

# Security Awakens: Defending Against the First Order

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# Irvin Hayes Jr.

- 26 years of IT Support and technical leadership
- Work with key customers or prospects to identify unsolved problems
- Assess and investigate different technologies to solve given market problems
- Lead user experience and development teams



*"I am a person that is constantly driven by technology. Technology is a field I find completely exciting and I can't learn enough of it."*



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# Class summary

This class is essential for administrators who want to learn the different security models within Vault. The main focus of the class is to cover object and lifecycle level security. Learn how object level security sets or denies access to objects for users or groups. Learn how lifecycle security sets or denies access to objects based on the state of the object. Finally, learn how object and lifecycle state security are combined to work together to control object access, which is new in Vault 2017

# Key Learning Objectives

At the end of this class, you will be able to:

- Configure object level security
- Configure lifecycle state level security
- Know how Object and Lifecycle level security work together
- Know how users are affected by the security settings

STAR WARS  
ROGUE ONE  
A N T H O L O G Y





Vault Security

# Object Security Types

- Access Control List (ACL)
- Role-based security
- Object-based security
- State-based security

## Permission Precedence

- Deny
- Allow
- No permission



The background features a blue gradient bar at the bottom, overlaid with a white wireframe mesh pattern that resembles a complex, organic structure. The text "Roles and Permissions" is written in white on the blue bar.

# Roles and Permissions

# Roles and Permissions

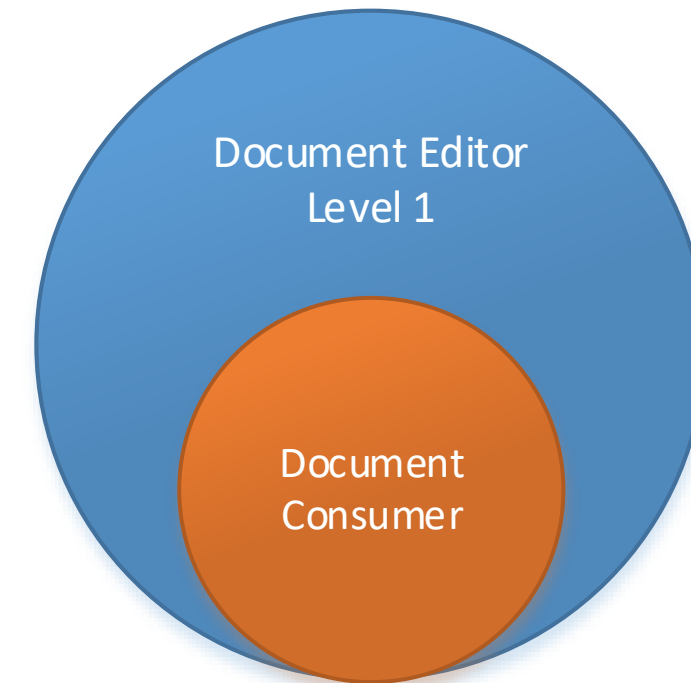
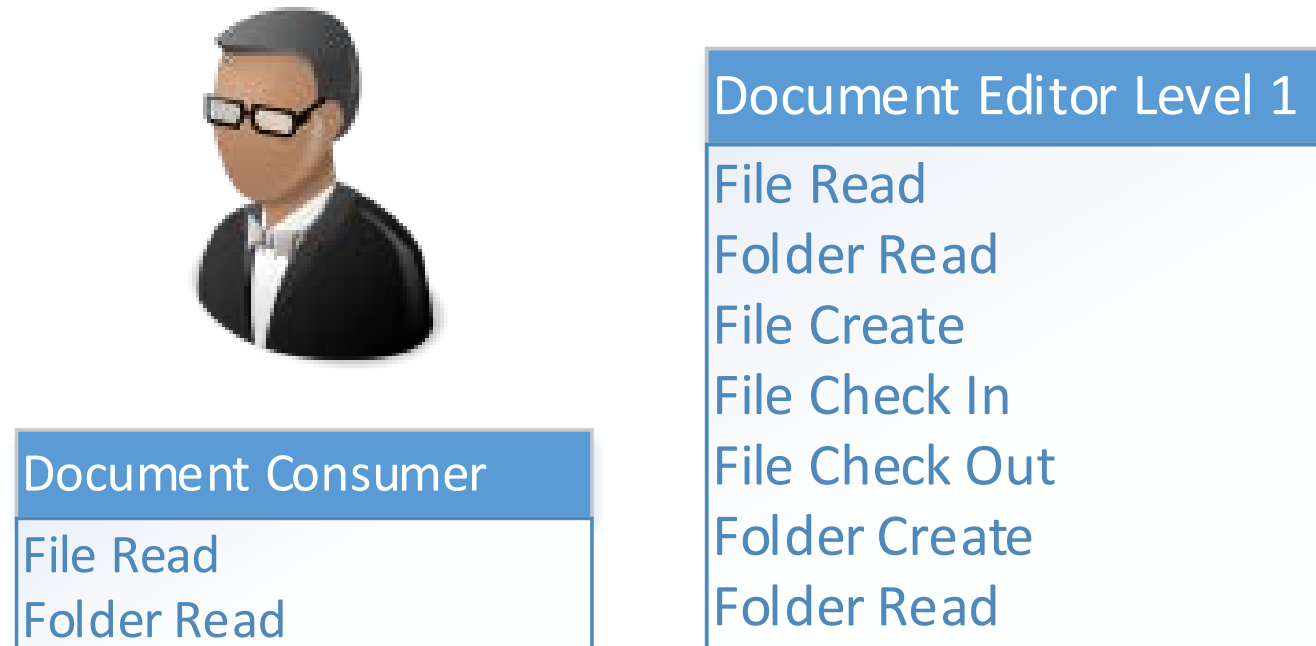
- A group of permissions
- Permissions to perform a specific task

Role	Details
Custom Object Consumer	Read-only access to Custom Objects only.
Custom Object Editor Level 1	Basic Custom Object adding and editing privileges within the vault, and add/remove Custom Object user-defined properties privileges. Cannot delete Custom Objects. Does not have administrative privileges on the server.
Custom Object Manager Level 1	Privileges to change category, lifecycle, and revision assignments, and to edit user-defined properties.
Document Consumer	Read-only access to files and folders only, including the job server queue.
Document Editor Level 1	Basic file adding and editing privileges within the vault, also add/remove file and folder user-defined properties, but cannot delete files and folders. No administrative privileges on the server.
Document Editor Level 2	Full privileges within the vault, also add/remove file and folder user-defined properties, but no administrative privileges on the server.
Document Manager Level 1	The privileges to change category, lifecycle, and revision assignments, and to edit user-defined properties.



# Roles and Permissions

- Multiple roles combine permissions





# Object-based Security



# What is OBS?

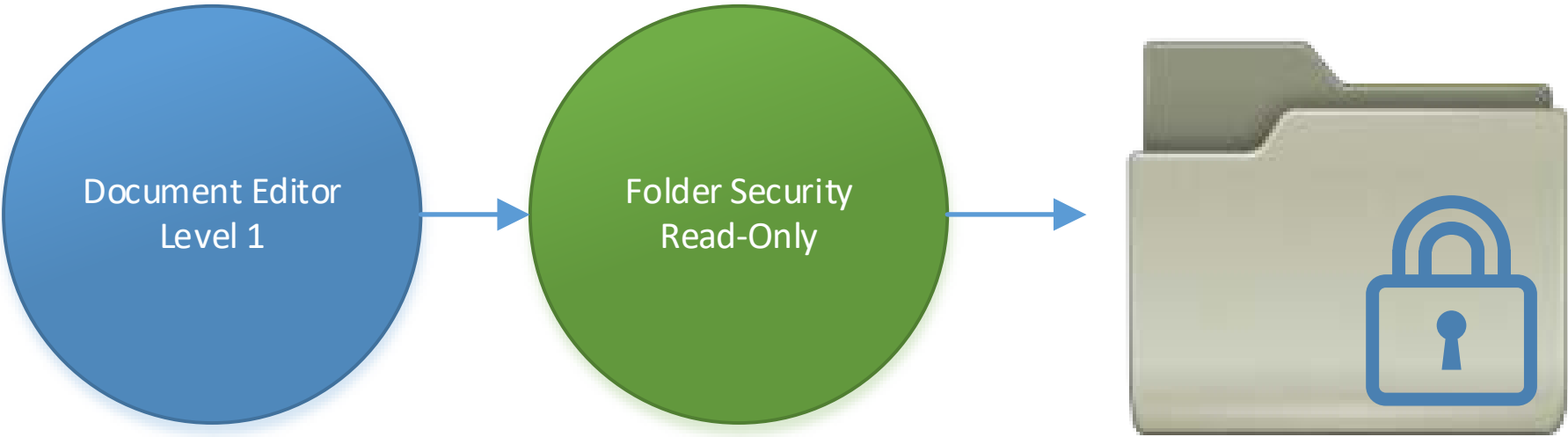
- ACL which controls whether the user can read, modify or delete the object

Permission	Access
Read	<ul style="list-style-type: none"><li>• Allow – grants Read permission on the object</li><li>• Deny – explicitly denies Read permission on the object.</li><li>• Null – implicitly denies Read permission on the object</li></ul>
Modify	<ul style="list-style-type: none"><li>• Allow – grants Modify permission on the object</li><li>• Deny – explicitly denies Modify permission on the object.</li><li>• Null – implicitly denies Modify permission on the object</li></ul>
Delete	<ul style="list-style-type: none"><li>• Allow – grants Delete permission on the object</li><li>• Deny – explicitly denies Delete permission on the object.</li><li>• Null – implicitly denies Delete permission on the object</li></ul>

# Folder Security

- Read, Modify & Delete
- Most Restrictive when combined

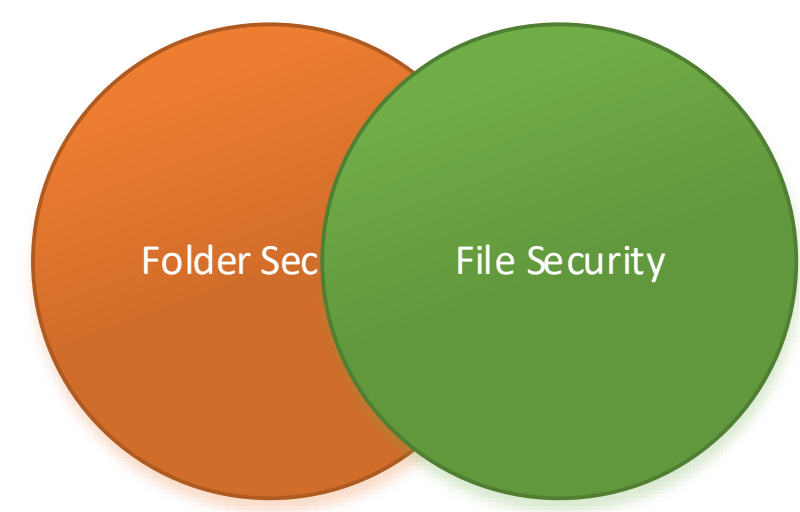
Permission	Access
Read	<ul style="list-style-type: none"><li>• Allow – the folder and files in the folder can be viewed</li><li>• Deny - The folder and files in the folder cannot be viewed and this overrides any Read Allow permission.</li><li>• None - The folder and files in the folder cannot be viewed.</li></ul>
Modify	<ul style="list-style-type: none"><li>• Allow - The folder and files in the folder can be modified.</li><li>• Deny - The folder and files in the folder cannot be modified. This overrides any Modify Allow permission.</li><li>• None - The folder and files cannot be modified.</li></ul>
Delete	<ul style="list-style-type: none"><li>• Allow - The folder and files can be deleted.</li><li>• Deny - The folder and files cannot be deleted. This overrides any Delete Allow permission.</li><li>• None - The folder and files cannot be deleted.</li></ul>





# File Security

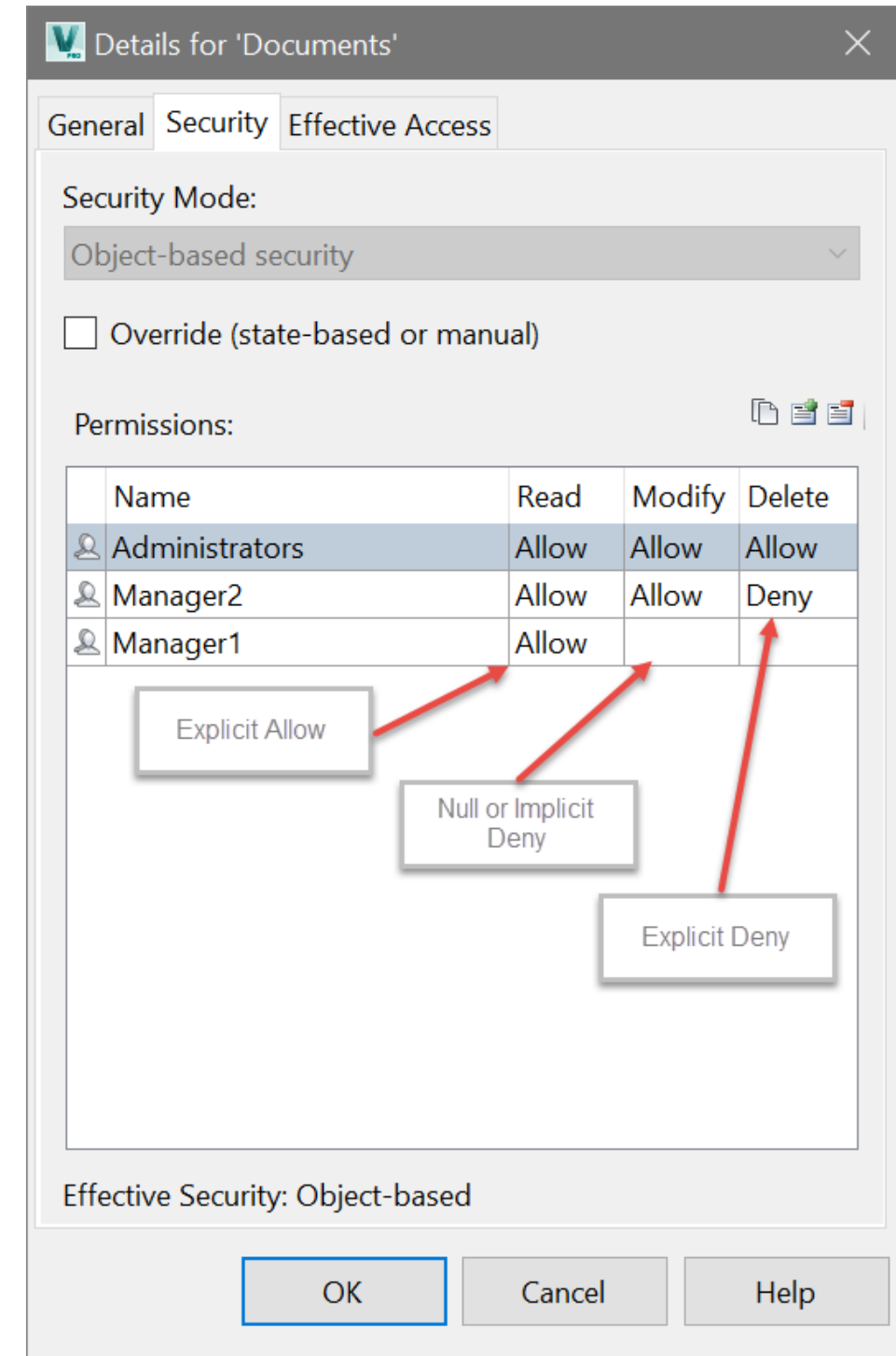
Permission	Access
Read	<ul style="list-style-type: none"><li>• Allow - Files can be viewed.</li><li>• Deny - Files cannot be viewed. This overrides any Read Allow permission.</li><li>• None - Files cannot be viewed.</li></ul>
Modify	<ul style="list-style-type: none"><li>• Allow - Files can be modified.</li><li>• Deny - Files cannot be modified. This overrides any Modify Allow permission.</li><li>• None - Files cannot be modified.</li></ul>
Delete	<ul style="list-style-type: none"><li>• Allow - Files can be deleted.</li><li>• Deny - Files cannot be deleted. This overrides any Delete Allow permission.</li><li>• None - Files cannot be deleted.</li></ul>



Overridden Security

# Implicit or Explicit Deny

- Null – Implicit Deny until granted
- Deny – Explicit Deny
  - Takes precedence over grants







# State-based Security

# State-based Security

- Security based on State
- Each State security can be different

## Security Options

- Combine
- Override

Lifecycle Definition - 'Flexible Release Process'

Definition Name: Flexible Release Process

Category: Engineering

Definition Security:

- Combine with object-based security
- Combine with object-based security
- Override object-based security

Description: Flexible manufacturing lifecycle process for release control

Lifecycle States:

Name	Description
✓ Work in Progress	State for free-form design cre...
For Review	State for targeted design revie...
Released	State for controlling access an...
Quick-Change	State for controlling access an...
Obsolete	State for retirement

General Transitions Security Control Comments

State Name: Work in Progress

State Description: State for free-form design creation and modifications

OK Cancel Apply Help



# State-based Security

- Migrated definitions (Override) by default
- New definitions (Combined) by default

Lifecycle Definition - 'Flexible Release Process'

Definition Name: Flexible Release Process

Category: Engineering

Definition Security: Combine with object-based security

Lifecycle States:

Name	Description
Work in Progress	State for free-form design cre...
For Review	State for targeted design revie...
Released	State for controlling access an...
Quick-Change	State for controlling access an...
Obsolete	State for retirement

Description: Flexible manufacturing lifecycle process for release control

General Transitions Security Control Comments

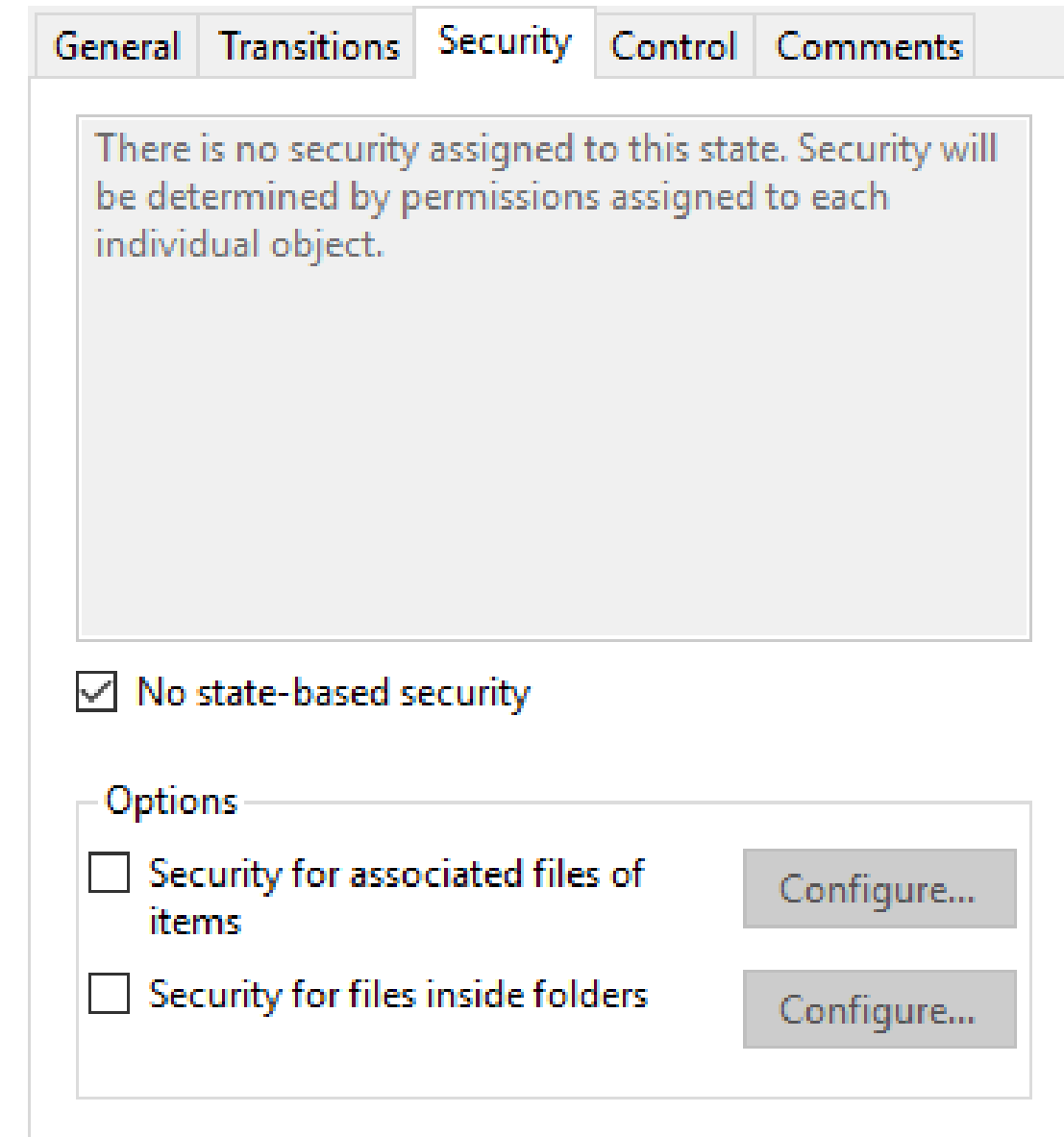
State Name: Work in Progress

State Description: State for free-form design creation and modifications

OK Cancel Apply Help

# Security Options

- No state-based security
- Security for associated files of items – security set on the file's SBS
- Security for files inside folders – security set on the file's SBS



The screenshot shows a dialog box with five tabs: General, Transitions, Security, Control, and Comments. The Security tab is selected. Inside the Security tab, there is a text box stating: "There is no security assigned to this state. Security will be determined by permissions assigned to each individual object." Below this text box, there is a checked checkbox labeled "No state-based security". At the bottom, there is a section titled "Options" containing two unchecked checkboxes: "Security for associated files of items" and "Security for files inside folders". Each checkbox has a corresponding "Configure..." button to its right.

General	Transitions	Security	Control	Comments
<p>There is no security assigned to this state. Security will be determined by permissions assigned to each individual object.</p>				
<input checked="" type="checkbox"/> No state-based security				
<p>Options</p>				
<input type="checkbox"/> Security for associated files of items <span>Configure...</span>				
<input type="checkbox"/> Security for files inside folders <span>Configure...</span>				



Combined Security



# Gated Security



Role

# Gated Security



Role



OBS

# Gated Security



Role



OBS



SBS



# Gated Security

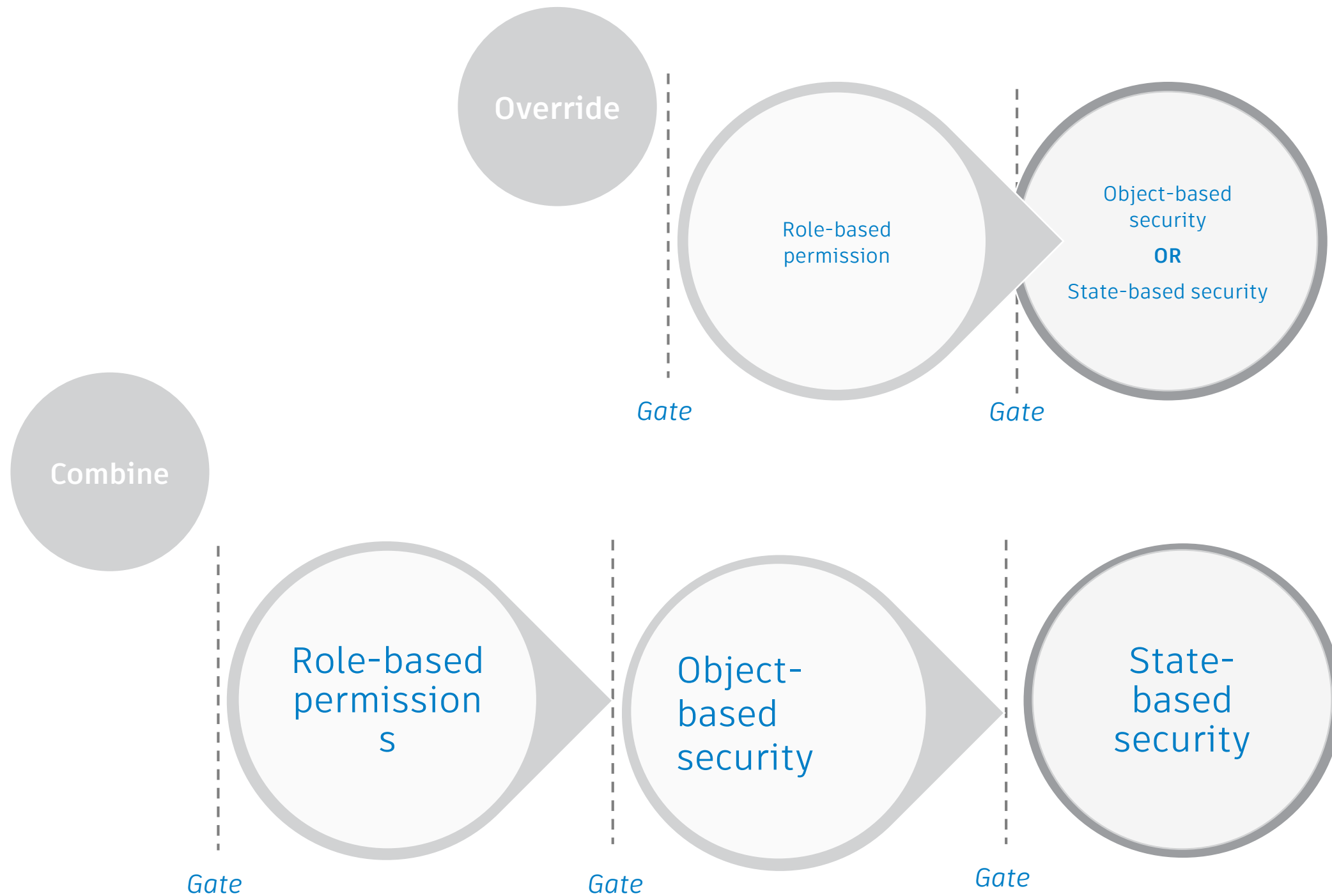


Role

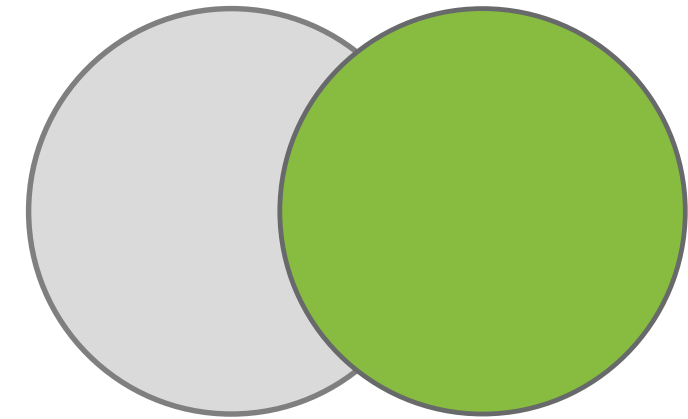


OBS\SBS

# Security Paradigms

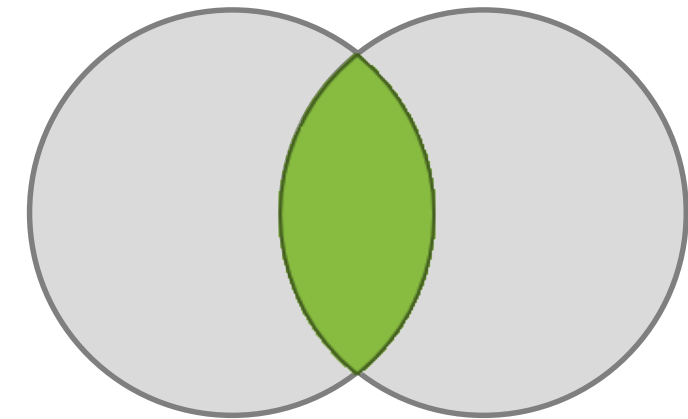


Object ACL State ACL



If both ACLs exist then one ACL **overrides** the other

Object ACL State ACL



If both ACLs exist then we take the **intersection** of each

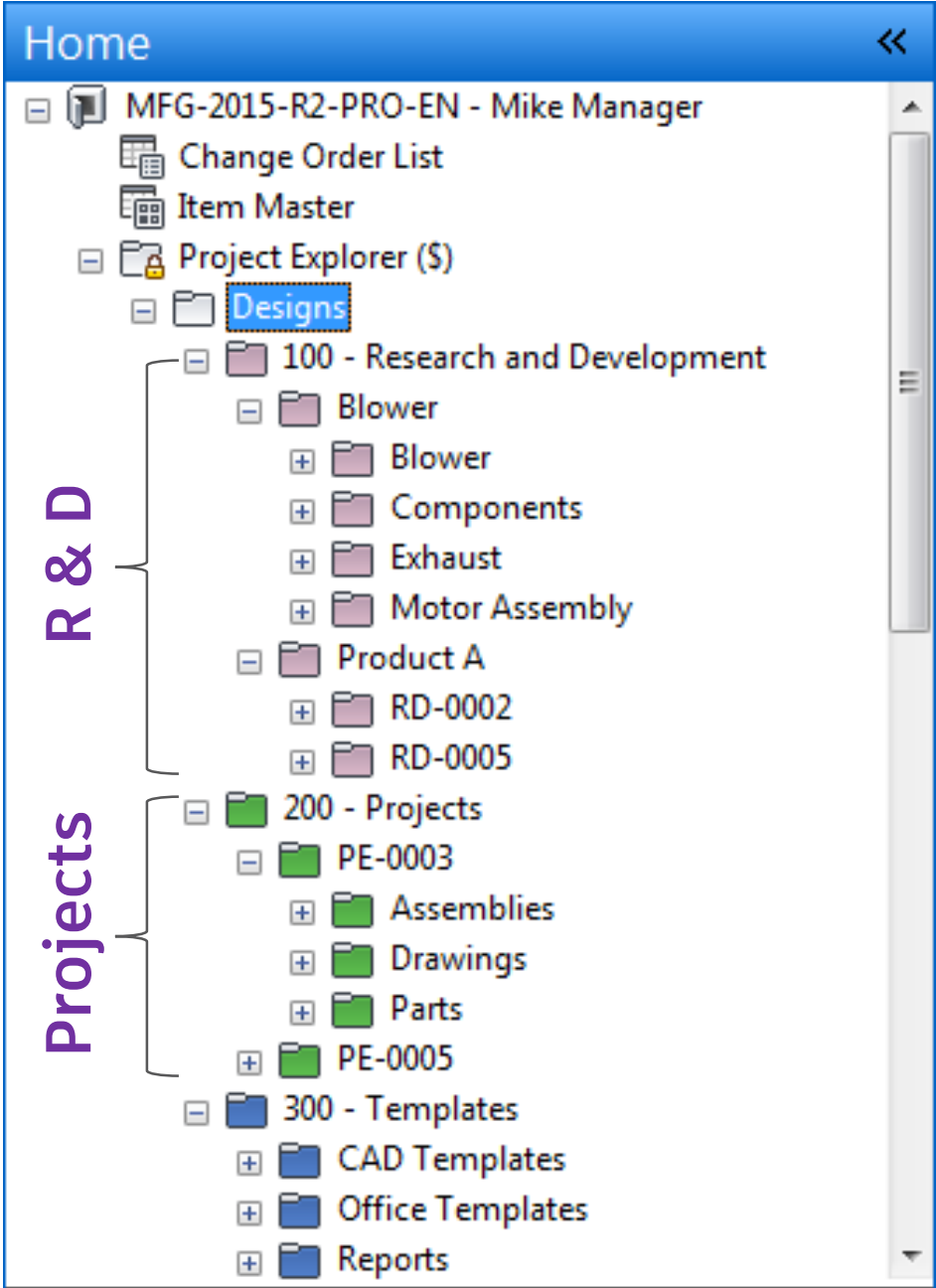
# Gated Security

Object -based	State-Based	Effective Permission
Allow	Allow	Allow
Deny	Deny	Deny
Deny	Allow	Deny*
Null	Deny	Deny
Allow	Null	Deny
Null	Null	Deny
Null	Allow	Deny*
Allow (Group A)	Allow (Group B)	Allow* (intersect group)

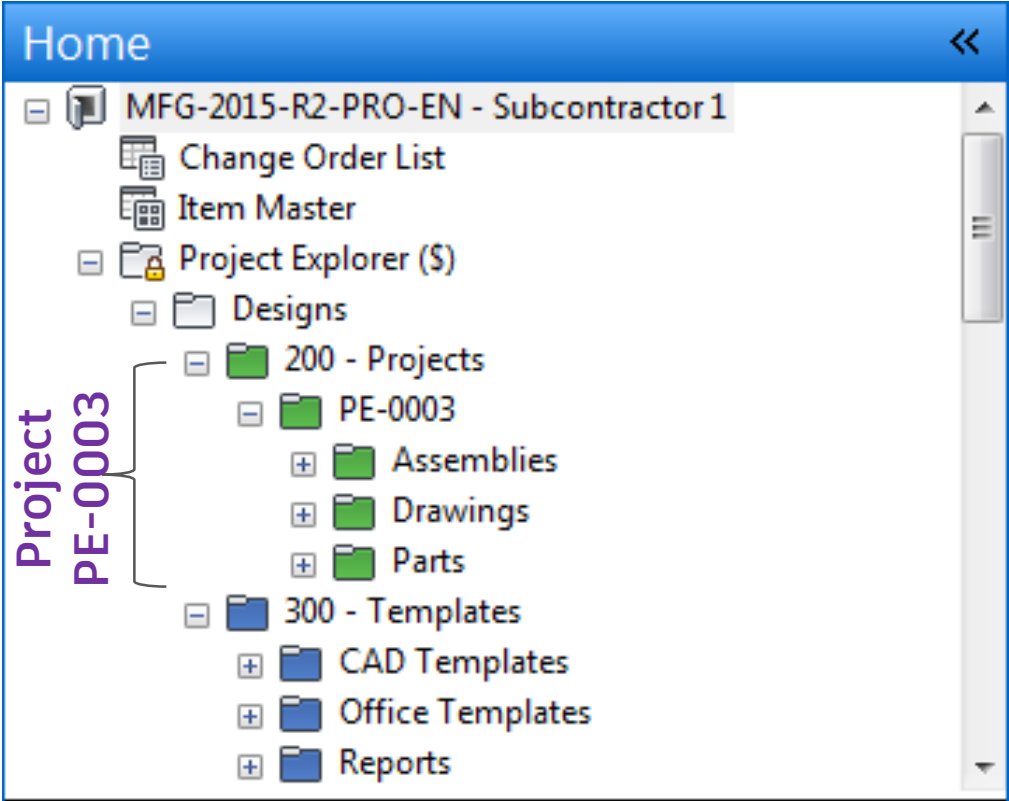


# Contractors with Strong Relationship

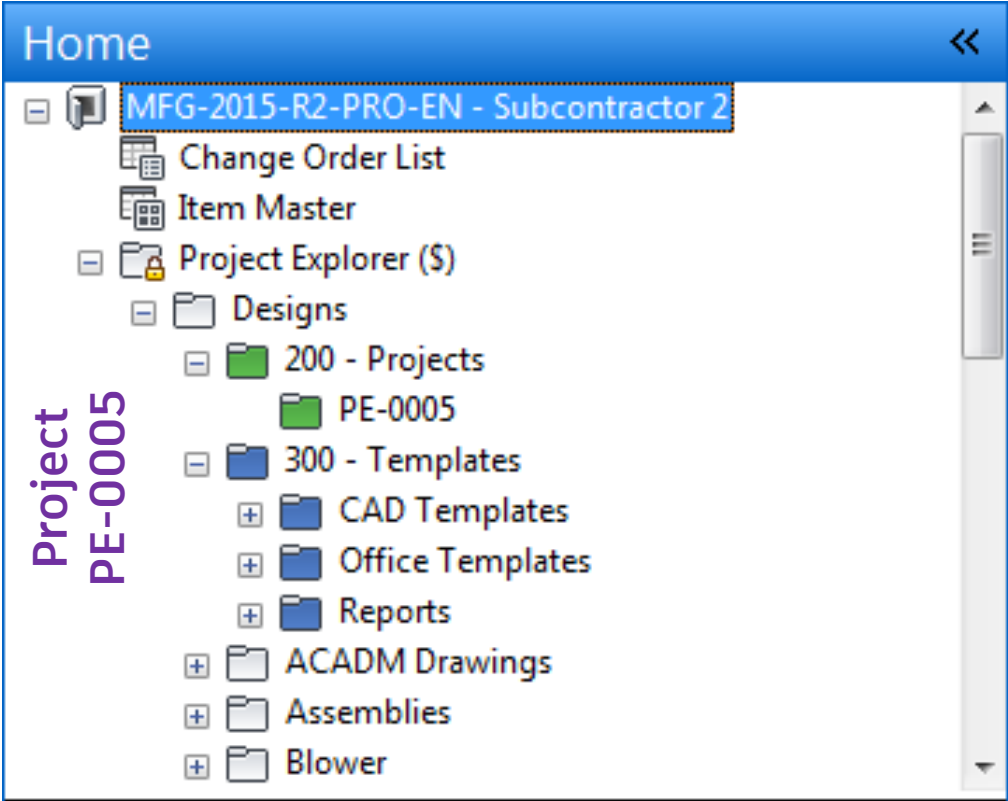
## Mike Manager Access



## Contractor 1 Access



## Contractor 2 Access

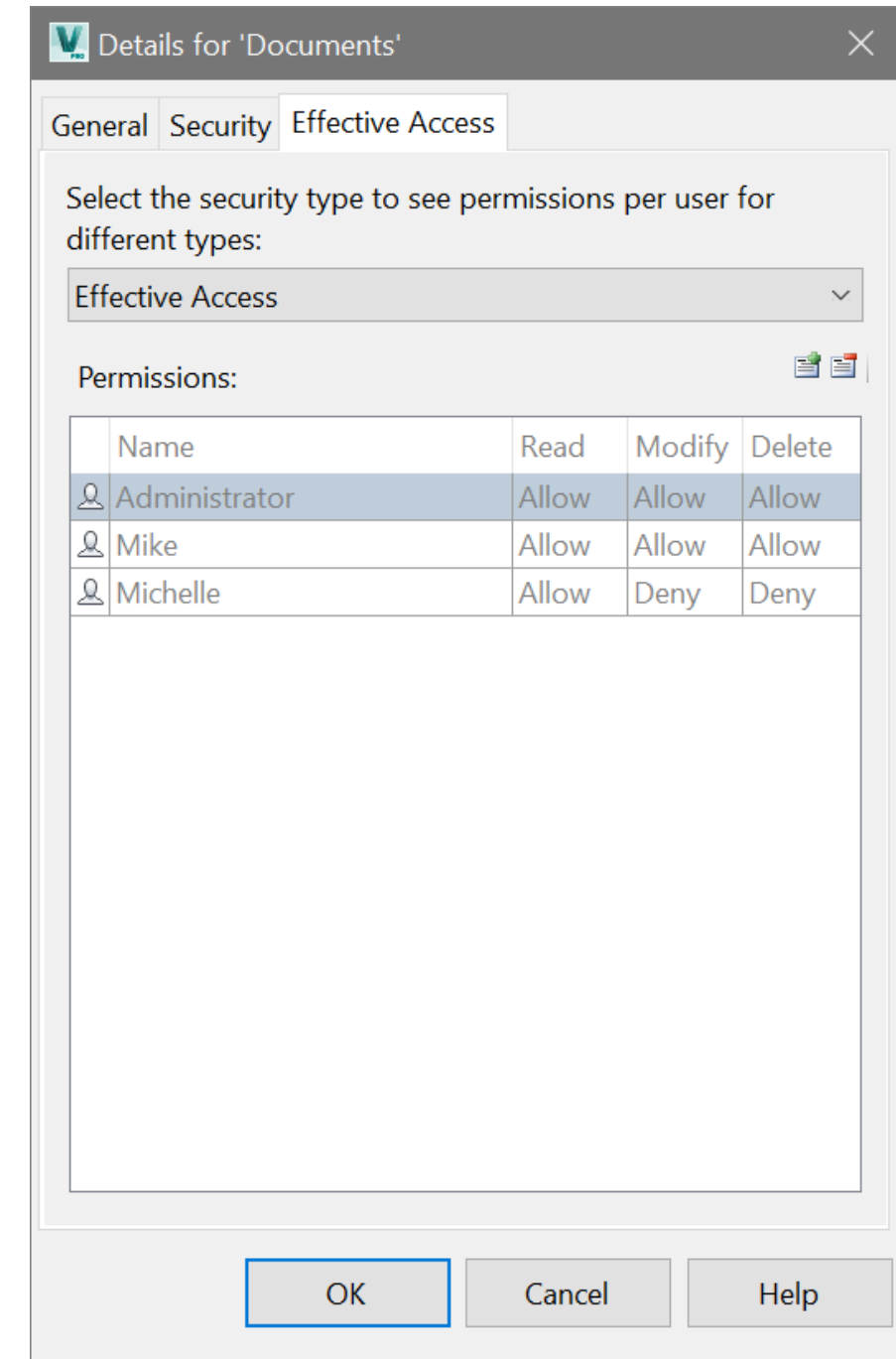


The background features a blue gradient bar at the bottom, transitioning from a darker blue on the left to a lighter blue on the right. Overlaid on this is a complex, light gray wireframe mesh pattern that forms a series of interconnected, flowing, and somewhat circular shapes, resembling a stylized, abstract network or a series of interconnected loops.

Effective Access

# Effective Access

- See User Permissions
- Test Effects of Changes



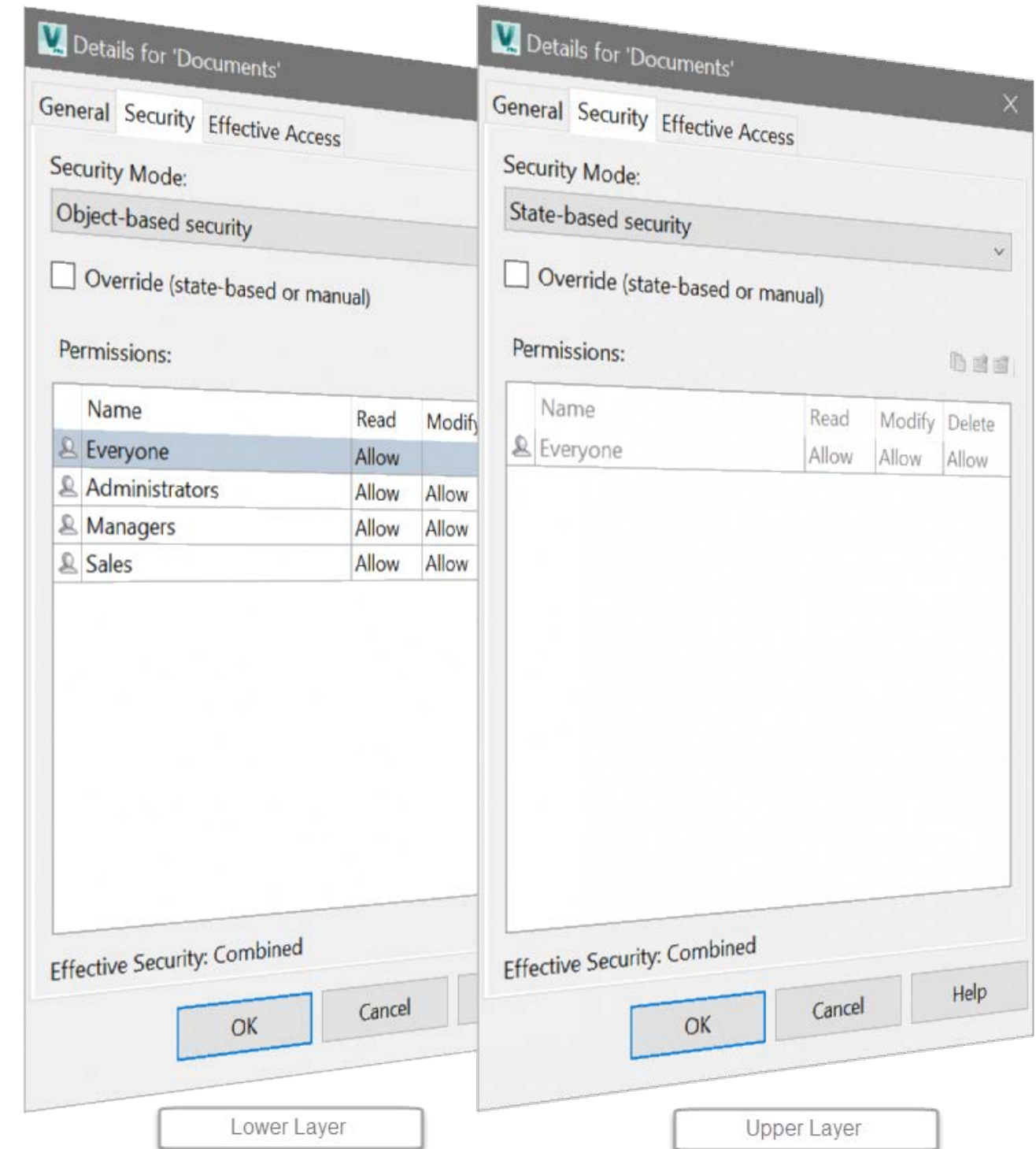




# Overriding Security

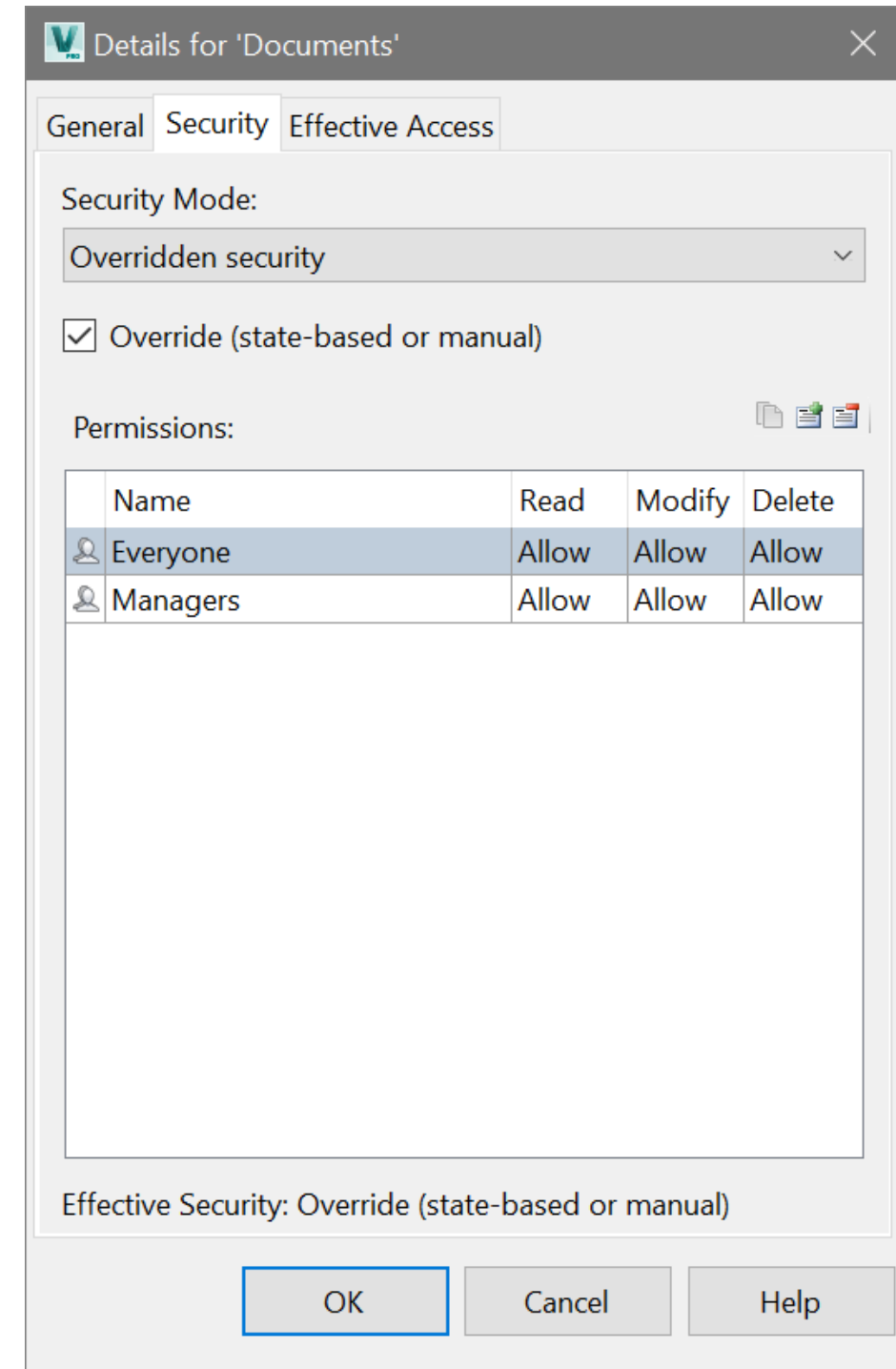
# Overriding Security

- Security in layers
- OBS – Lower Layer
- SBS\Overrides – Upper Layer



# Overriding Security

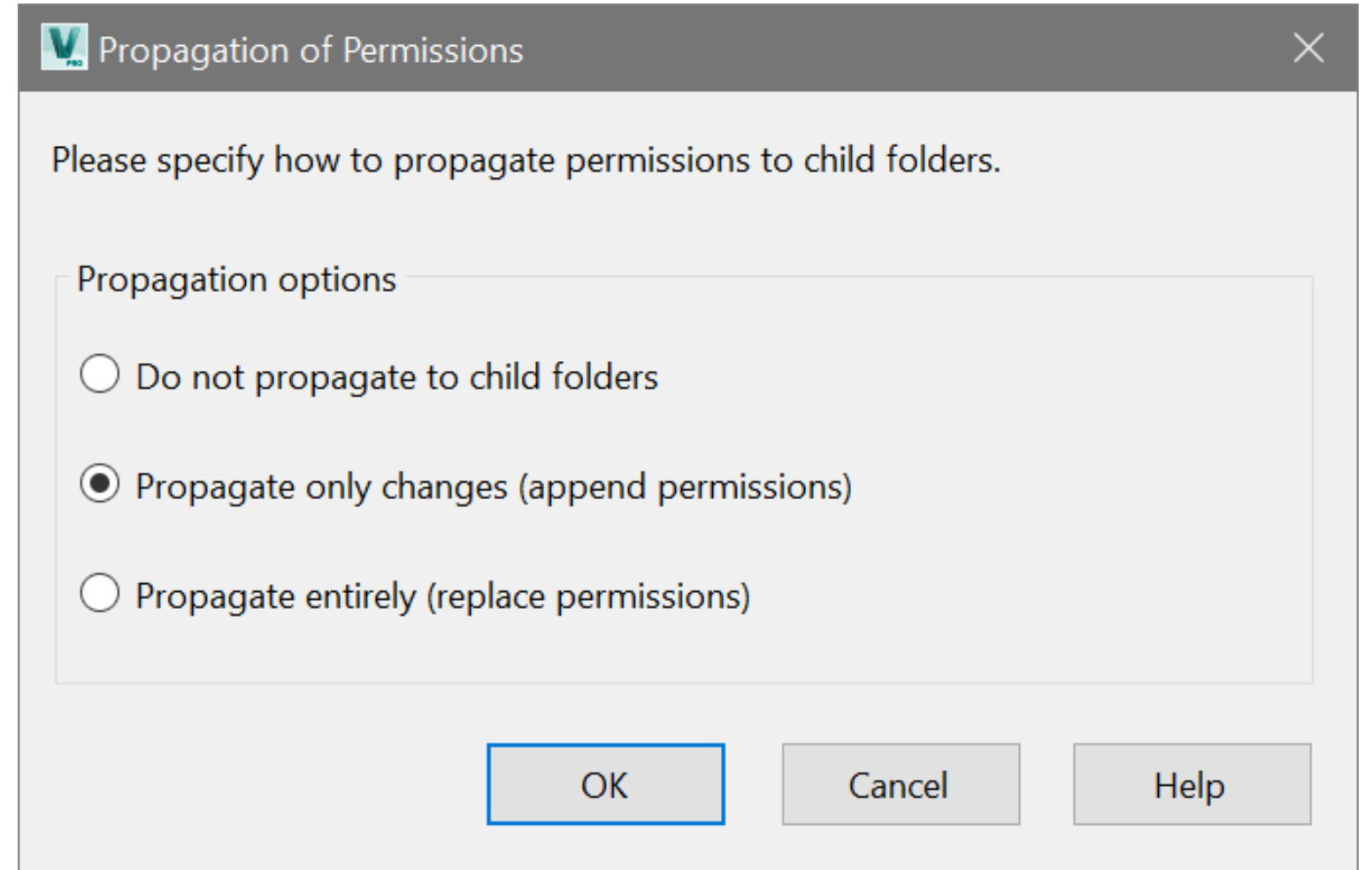
- Select model to override
- Model ACL copied
- Override sits in Upper Layer





# Overriding Security & Security Propagation

- Propagated to Lower Layer
- Upper Layer isn't changed



# Summary

You now know how:

- To configure object level security
  - To configure lifecycle state level security
  - Object and Lifecycle level security work together
  - Users are affected by the security settings
- [PL11233 – Behaviors 201 for Padawan Learners](#)
  - [PL10597 – Behaviors 101 for Younglings](#)
  - [PL11664 – Behaviors 301 for the Jedi Master](#)
  - [PL2082 – The Rock, Paper, Scissors of Autodesk Vault Security](#)



#AU2016



