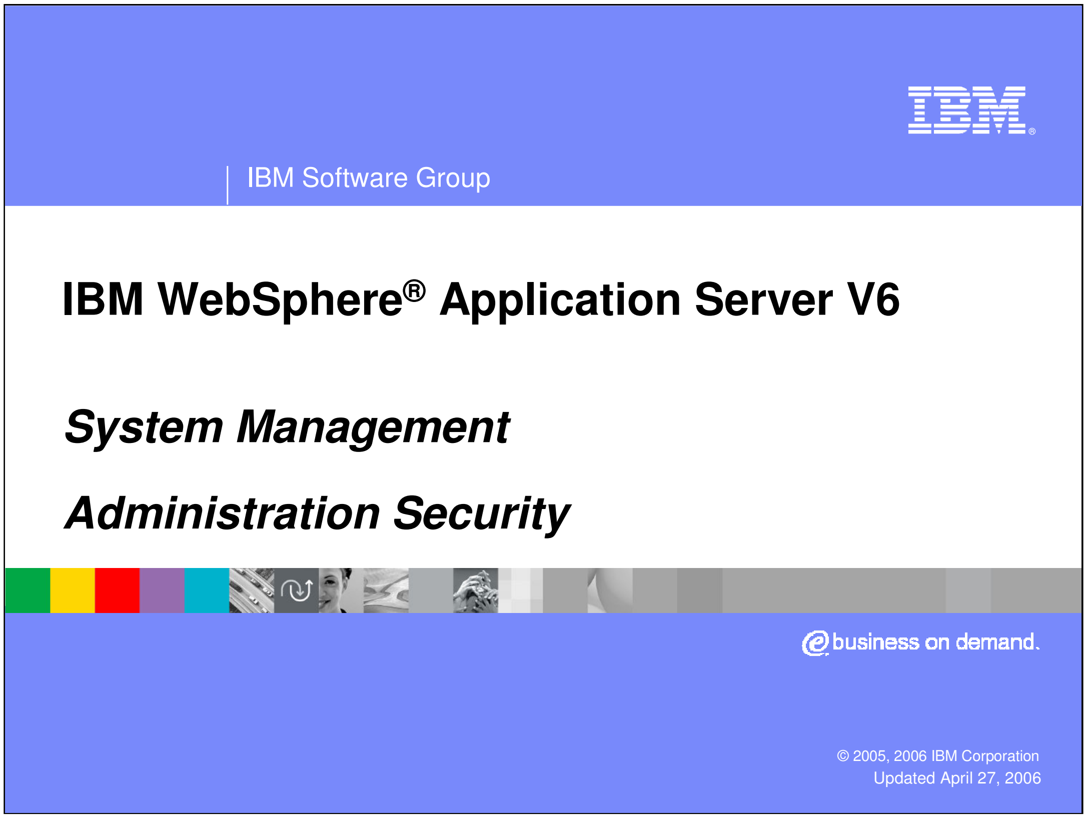

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IBM WebSphere® Application Server V6

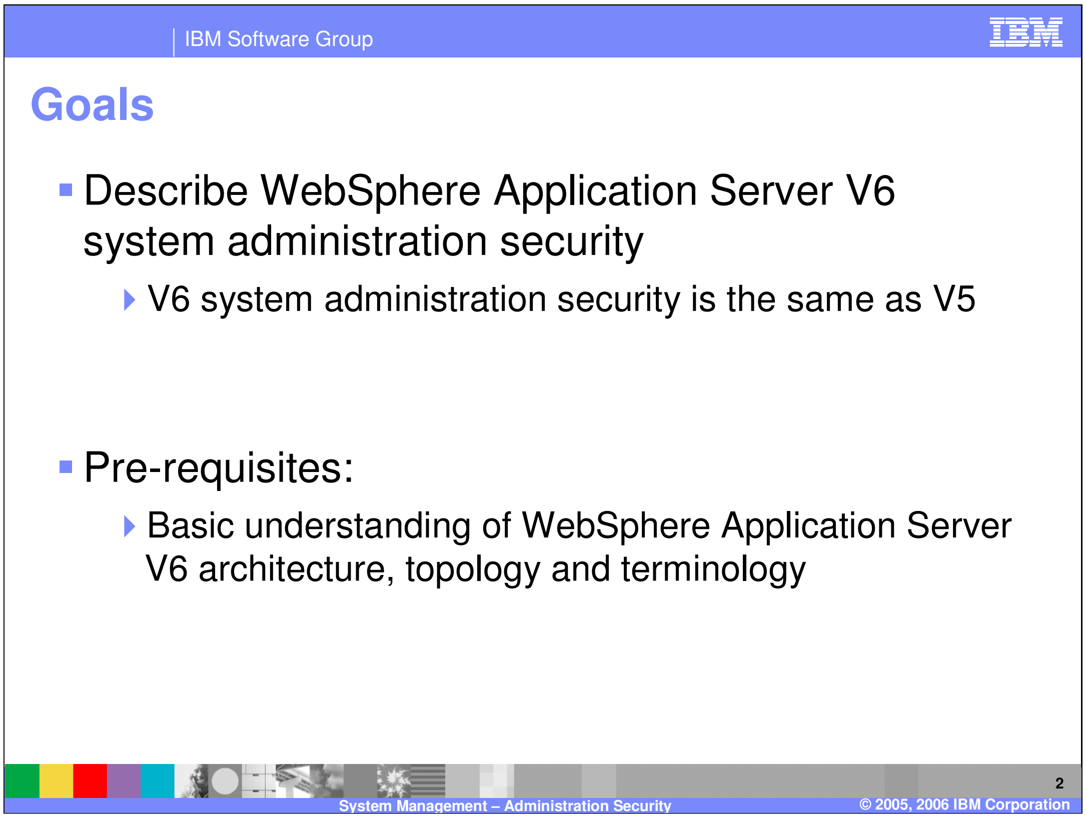
System Management

Administration Security

business on demand.

Updated April 27, 2006

This presentation will focus on WebSphere Application Server Administrative Security.

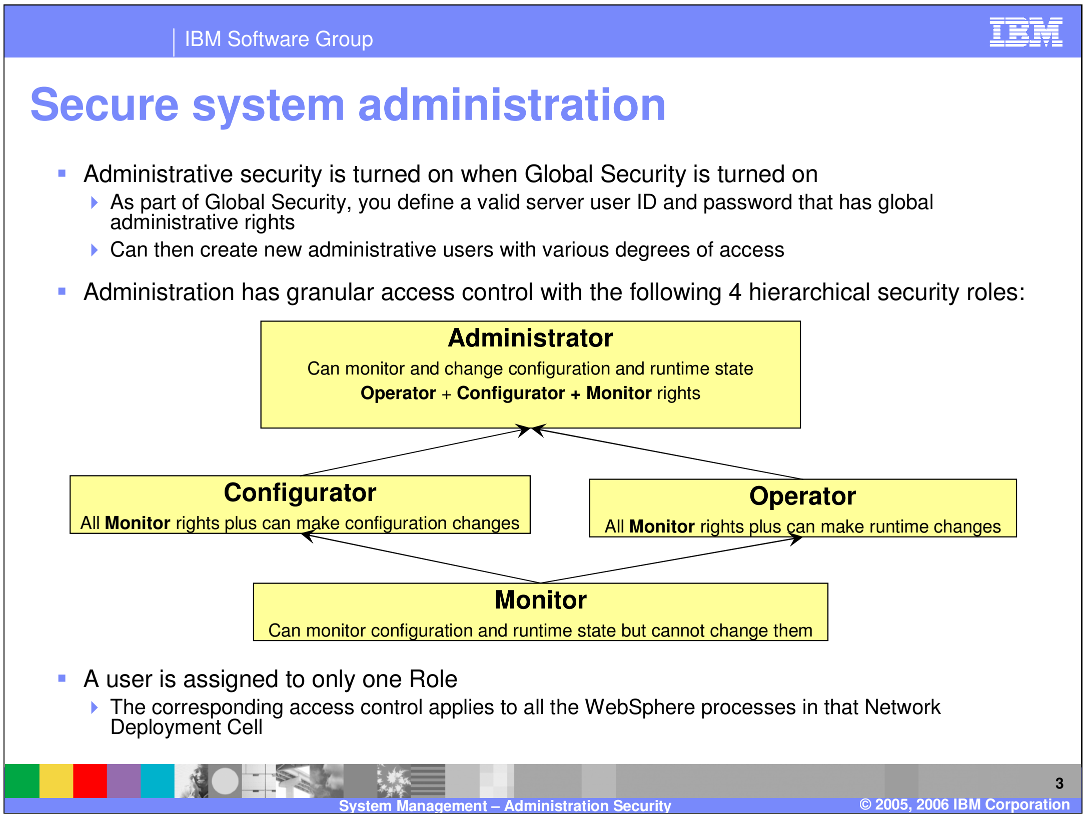


Goals

- Describe WebSphere Application Server V6 system administration security
  - V6 system administration security is the same as V5

- Pre-requisites:
  - Basic understanding of WebSphere Application Server V6 architecture, topology and terminology

The goal of this module is to briefly describe security of the Administrative Console.



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Secure system administration

- Administrative security is turned on when Global Security is turned on
  - As part of Global Security, you define a valid server user ID and password that has global administrative rights
  - Can then create new administrative users with various degrees of access
- Administration has granular access control with the following 4 hierarchical security roles:

Administrator
Can monitor and change configuration and runtime state
Operator + **Configurator** + **Monitor** rights

Configurator
All **Monitor** rights plus can make configuration changes

Operator
All **Monitor** rights plus can make runtime changes

Monitor
Can monitor configuration and runtime state but cannot change them

- A user is assigned to only one Role
  - The corresponding access control applies to all the WebSphere processes in that Network Deployment Cell

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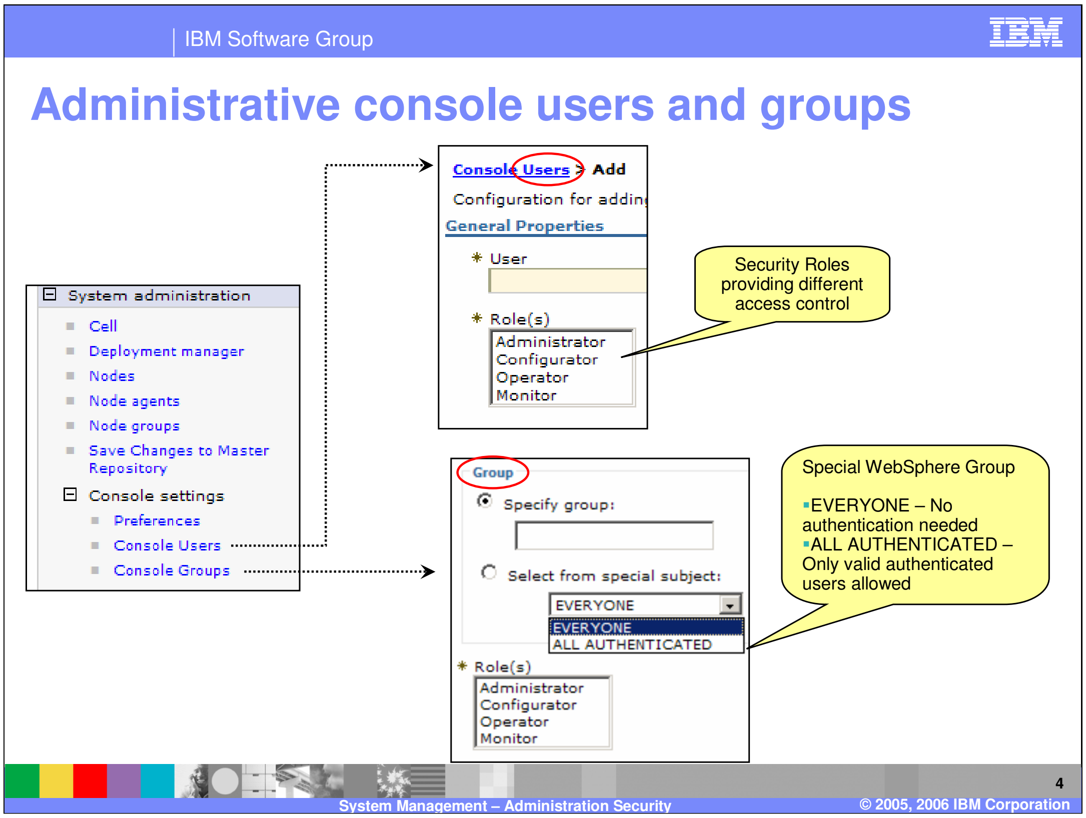
System Management – Administration Security

Once security is enabled, the administrative console is secured. You will be required to authenticate with an ID and password. Some installations will elect to disable Java™ 2 security and application security, but protect the integrity of the configuration by restricting administrative access.

Since WebSphere version 5, the Administrative Security subsystem defines four security roles: monitor, configurator, operator, and administrator. A monitor can observe system state and configuration data but cannot make changes. A configurator security role is a monitor who can also make changes to the configuration data. The operator security role is a monitor who can change runtime state. For complete capabilities the administrator role, which is essentially a configurator and also an operator, can be assigned and is a fourth security role.

The Operator role has the permission to start and stop servers throughout the entire cell. Monitors can view all the servers in the cell and Configurators can change any server in the cell. This is because roles are applied to all of the servers and resources in the cell.

It is not possible to have one set of administrative access control, like Operator, on a set of servers in a cell, and another set of access control, like Configurator, on another set of servers within the same cell.



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Administrative console users and groups

Security Roles providing different access control

Special WebSphere Group

- EVERYONE – No authentication needed
- ALL AUTHENTICATED – Only valid authenticated users allowed

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System Management – Administration Security

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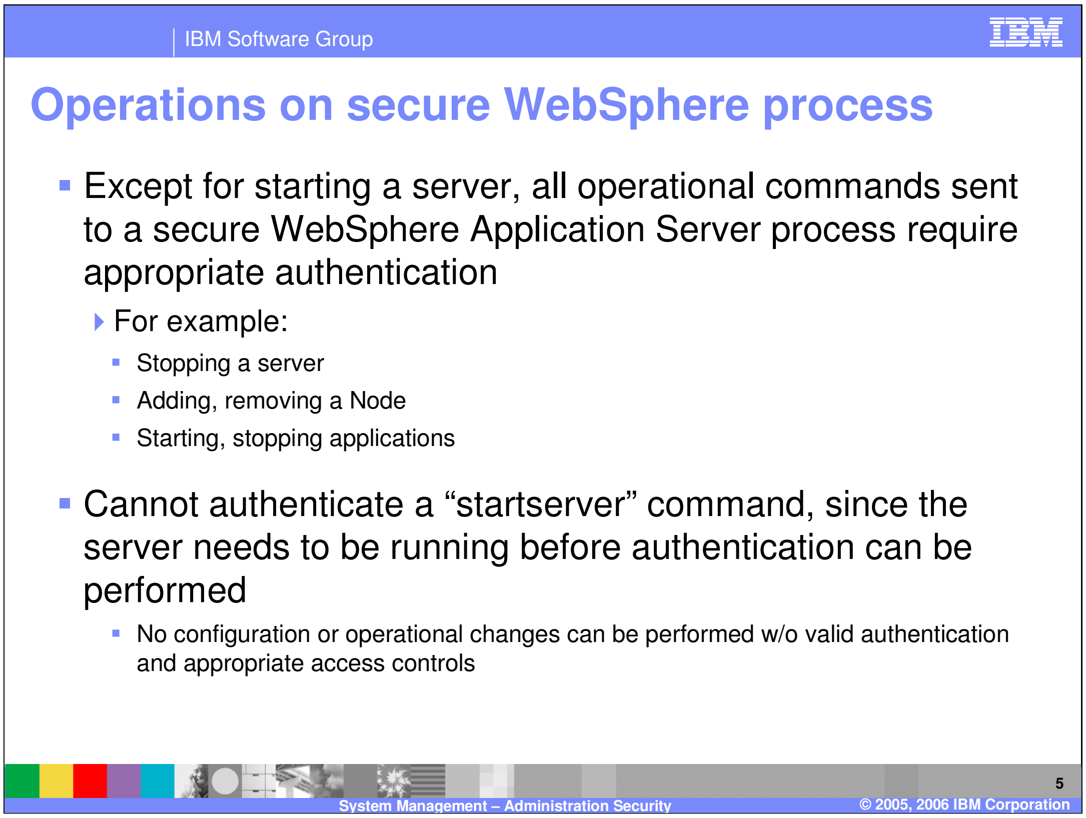
This slide illustrates where in the administrative console the administrative roles can be configured. The System administration panel is on the left side of the Administrative Console. You can add users individually to the Administrative Console roles, or you can specify a group to have certain access rights. The groups will be defined in whatever authentication repository is being used.



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Operations on secure WebSphere process

- Except for starting a server, all operational commands sent to a secure WebSphere Application Server process require appropriate authentication
  - For example:
    - Stopping a server
    - Adding, removing a Node
    - Starting, stopping applications
- Cannot authenticate a “startserver” command, since the server needs to be running before authentication can be performed
    - No configuration or operational changes can be performed w/o valid authentication and appropriate access controls

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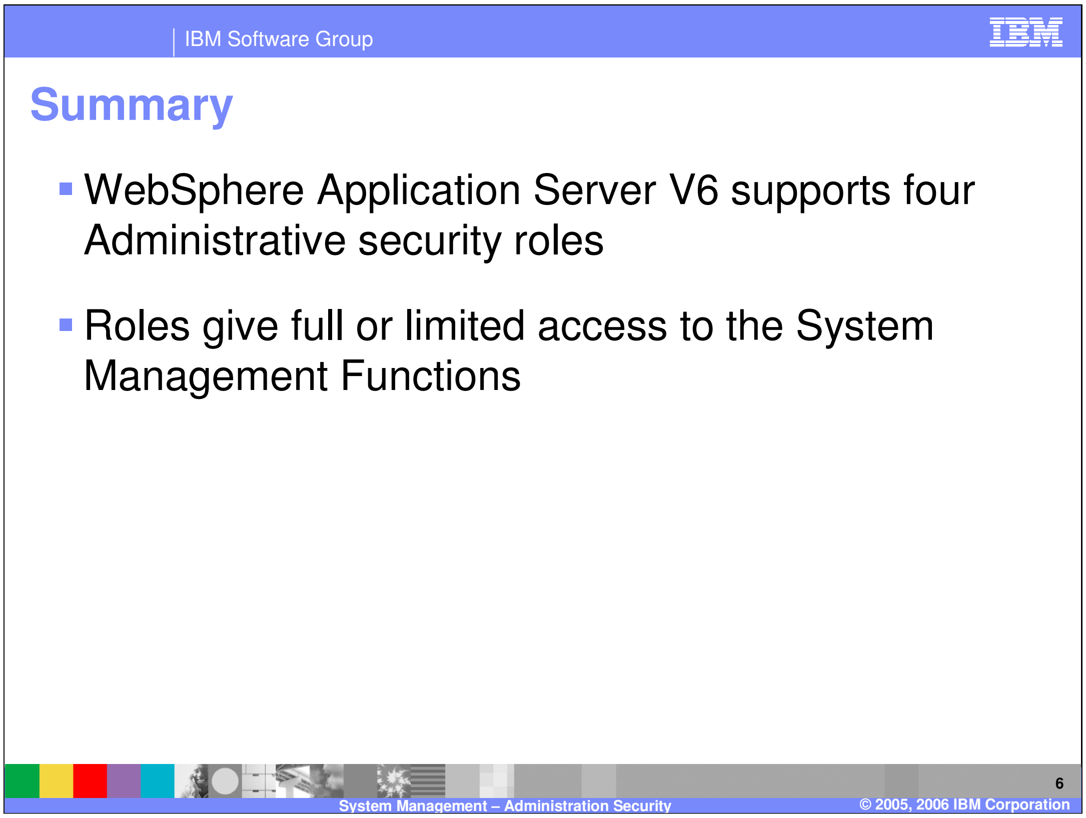
System Management – Administration Security

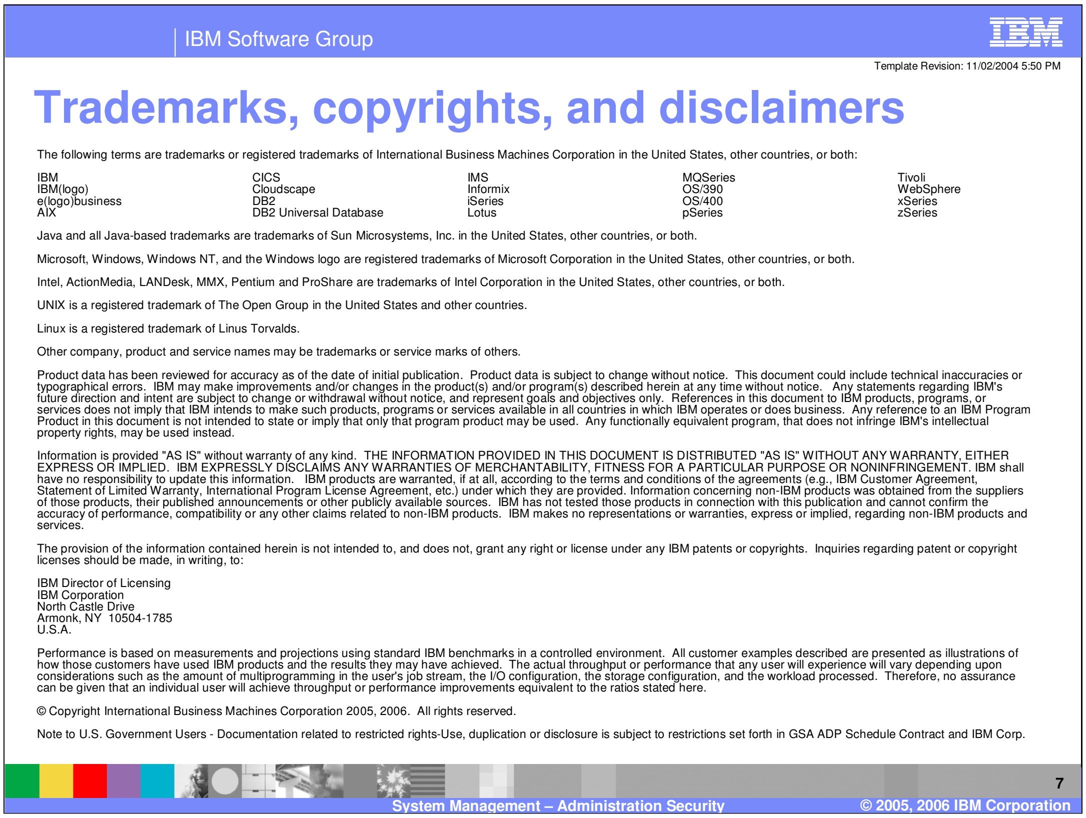
Once security is enabled, it is necessary to restart the application servers so that the security configuration information is implemented by the running processes. From that point on, all operations will require authentication except for starting the server. The reason for this exception is that until the server starts, it cannot connect to the authentication registry and therefore cannot authenticate a user ID.



Summary

- WebSphere Application Server V6 supports four Administrative security roles
- Roles give full or limited access to the System Management Functions

In summary, the administrative roles provide a level of granularity that allow you to give different access controls to different users, based on the four security roles.



Template Revision: 11/02/2004 5:50 PM

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