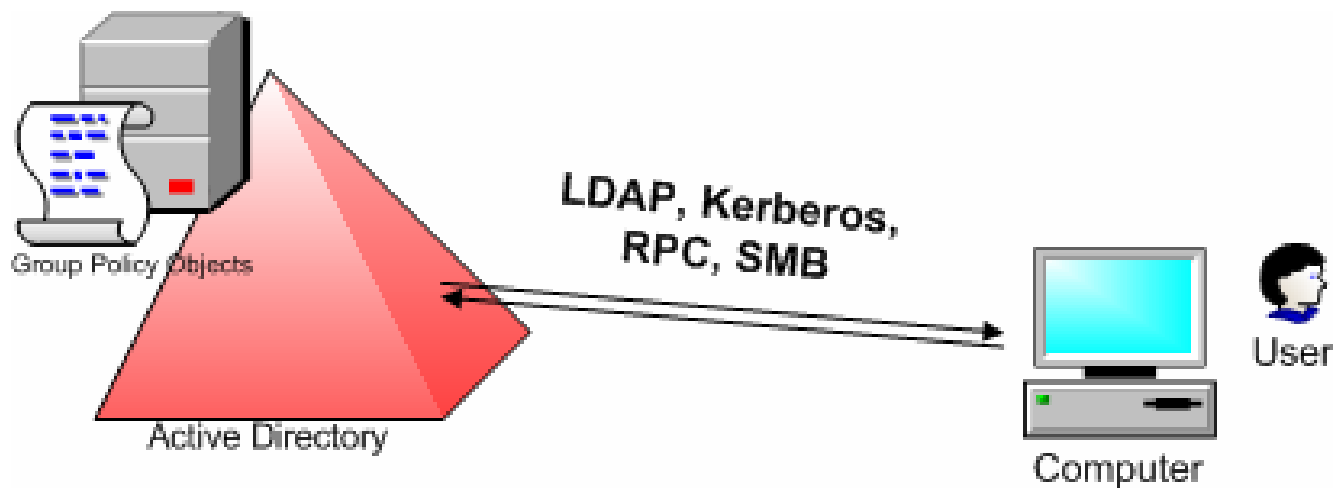
Administrators define policy settings to define a number of configuration “areas”

How is Group Policy Used Today?

- Manages large numbers of Windows systems
 - Scalable
- Uses Active Directory's built-in hierarchy for targeting
- Offers very granular configuration control
 - And complexity!

Requirements of Group Policy

- Active Directory
- Key network protocols need to pass freely



Some Challenges of Group Policy

- Can be complex (lots of settings)
- Configuration is “pulled” by the client at indeterminate times
- Management tools (e.g., Group Policy Management Console) are limited

Why Group Policy for non-Windows Configuration Management?

- AD is ubiquitous today
- So are heterogeneous systems
- Group Policy provides the opportunity to centralize key configuration management tasks
 - Especially security configuration management

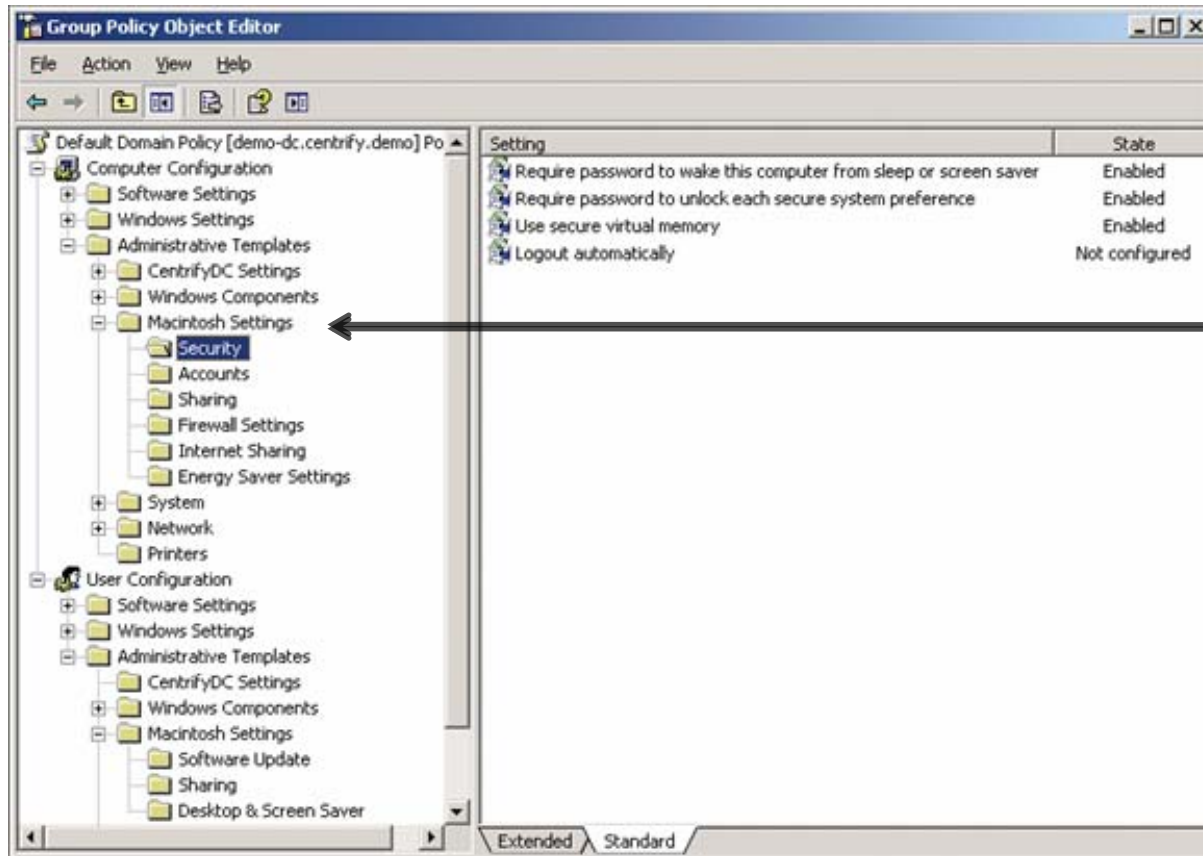
Group Policy is well-suited to non-Windows platforms

- Group Policy is essentially an LDAP-enabled application
- Most of Group Policy is accessible to non-Windows systems using standard protocols (e.g., LDAP, SMB, Kerberos)
- Some parts of Group Policy are easily extended to represent non-Windows configuration items (e.g. Administrative Templates)
 - Group Policy also defines the ability to create new “client-side extensions” for new policy areas

Requirements for non-Windows Group Policy

- Non-Windows system emulates the Group Policy engine
- The non-Windows system must be part of Active Directory to be able to securely access Group Policy in AD
- Windows Group Policy editing tools must be extended to expose the non-Windows configuration settings

Extending the Windows Interface



Centrify adds Mac OS X settings to native Group Policy Editor

Considerations for using Group Policy

- Windows becomes the de-facto management platform
 - This is a big leap for many organizations
 - But can save time and money by consolidating policy-driven configuration across all supported platforms

Vendors Providing non-Windows Group Policy

- Three vendors currently provide solutions for managing Unix/Linux/Mac configurations via Windows Group Policy
 - Centeris Likewise Identity (www.centeris.com)
 - Centrify's Direct Control product (www.centrify.com)
 - Quest Software's Vintela Group Policy (www.quest.com)
- All take a similar approach to solving the problem

Non-Windows Group Policy Vendors

- Quest's Vintela product supports various flavors of Unix and Linux for Group Policy
- Centrify supports Unix, Linux & Mac OS X Group Policy
- All vendors require you implement some non-Windows AD integration solutions as a prerequisite for deploying Group Policy

Non-Windows Group Policy Vendors

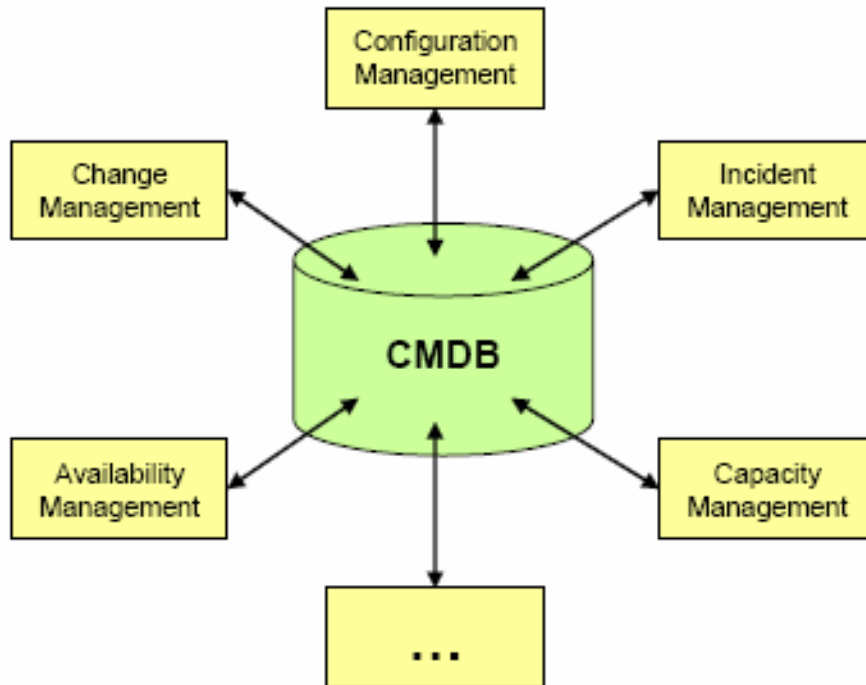
- All vendors provide extensions to Microsoft's Group Policy editor to manage settings
- All have built their own GP processing engines on their supported platforms, that emulate Windows' own GP engine
- Management of GP settings resides on Windows

DEMOS OF THE CENTRIFY & QUEST SOLUTIONS

Configuration Management Databases (CMDBs)

- CMDBs are the newest trend in configuration management
- Consolidated view of an organization's IT assets
- Central repository for modeling and pushing out new configuration

Logical CMDB



The Promise of CMDB

- CMDBs promise: total visibility into your IT assets and their relationships to one another
- This means:
 - Improved compliance with regulations
 - Improved security through better consistency and reporting
 - Improved availability by being able to spot possible problem changes that can cause outages

The Challenge of CMDB

- Challenges bringing together disparate data
 - Configuration data are spread across multiple platforms, products, protocols and support organizations
 - Vendors each offer their own soup-to-nuts solutions that will likely take time and money to implement

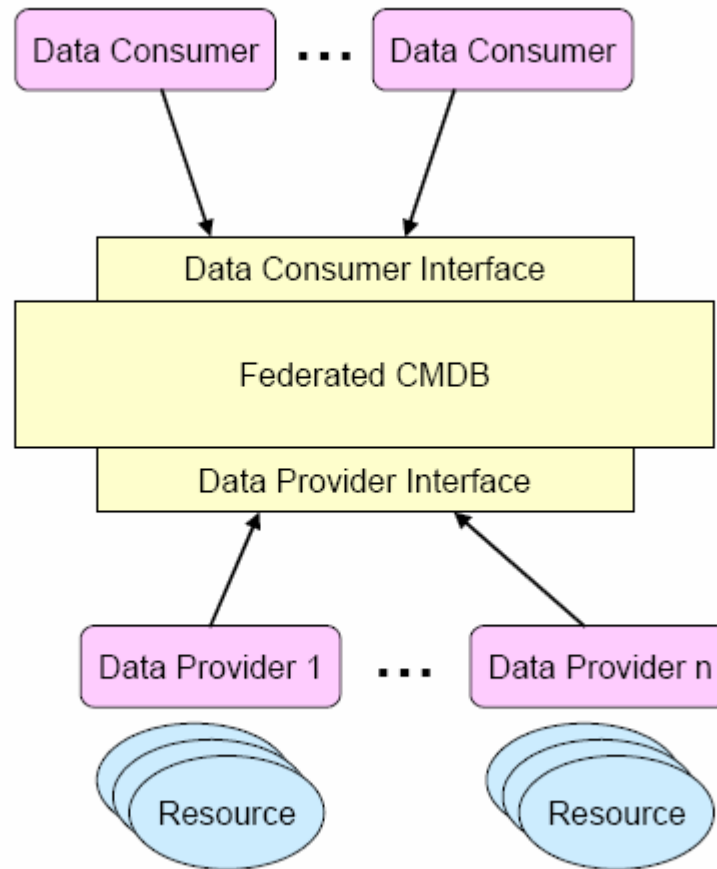
The Challenge of CMDB

- Standards are just starting to emerge that attempt to address the issue of representing configuration commonly across platforms
- And integrating multiple vendors' configuration products

Standards around CMDB

- CMDB Federation started in April 2006
- Joint effort between **BMC, CA, Fujitsu, HP, IBM, and Microsoft**
- Goal is to create a standard for accessing configuration items across multiple vendor repositories
- Single view of configuration for a given system or application from multiple vendor's products
- First vision statement posted at <http://cmdbf.org/> in February

CMDB Federation Architecture



CMDB Recommendations for Today

- Vendors will make lots of claims here
- Its still very early – no best-of-breed solution yet
- As with anything, what are your requirements?
 - Compliance
 - Consistency
 - Availability
- Avoid rip-and-replace solutions
 - Leverage your existing service desk and configuration management tools
- Push vendors to interoperate
 - CMDB Federation will only work if customers push them...