



IBM Case Manager 5.2 Security Model and Considerations



Objectives

This session is designed to enable you to:

✓ Describe the Security Model for Case Management



Utilize Best Practices for Assigning Security

Understand how customers are extending security model



Introduction

Overview

Focus on the Case Manager security model, best practices and configuration



Target Audience

Anyone who will be deploying and configuring case solutions in a Production Environment

Prerequisites
 Knowledge of IBM FileNet P8 and Case Manager
 Architecture



Session Roadmap

- → Target Environment Security Planning and Configuration
- •ICM Solution Model and Solution Structure
- Case Manager Security Model
- Deployed Solutions and Case Client
- Content Engine Classes and Objects
- Process Services Queues, Event Logs, Roster and Application Space
- Additional Security Best Practices
- •Q & A



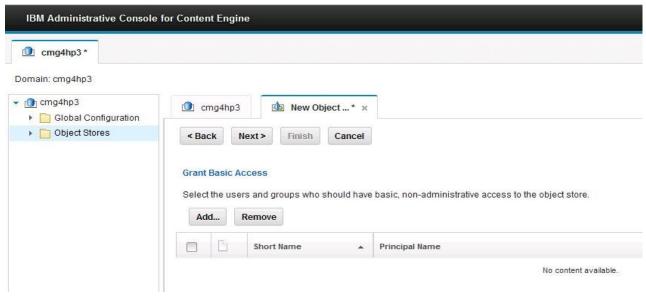
Target Environment Security Planning

- Security is an important part of system planning
- Plan ahead for groups and/or users who will be accessing the Target Object Store as users
 - If #AUTHENTICATED-USERS cannot be used, then a Master Group (or even Master Groups) should be specified instead during Target Object Store creation time
 - Master group is a LDAP group which in turn contains groups/users
 - Change of access to the OS can then be easily maintained by adding or removing groups/users from the master group within LDAP, which in turn effectively controls the usage of the OS
 - This approach helps setup majority of the basic access rights from OS usage perspective hence minimizes security configuration complexity
 - It will be hard to add unplanned groups/users after the fact to use the OS
 - Customized security scripts or even manual steps are likely involved based on the situation and variations to reach a resolution
 - Consult CPE best practices and recommendation in Info Center
 - Contact IBM subject experts or L2/L3/Enablement team for careful review then plan and apply adjustments accordingly



Target Environment Creation and Configuration

 Grant #AUTHENTICATED_USERS or Master Group(s) basic access during OS creation



- Case Manager Configuration Tool and Administration Client checks if there
 is no group/user with basic access rights at all and generates warning
 - Correct the situation immediately before further proceed with any additional
 Case Manager configuration steps and OS usage

Target Environment Administration Security

- Grant IT Administrators and Solution Administrators to have Full Control on CPE to deploy/redeploy solutions, configure/update security configurations and auditing configurations
- Add IT Administrators and Solution Administrators to Process Services Administration and Configuration groups as well

Also

- Security model is an intrinsic part of the solution design
 - What is the problem scenarios to be solved
 - Who the players are for driving the case to resolution
 - How each role involved in the case and perform their work collaboratively
 - What each role can do and what kind of rights needed
- Remaining sections focus on Case Management security model and configuration with non-administrative rights
 - What determines how a user can see and act in terms of Case Management operations from within Case Client

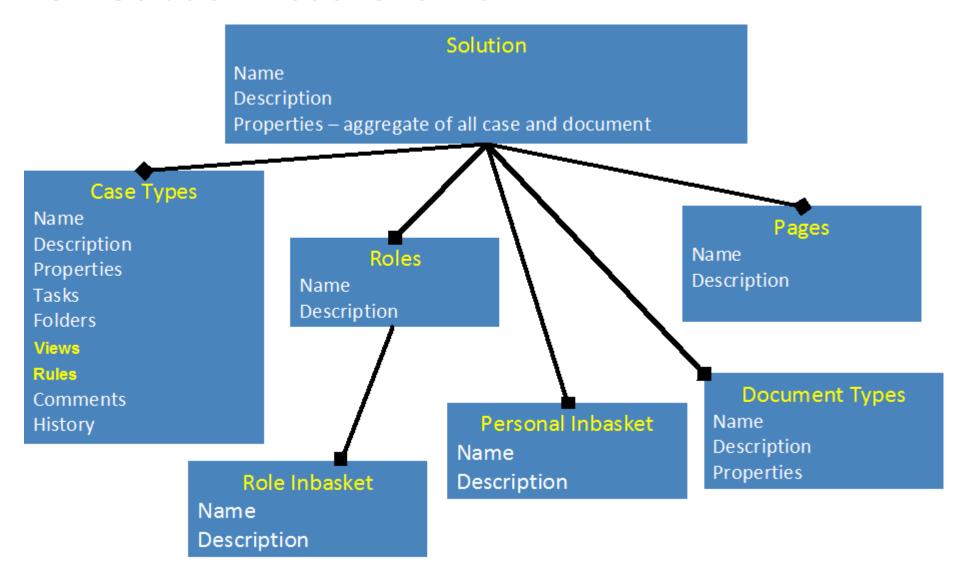


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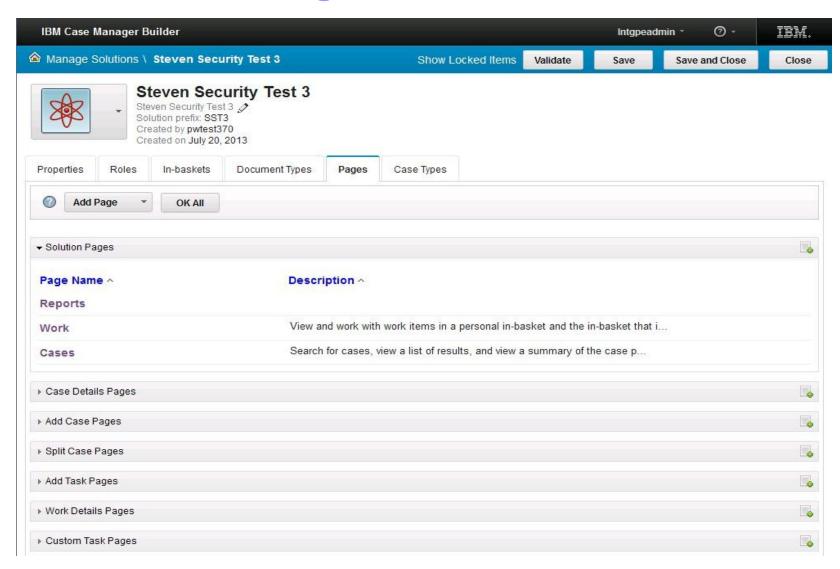


ICM Solution Model Overview



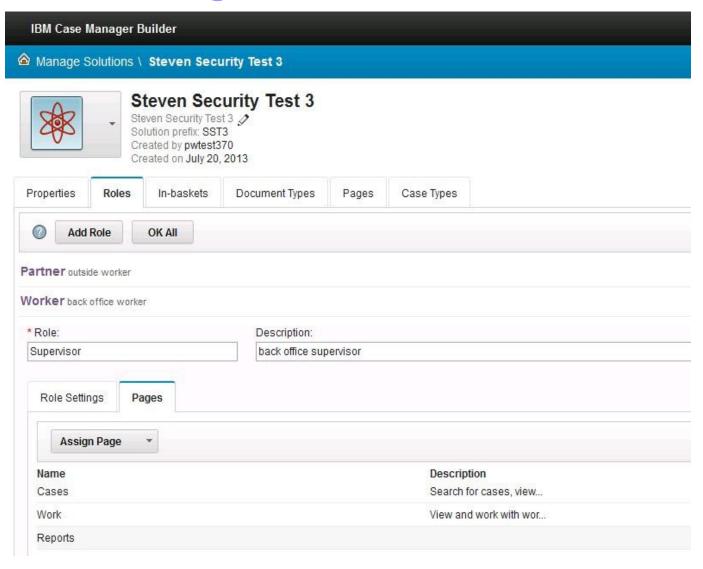


ICM Solution and Pages



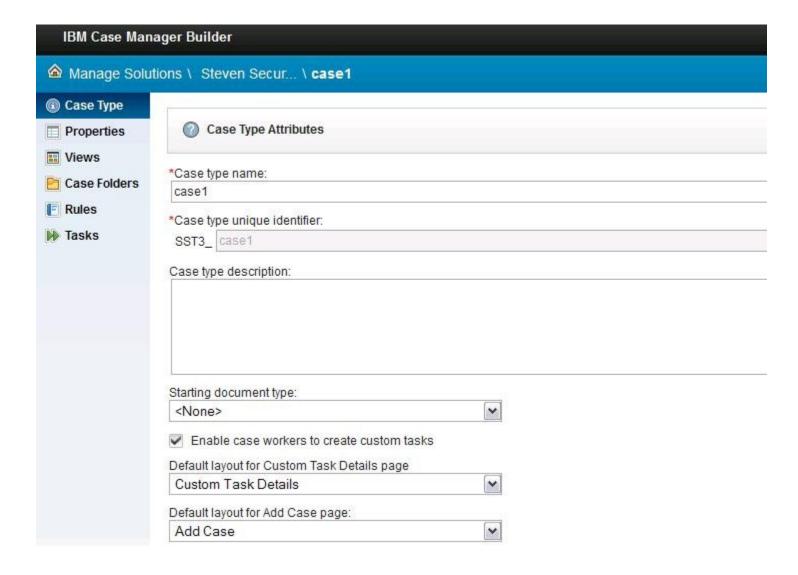


ICM Solution Pages for a Role



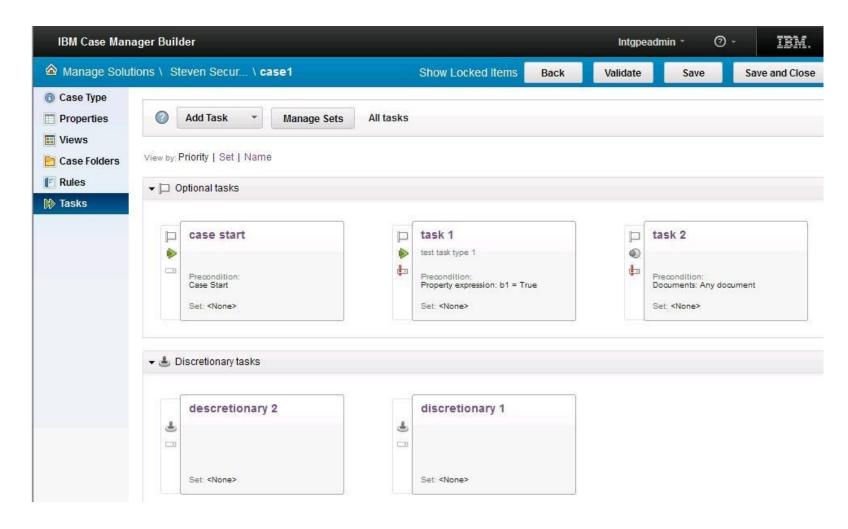


ICM Views, Rules, and Custom Task



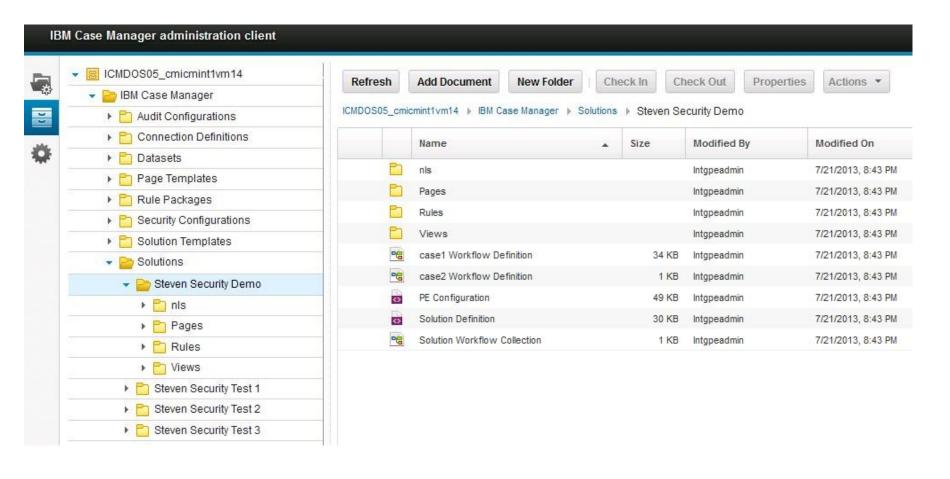


ICM Discretionary Tasks





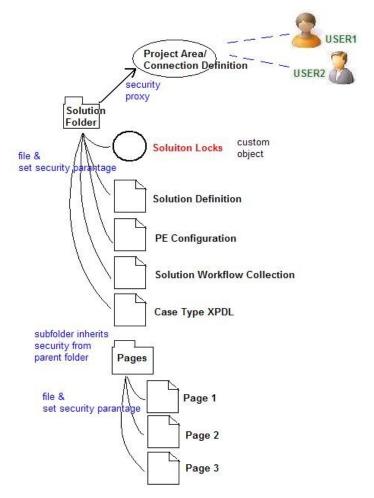
ICM Solution Structure





Design Object Store Security

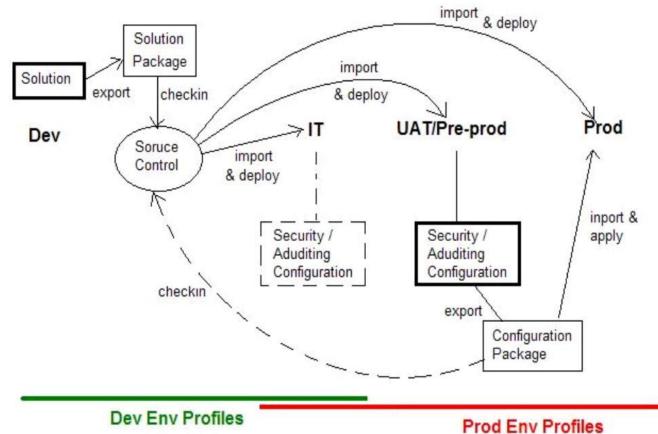
- IT/ICM Solution Administrator has control over Staging OS
- Treat the Design OS in Development Environment just like a source control system
 - Only groups/users assigned to Project Area has authoring rights to corresponding solutions within the project area
 - Solution security is dynamically reflected
- Remaining sections focus on Target Environment security model





Stages of Target Environments

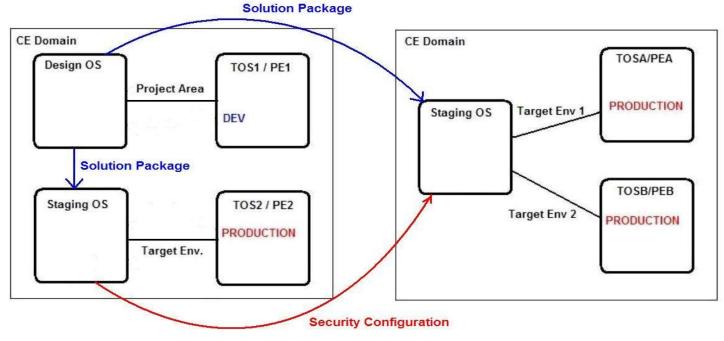
- Solution Package coming from Development Environment
- Security tests are configured/tested early via production environment profile





Target Environment for Security Tests

- Development Environment and Production Environment (IT/UAT) can be within same CE Domain or multiple Domains
- Exercise solution migration properly
- Configure security for a deployed solution as if it is in a production system and use proper end user accounts for security tests
 - Do not sign in as administrator into Case Client



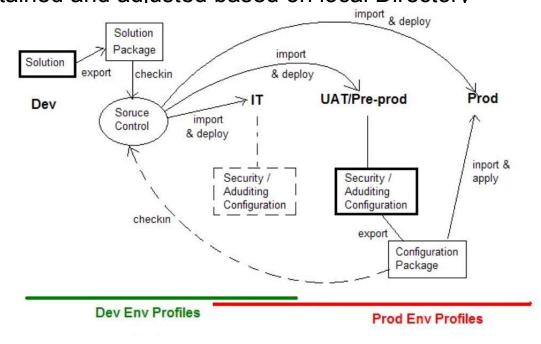


Solution Package vs. Security/Auditing Configuration

- Solution Package may be less updated while Security and Auditing are more frequently changed based on business needs and mandates
 - Different change lifecycle

 Same Solution Package may be delivered and deployed to multiple Geo's Data Centers for a global enterprise, where security access rights and role memberships are maintained and adjusted based on local Directory

Services of the Geo



Call to Action

- Understand customer business requirements as well as security models needed in order to build a good ICM solution
- Design the solution and plan security accordingly
- Prepare proper security test plan, scenario coverages and allocate amount of test time needed to exercise the plan
- No excuse for security not well understood nor tested thoroughly already before going into UAT or PROD, or to a client site



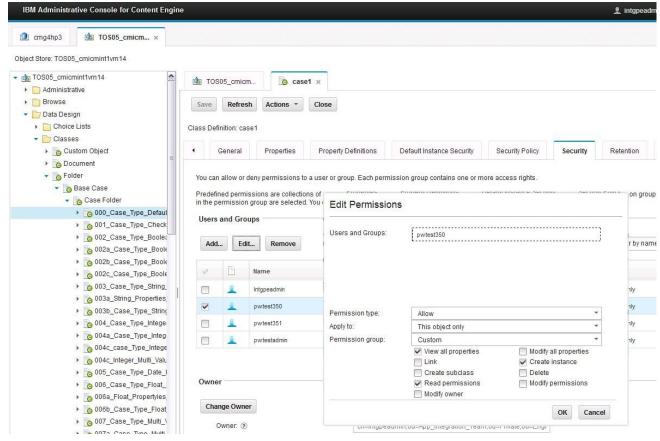
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Content Engine Create Instance Rights

- Class Definition controls
 - Who can view the class
 - Who can create an instance of the class





Content Engine Create Instance Rights (cont)

Case Type

- Solution Case Types are subclasses of Case Folder
- Also needs Deployed Case Type folder side security

Case Subfolder

- No subclasses, all OS users can create case subfolder
- Also needs Create Subfolder right on case or case subfolder

Document Type

- Solution Document Types are subclasses of Document Class
- Also needs File in Folder right on the case or case subfolder

Discretionary Task Types

- Solution Task Types are subclasses of Case Task
- Also needs Process Services Roster create right

Dynamic Task

- There is one subclass for each Case Type enabled for Dynamic Task
- Also needs Process Services Roster create right

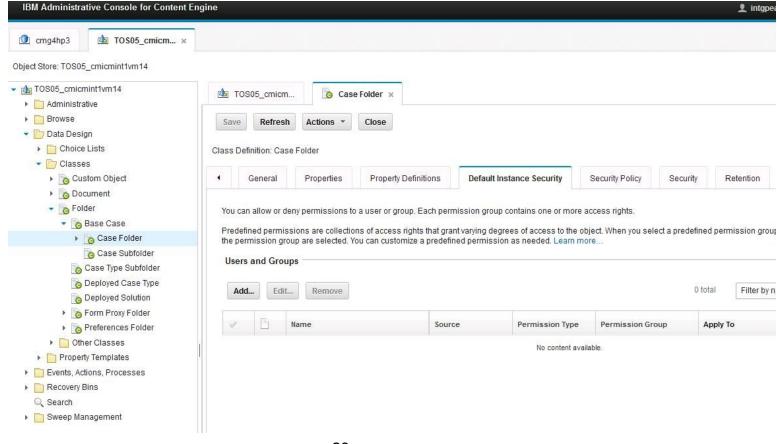
Comments

- All OS users can create comments
- Also needs Annotate right on the case



Production Environment Profile

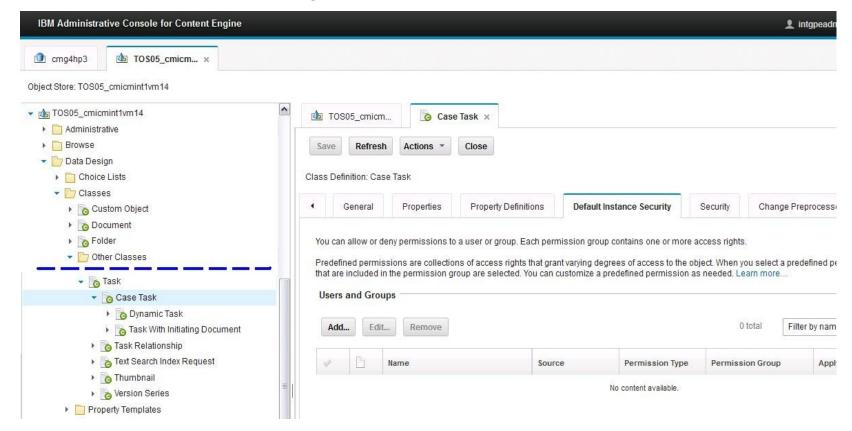
- The Configuration Tool empties out Default Instance Security settings from various ICM AddOn base classes if it is an production environment profile
- Case Folder, Case Subfolder, Case Type Subfolder





Production Environment Profile (cont.)

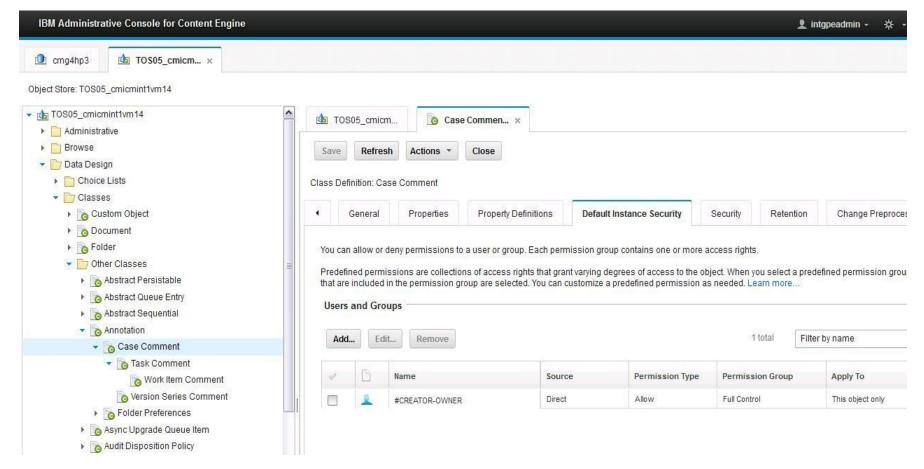
- Case Task
 - Dynamic Task
 - Task With Initiating Document (depreciated)





Production Environment Profile (cont.)

 Case Comment, Task Comment, Work Item Comment, and Version Series Comment with #CREATOR_OWNER only



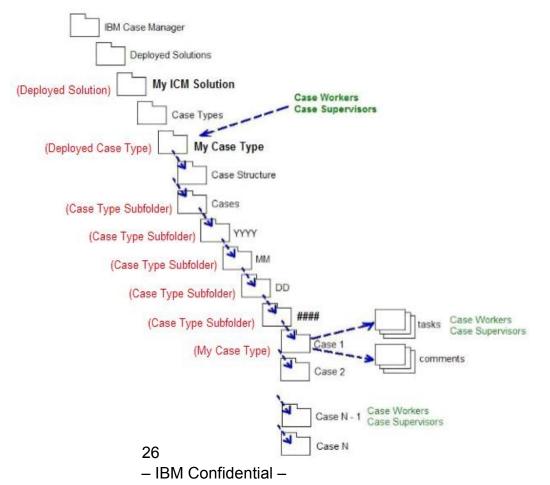


Dynamic Security Inheritance Model

ICM recommends and uses dynamic security inheritance model

Not using default instance security allows the security to be configured at the Deployed Case Type folder level, and inherited cleanly all the

way down





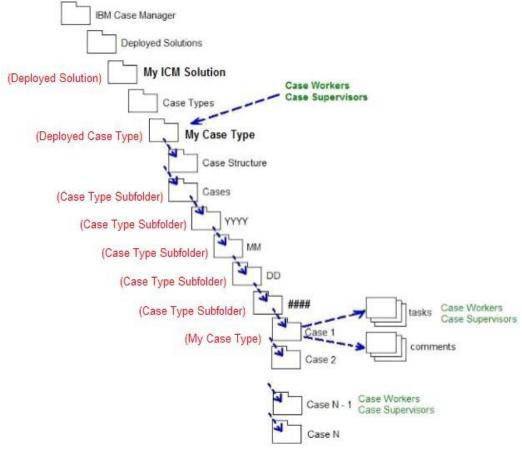
Dynamic Security Inheritance Model (cont.)

- Using Default Instance Security adds ACEs into object instance directly
 - Future update/change of the security across all existing instances could become very difficult
 - Need extra program or script to search for existing case instances, and do update by batch as well as good recovery/retry instrumentation to ensure system integrity
- Dynamic Security Inheritance allows changes of security easily that can be triggered by any personnel functional responsibility change, corporate structural reorganization, business model/requirement update, or government mandates, etc.
 - Only a fixed number of well-known control points need security update and let the platform reflects the security change dynamically & reliably



Dynamic Security Inheritance Model (cont.)

- The default model assumes all case instances has same rights following the deployed case type folder
 - Variations of instance based security model discussed later





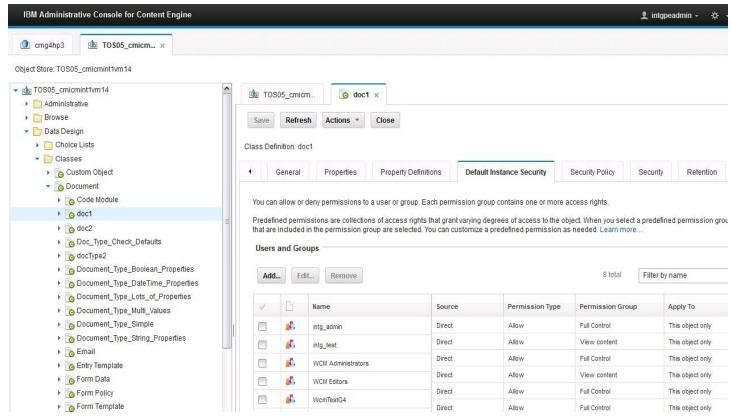
Document Security Model

- Existing document classes may be reused into an ICM solution
 - Already has default security configuration settings to be used as is
- Document can be shared (multi-filed) across cases
 - When a document is filed into different cases, its security in general should not be changed as a side-effect in order to avoid unexpected security concern or issue
 - e.g. a document a user can only see and not able to modify its properties, nor authoring – i.e. checkout/checkin, its security should not be altered even if the user files that document into a case which the user has more elevated rights on the case (like update case properties, modify permission, delete case, etc.)
 - Split case can also cause some documents to be filed into the newly split case of same or different Case Type
 - A different Case Type may have different security
- Generally document security needs careful planning and review, and it can be highly diverse from customer to customer business scenarios



Document Security Model (cont.)

- In Case Manager, case documents still use the standard default instance security model controlled by document subclasses
 - A custom variation of case owned document (never filed to another case) is discussed later



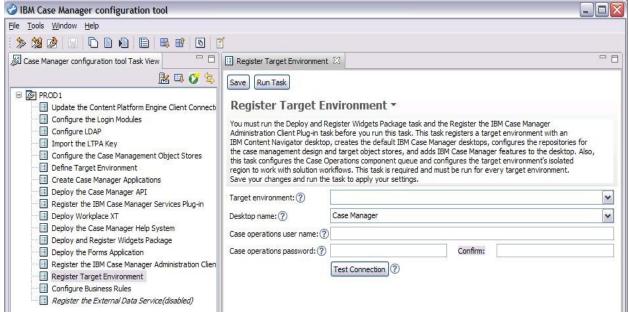


Process Services Security Model

- Do not leave Process Services security open
 - Only secured on CE side is not sufficient
- Setup Process Services Administrator and Configuration groups to IT/ICM Solution Administrators
- Application Space (for the solution)
 - Users that can manage roles need to be added into Application Space security
 - No longer needs to be adjusted for Reassign Work to see all roles
- Roster (for the solution)
 - Controls task process creation/launching
 - Users who might start a task, e.g. during case creation, create and start a discretionary or custom task, etc. will need Create right
- Event Log (for each case type) used by Case History/Visualizer
- Work Queue (for each role)
 - Query and Process rights to get to work object and process/dispatch
 - CE side security further influenced by the task processes design as well
 - User who can view/query the work items, select a response and influence how the work is routed next ... but can only view case
 - i.e. does not update case property, nor add document, etc.
- User who can actually update the work item (case properties exposed on the step UI as

Component Queue Workers

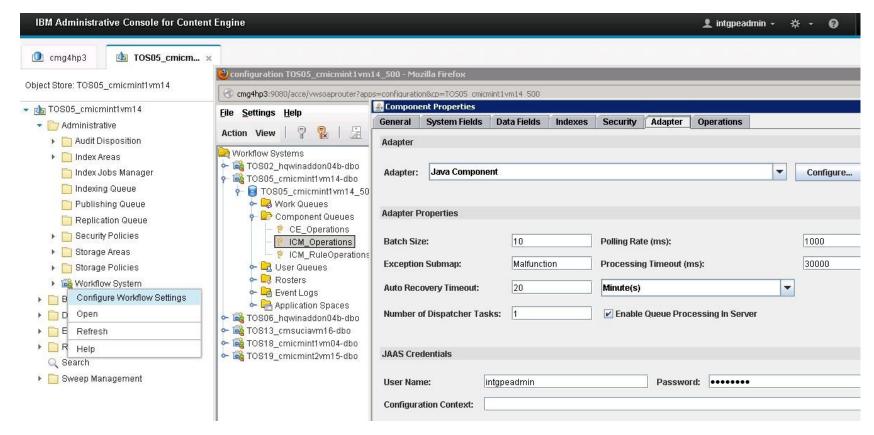
- Configuration Tool configures the default ICM OOTB component queues security
 - Case Operations, Rule Operations
 - Do not use CPE Administrator account, customer typically uses a delegated non-FullControl account instead
 - This non-UI worker/account designated also needs Content Engine side security configuration in order to perform the operations, e.g. create a case, update case properties, file a document, etc.





Component Queue Workers (cont.)

 Customer IT/ICM Solution Administrators further need to take care of CE Operations queue as well as any additional custom component queue(s) security configuration accordingly





Session Roadmap

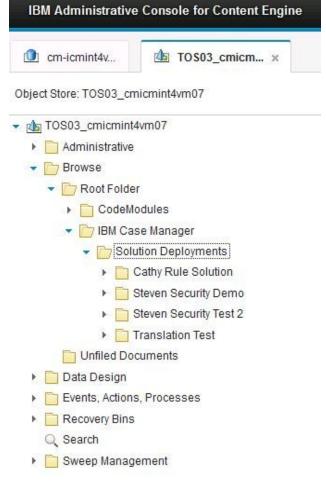
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Target Environment and Deployed Solutions

- A CE Domain can have multiple target object stores
- Each target object stores can have multiple deployed solutions

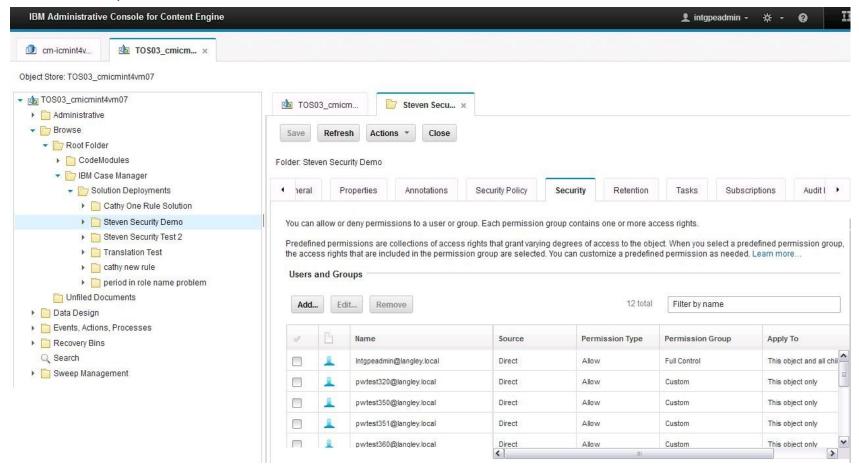






Security Configuration for a Deployed Solution

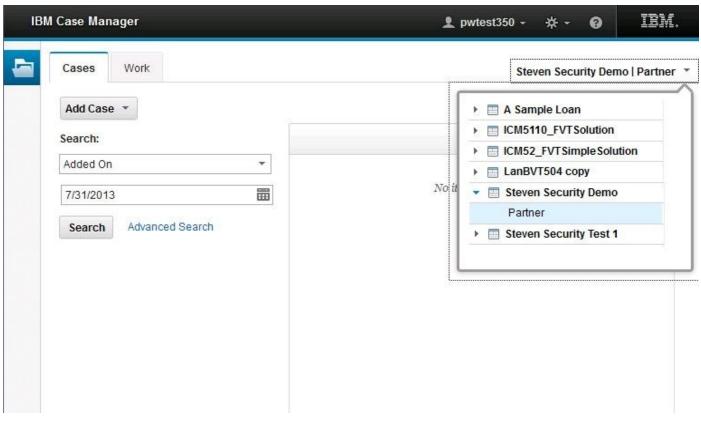
 Grant groups/users with "view" rights to a deployed solution folder to allow access, i.e. see and use the solution





Deployed Solutions and Case Client

- When a user signs into Case Client, the user can access all the solutions deployed within the CE domain that the user has "view" rights to
 - i.e. the deployed solutions available for a user are discovered and collected from multiple target object stores



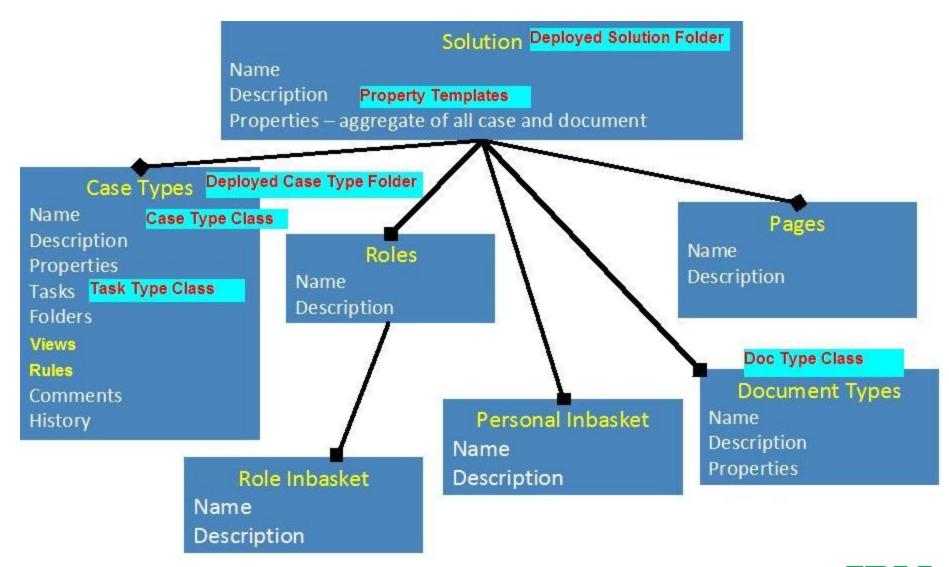


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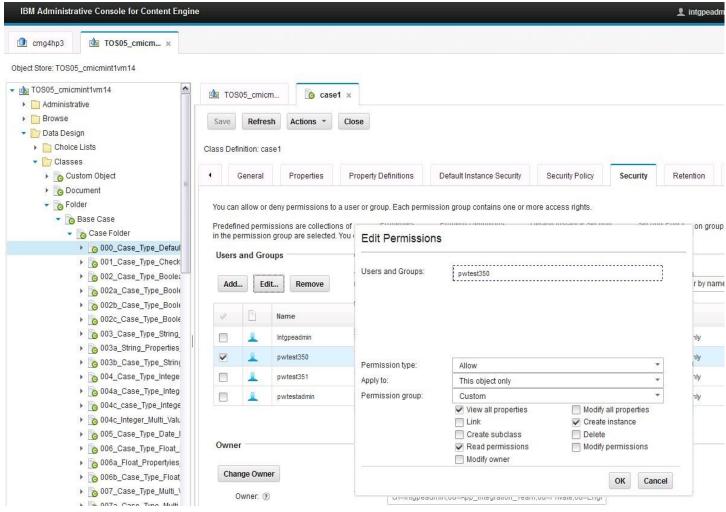
ICM Solution Model to CE Classes and Objects





Case Type Classes

Solution Case Types are subclasses of Case Folder class





Case Type Classes (cont.)

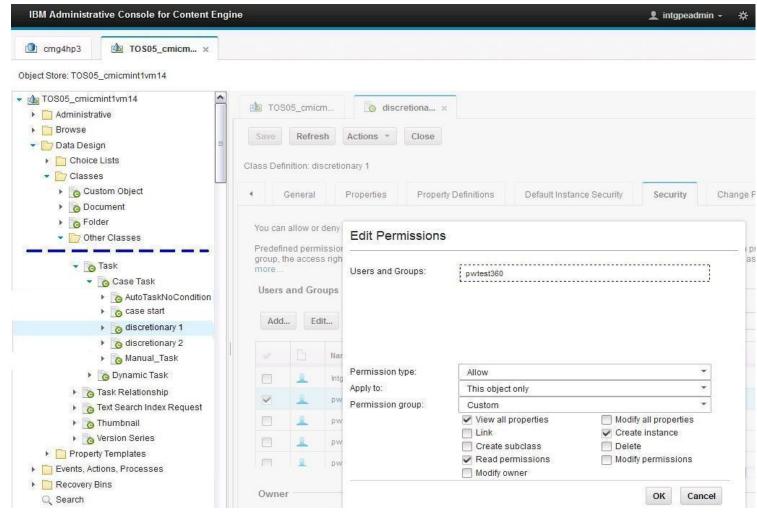
- Case Type Class Definition controls
 - who can see a Case Type
 - who can create a case instance off the Case Type





Discretionary Task Type Classes

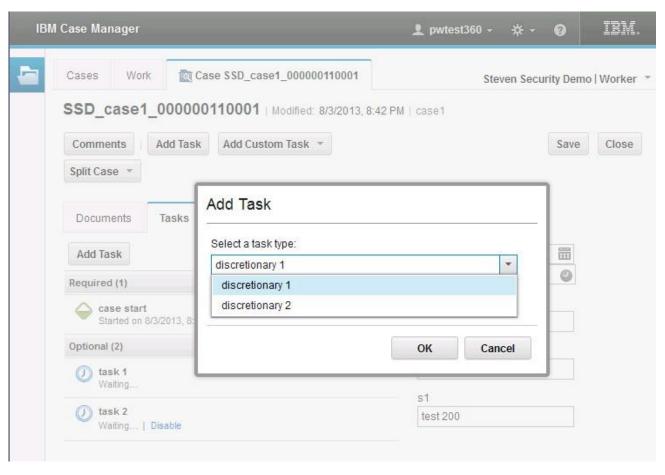
Discretionary Task Types are subclasses of Case Task class





Discretionary Task Type Classes (cont.)

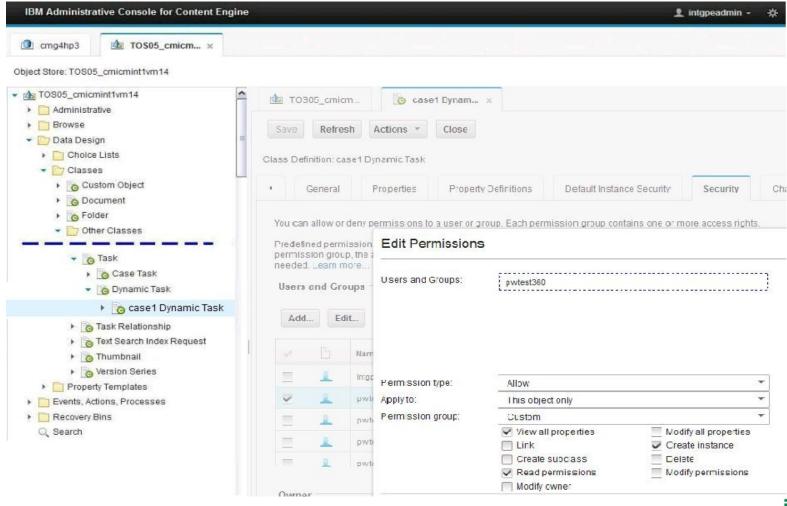
- Discretionary Task Type Class Definition controls
 - who can see and create a task instance off the Discretionary Task Type





Dynamic Task Type Classes

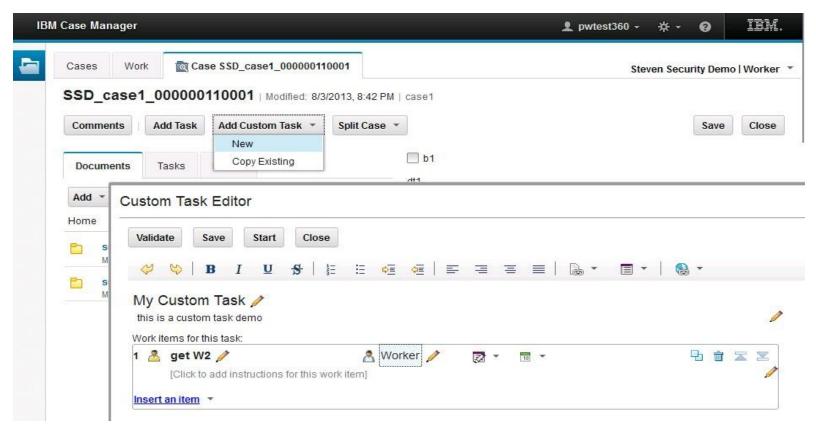
Dynamic Task Type of a Case Type is a subclass of Dynamic Task class





Dynamic Task Type Classes (cont.)

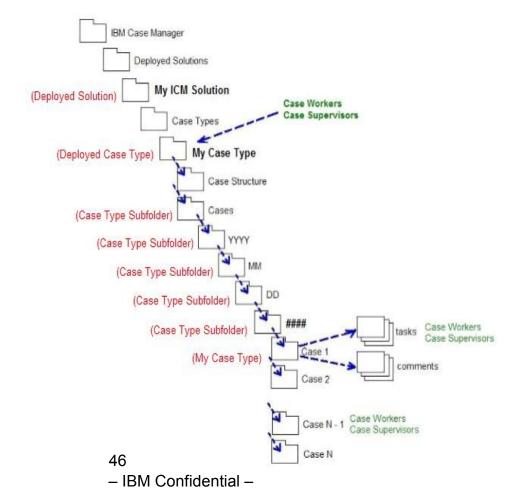
- Dynamic Task Type Class Definition controls
 - who can define/create a custom task for a case in Case Client during runtime



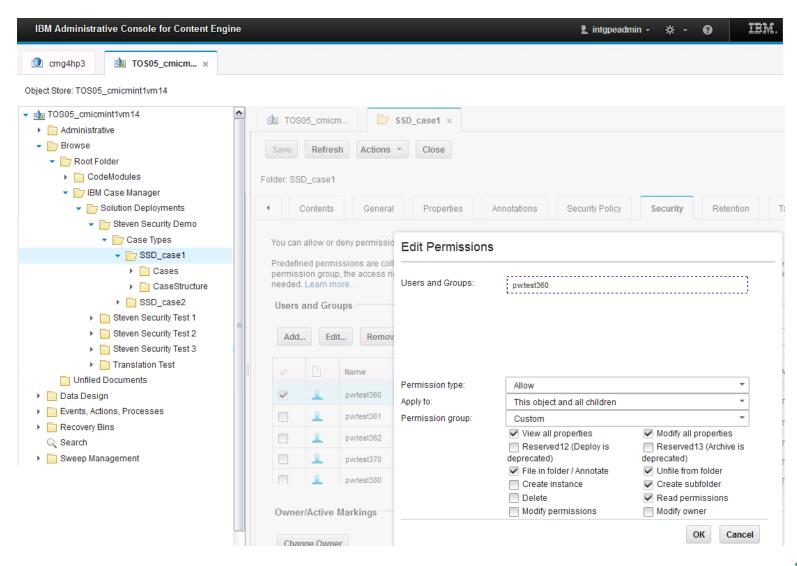


Deployed Case Type Folder

- Deployed Case Type Folder controls a lot of Case Client UI operations
- Each Case Type class has a corresponding Deployed Case Type Folder
 - By default, the deployed case type folder instance has no security set

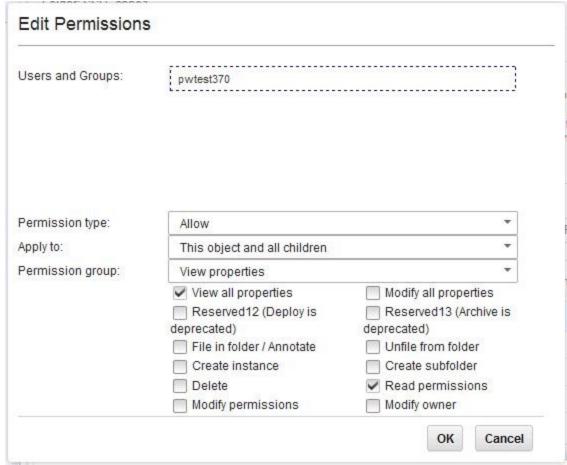






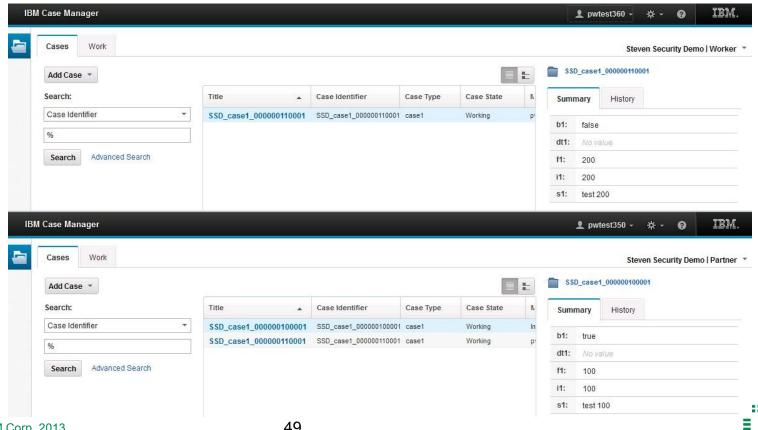


 View Case, Case Subfolders, Tasks, Comments, Case History, etc.

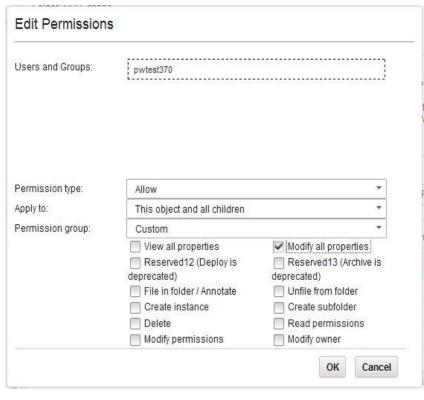


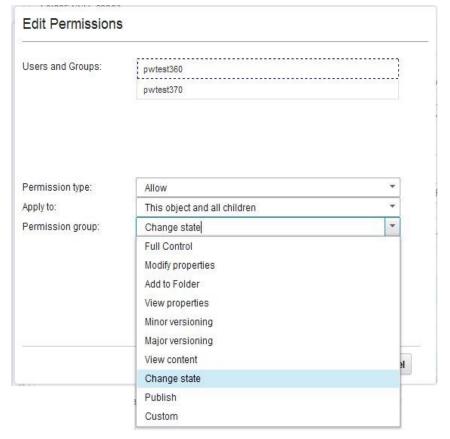


- Unless a user has view right on the case, the case will not even returned in Cases search
 - In turn user will not get into Case Detail Page



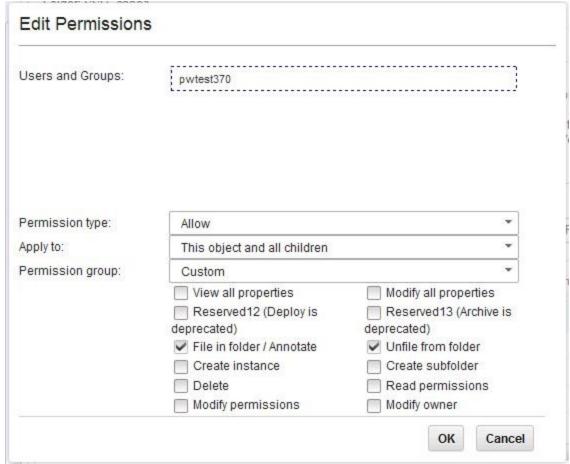
 Update Case Properties, Task Properties and States, etc.





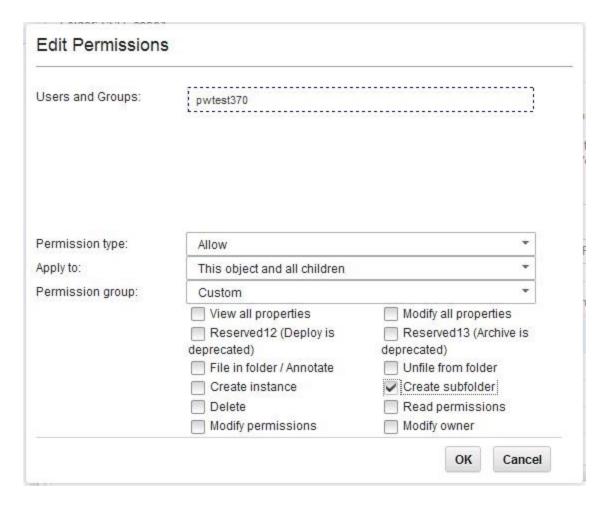


- Add/File Case Document, Add comment
- Unfile Case Document





Create Case Subfolder



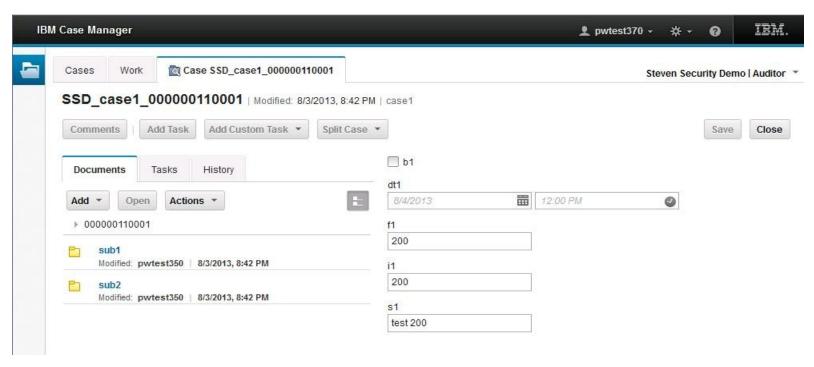


 Give additional Modify Permissions, Modify Owner or Delete case assets rights to case supervisors or managers only

Users and Groups:	pwtest360	
Permission type: Apply to:	Allow This object and all children	-
Permission group:	Custom	*
	View all properties Reserved12 (Deploy is deprecated) File in folder / Annotate Create instance Delete	Modify all properties Reserved13 (Archive is deprecated) Unfile from folder Create subfolder Read permissions



- Case Client UI actions will be grayed out unless user have proper rights
 - Some places missed will be enhanced in the future
 - But still protected properly in CPE backend





Relate Cases and Split Case

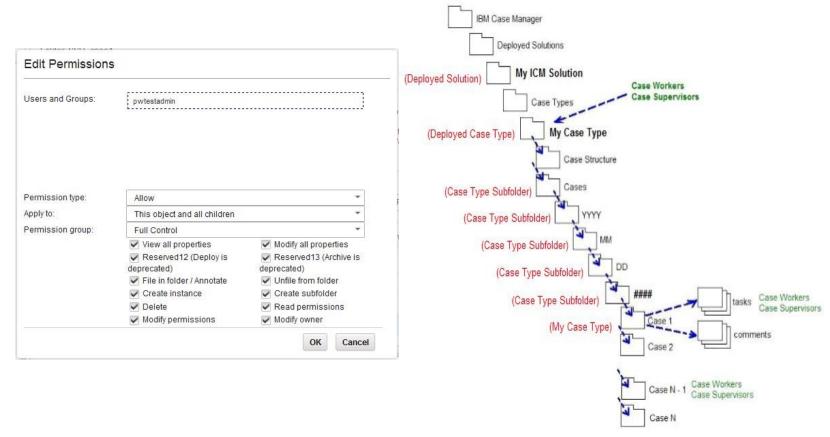
- Cases can be related if the user can
 - View the cases to be related together
 - User has Create Instance right on the Case Relationship class
- A case can be split to another case of same or different case type
 - User has Create Instance right on the Case Relationship class
 - User has Create Instance right on the target Case Type class





IT/ICM Solution Administrators

 Give IT/ICM Solution Administrators Full Control from Deployed Solution folder



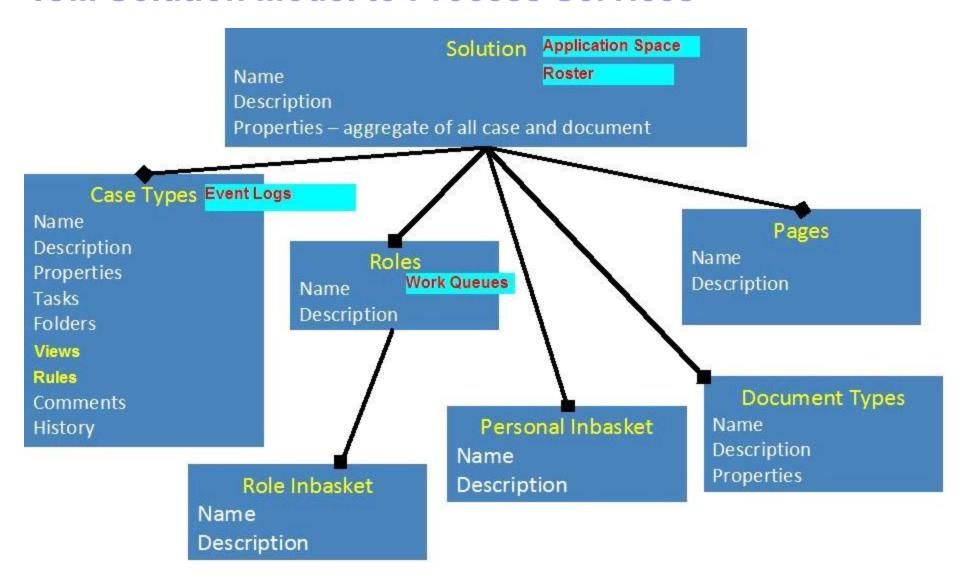


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ICM Solution Model to Process Services





Process Services

- A Process Region is shared by multiple ICM solutions
- Component Queues within a Process Region are shared by multiple ICM solutions
 - Already covered in previous section and security configured via Configuration
 Tool and Process Configuration Console
- Each ICM Solution → Application Space
 - Adjust Application Space security accordingly
 - Roles
 - Each Role has associated inbaskets and members
 - Setup role membership accordingly
- Each ICM Solution → Roster
 - Give Query and Create rights to case workers/managers who might need to start task processes
- Each Case Type → Event Log
- Each ICM Role → Work Queue
 - Inbasket definitions
 - Give members of the role Query and Process rights accordingly



Process Services Security Model

- Do not leave Process Services security open
 - A user can see and use 1 ICM solution does not mean that same user can see and use another solution deployed into same target environment
 - Only secured on CE side for each ICM Solution, each Case Type class, and case instances and assets are not sufficient, as Process Region is shared across ICM solutions as well
 - Process Services work item is as important as CE cases and assets
 - Work item may also contain important business information or sensitive private information during runtime even though not persisted into the case
 - PEREST and ICM/ICN model javascript APIs are exposed to client browser side to explore the system
 - Dynamic Task (Custom Task) if enabled for a Case Type, empowers certain workers to define and create ad-hoc processes directly off ICM Case Client
 - Not pre-determined by Business Analysis and tested like the system tasks and discretionary tasks
- Security practices should be planned, reviewed and applied accordingly by IT/ICM Solution Administrators as well

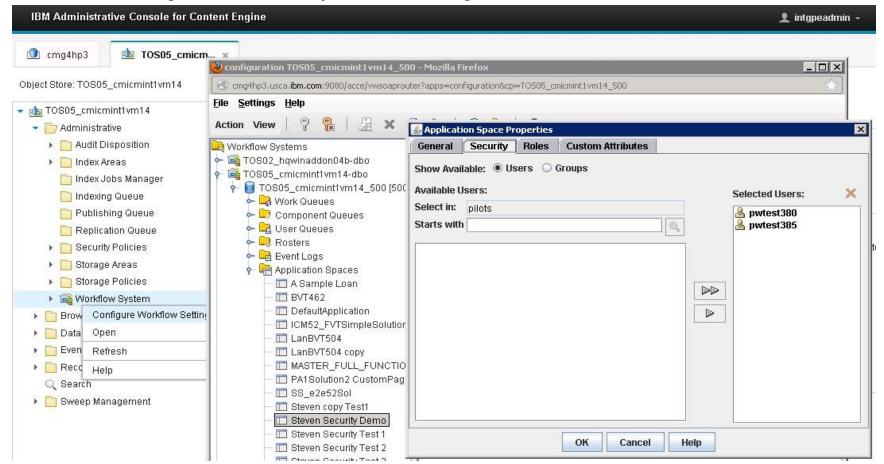


Process Services Security Model (cont.)

- Setup Process Services Administrator and Configuration groups to IT/ICM Solution Administrators
 - Adjust remaining security based on solution security design
- Application Space (for the solution)
 - Users that can manage roles need to be added into Application Space security
 - No longer needs to be adjusted for Reassign Work to see all roles
- Roster (for the solution)
 - Controls task process creation/launching
 - Users who might start a task, e.g. during case creation, create and start a discretionary or custom task, etc. will need Create right
- Event Log (for each case type) used by Case History/Visualizer
- Work Queue (for each role)
 - Query and Process rights to get to work object and process/dispatch
 - CE side security further influenced by the task processes design as well
 - User who can view/query the work items, select a response and influence how the work is routed next ... but can only view case
 - i.e. does not update case property, nor add document, etc.
 - User who can actually update the work item (case properties exposed on the step UI as R/W) with new values, add document, create comment, etc.

Application Space

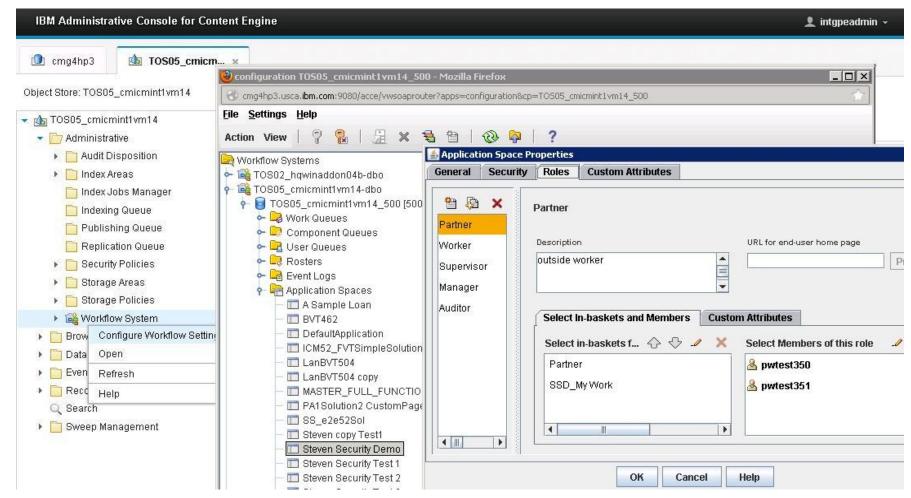
- Groups and users that can Manage Roles for a solution
 - No longer needs to be adjusted for Reassign Work to see all roles





Roles

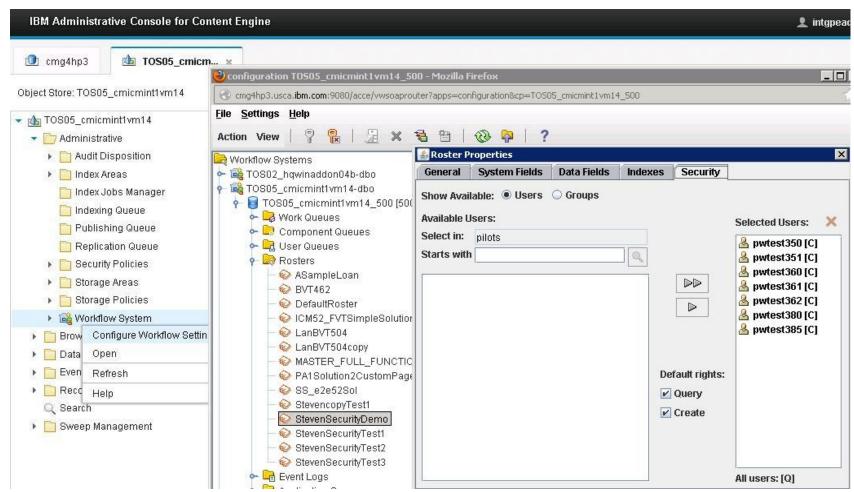
Assign proper role membership for each role





Roster

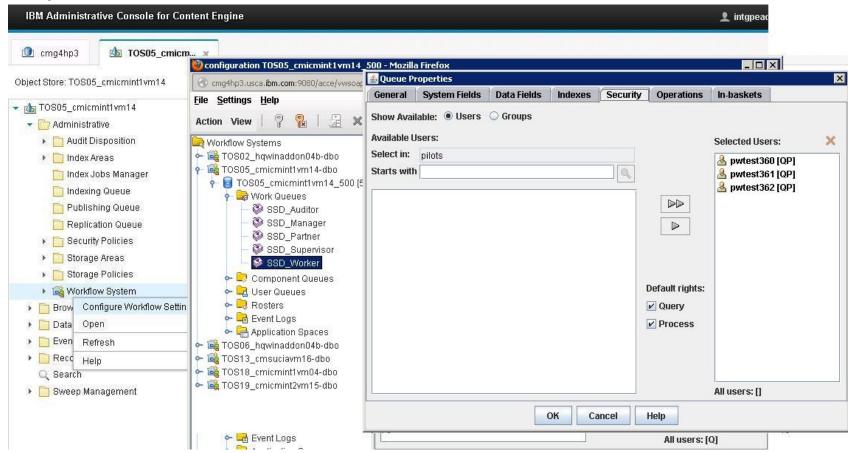
Groups and users that can start task processes for a solution





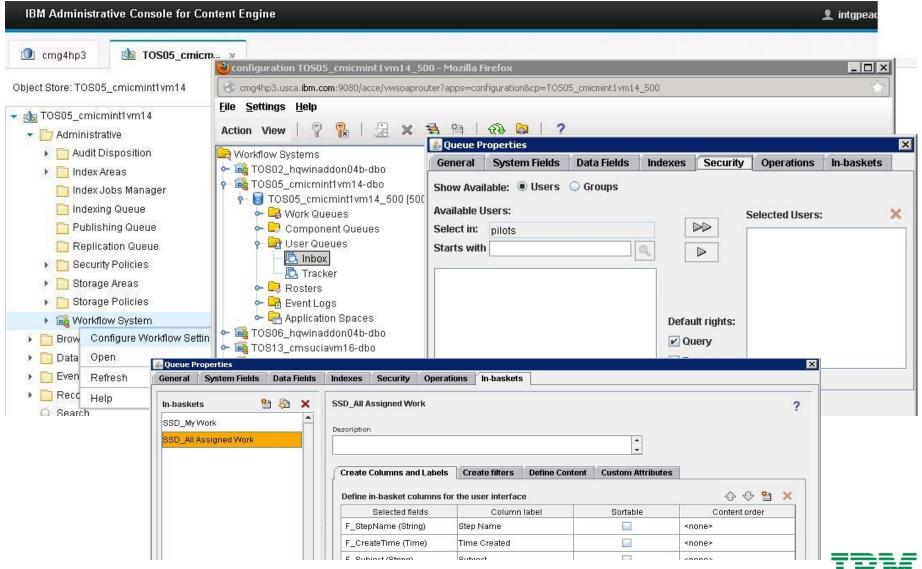
Work Queue

Groups and users that can query and process work items for each work queue

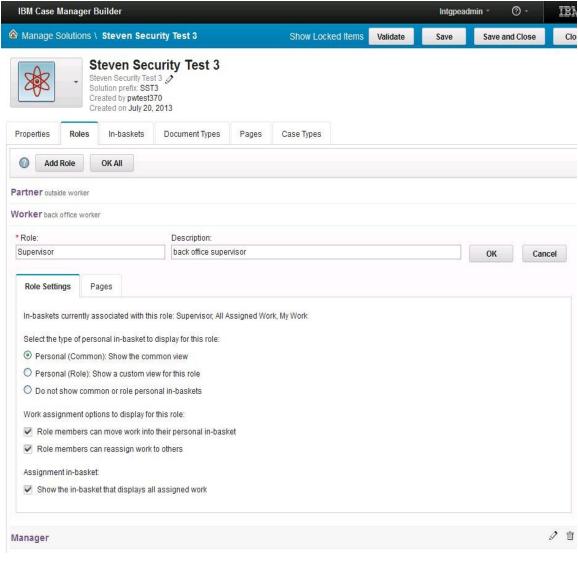




InBox Queue

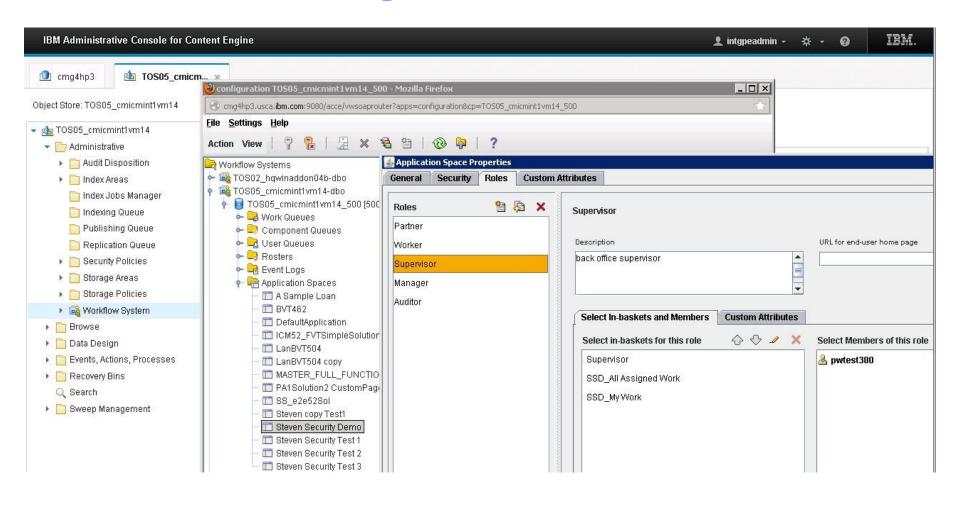


Show In-basket for All Assigned Work



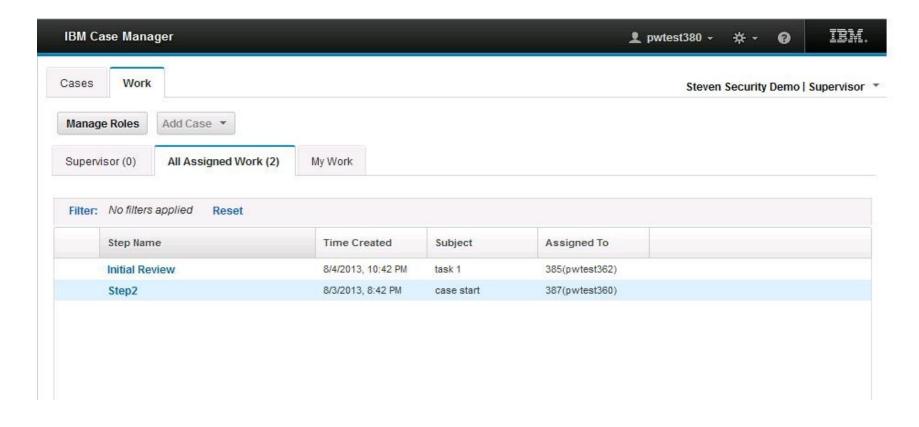


In-basket for All Assigned Work for a Role



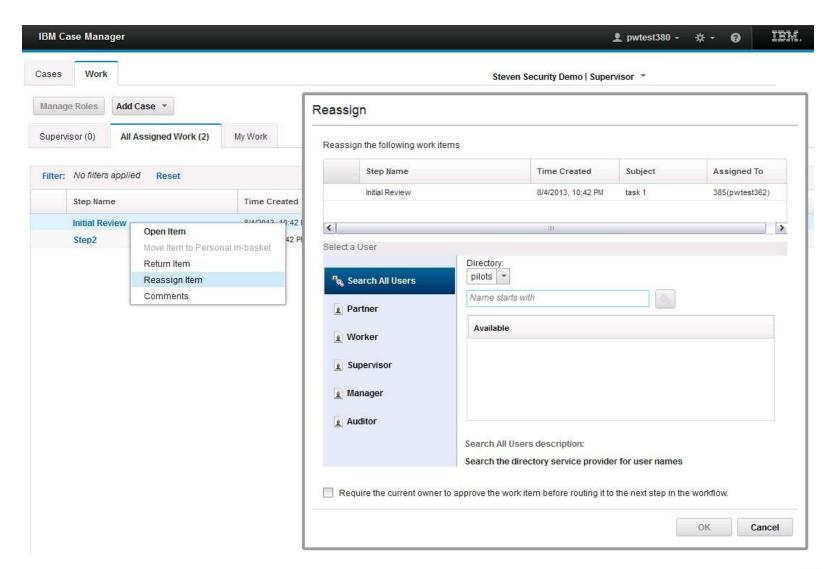


Role with All Assigned Work





Reassign Work





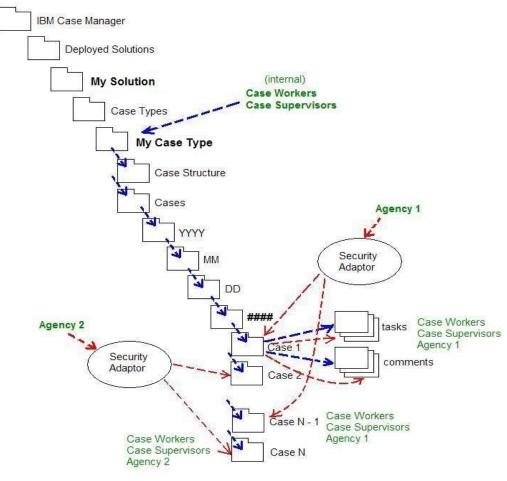
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Security Adaptor/Proxy Mix-in

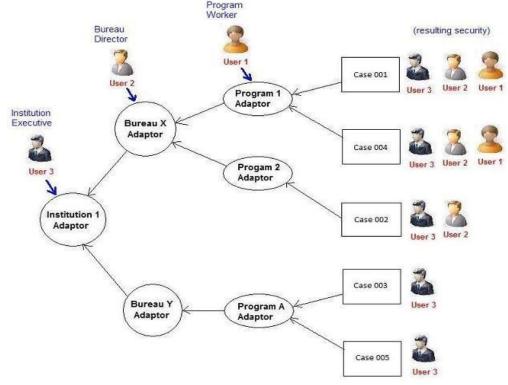
- A subset of the cases now have different security rights mixed in
- Still a limited set of control points to adjust security as needed





Security Adaptor/Proxy Hierarchy

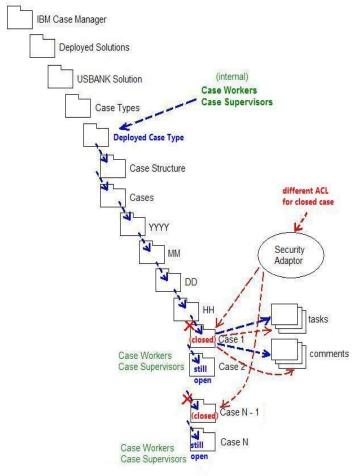
- Build a security adaptor hierarchy according to organizational structure or security privilege hierarchy
- Simple adjustment of security proxy pointers (OVPs) to reflect the security changes needed
 - e.g. Program 2 now under supervision of Bureau Y





Security Adaptor change based on Case State

- A subset of the cases at different states/stages now can have different security rights mixed in or completely replaced
 - An alternative of using marking set to achieve this





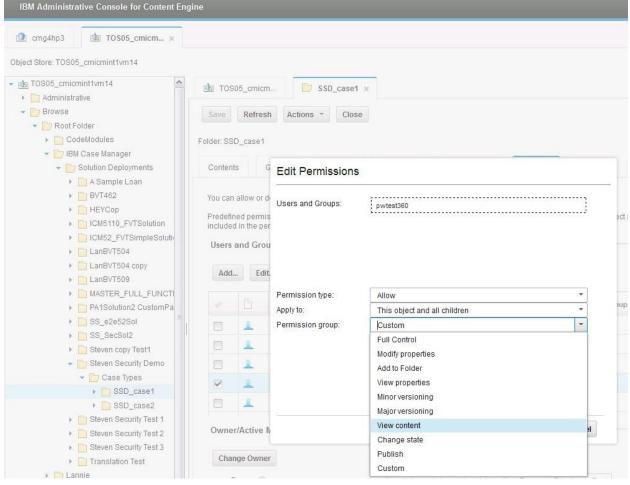
Case Owned Documents

- In a lot of case management scenarios, case documents added to a case are owned by the case
 - They are there to support that particular case solely, and not shared/filed to any other case
 - There could be a lot of different document classes involved in a case
- A common scenario is
 - Anyone who gets added to handle a case dynamically, the worker can and should be able to view or even update any document filed in the case as well
- However
 - All possible document classes involved can not be predicted, and default instance security can not be pre-determined
 - Adjust all document instances' security already in the case is not a good approach and sometimes not even feasible whenever a group/user is removed or assigned to handle the case



Case Owned Documents (cont.)

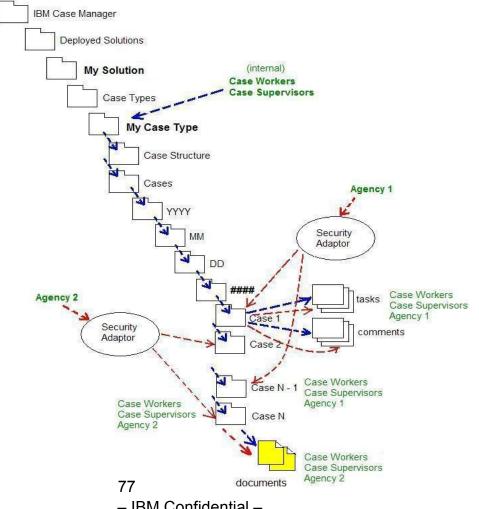
 Configure the deployed case type folder or security adaptor to also propagate View Content or even Major Versioning





Case Owned Documents (cont.)

- Setup security folder of the document to the case folder or case subfolder
 - Allows security to be propagated from container to the document





Session Roadmap

- Target Environment Security Planning and Configuration
- •ICM Solution Model and Solution Structure
- Case Manager Security Model
- Deployed Solutions and Case Client
- Content Engine Classes and Objects
- Process Services Queues, Event Logs, Roster and Application Space
- Additional Security Best Practices

→Q & A



Questions



