

# Teamwork Cloud / Collaboration Studio

## Tips & Best Practices

**David Fields**

*Founder & Chief Technology Officer*



**ENOLA TECHNOLOGIES**

- **Name/Role:**
  - David Fields
  - Founder/CTO of Enola Technologies
- **Education:**
  - BS in Computer Engineering from University of Arkansas
- **Experience:**
  - 10+ years of MBSE consulting and training
    - NAVAIR
      - MQ-25 MBSE Lead
      - Systems Engineering Transformation (SET) Functional Lead
      - Naval IME Lead
    - Army PEO Aviation
      - FLRAA DE Lead
- **Specialties:**
  - Environment Deployment
  - Automation (Macros, Scripts, Plugins)
  - Profiling/DSL
  - Report Generation
  - Custom Validation Suites



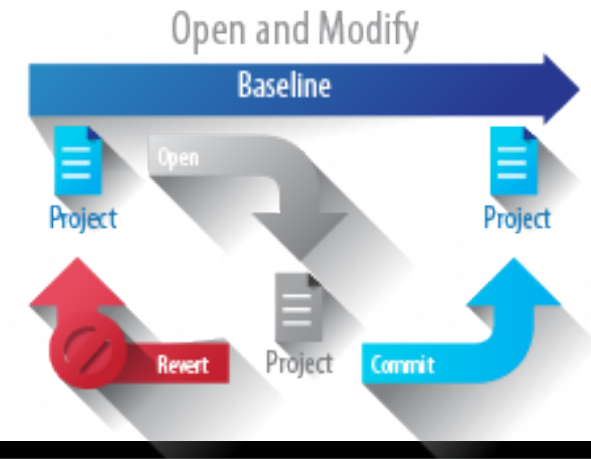
- Teamwork Cloud / Collaboration Studio Overview
- Installation/Configuration
- Security
- Access
- User Groups
- Model Libraries
- Metrics & Automation

NOTE: This brief focuses on tips and best practices, not basic usage and installation that can be found in the documentation!



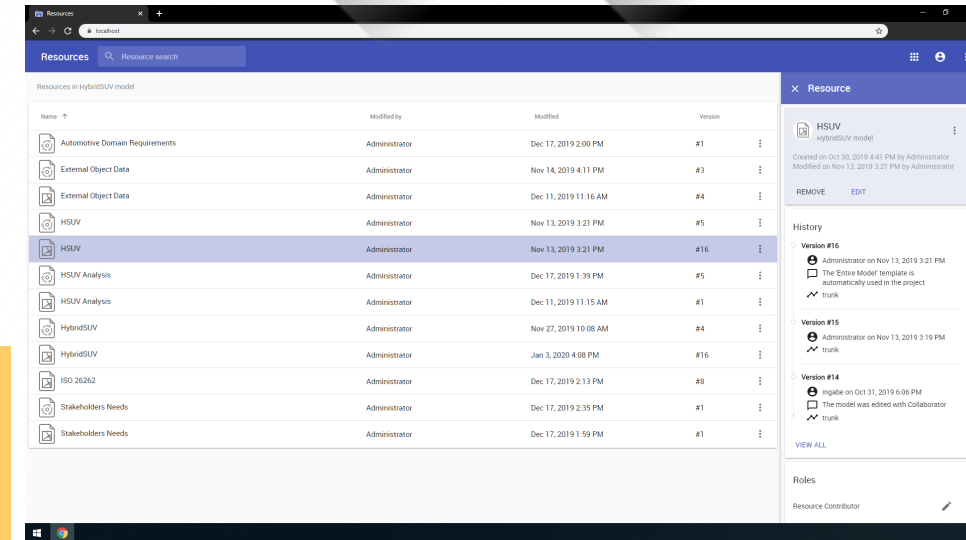
# Teamwork Cloud Overview

- Teamwork Cloud is a server-based model repository for NoMagic/CATiA Magic client applications
  - Models are uploaded to Teamwork Cloud from the client application allowing for:
    - Role-based access (read/write/manage) with multiple authentication methods
    - Simultaneous collaboration via locking/unlocking elements
    - Element-level versioning
    - Web-based administration



The Dassault CATIA version of Teamwork Cloud is called Collaboration Studio. It is a bundle of both Teamwork Cloud and Cameo Collaborator.

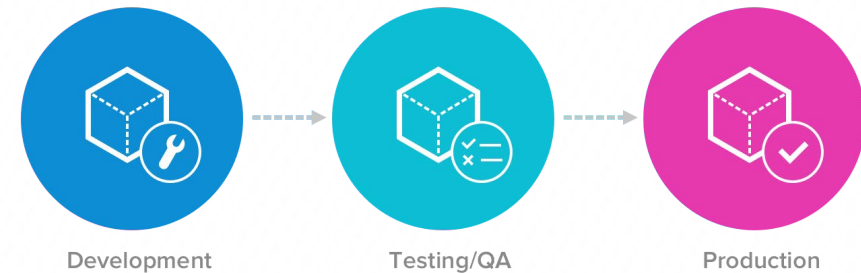
Most of the Collaboration Studio code, documentation, and images still refer to the NoMagic products including Teamwork Cloud and MagicDraw



➤ #1 Tip of the Day: Add extra time in the plan for the initial installation!

➤ Do not stand up a single TWC server!

- Have at least two: Development and Production
  - ❖ Does require a second license
- Add Testing, QA, and others if needed
- A Development Server is essential for testing:
  - Upgrades and patches
  - Automations
  - Integrations
  - New Features

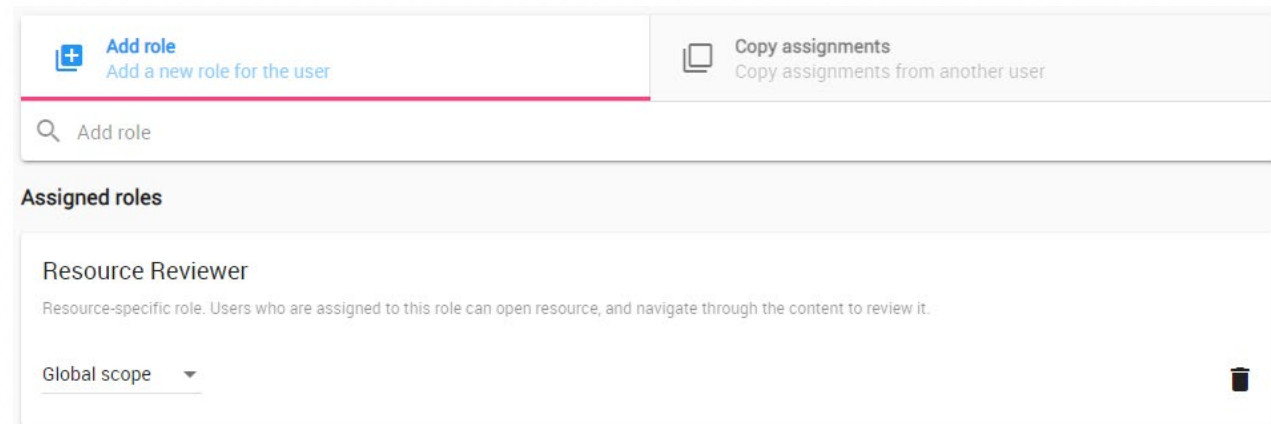


➤ Backup the Cassandra Database!

- Nightly
- Weekly to offsite location
- Incremental backups are possible!



- Once installed, follow the guidelines on the documentation page “Hardening Teamwork Cloud”!
  - Covers port access, encryption, Tomcat configuration, and more
  - Includes shell scripts for easy implementation
  
- Periodically review who has access to your projects!
  - Run the “Generate security audit report” in the Resource Application
    - ❖ Can only be run by an Administrator!
  
- Monitor global scoped role assignments!
  - An admin or Resource Manager can accidentally grant a user global read or write access!
    - When adding a role assignment from the Use Application, the default scope is Global



- Decide early on how you want to manage access to resources
  - Two common approaches:
    - **Admin Level:** TWC admins or other “admin” like users manage all roles assignments
      - ✓ Allows a single person or group to manage and monitor access
      - ✓ Users can focus more on modeling instead of TWC resource management
      - ❖ Can be cumbersome for users to wait on admins to grant access
      - ❖ Can put an extra strain on admins
    - **Project Level:** Resource access is handled by the Resource Managers of each resource
      - ✓ Allows admins do admin things and not be bothered by the day-to-day management of models
      - ✓ Puts the responsibility on those who know who should have access or not
      - ❖ Requires all Resource Managers to understand how to add/remove users from a resource
      - ❖ Can be difficult for users to know who they need to contact for access
    - **Category Level:** Resource Access is handled at the category level by one or more “category admins”
      - ✓ Allows a single person or group to manage and monitor access at a category level
      - ✓ Category level admins are typically part of a project or business unit that know and understand the projects
      - ❖ Only works in 2021x and newer
      - ❖ Can put additional strain on category managers if they have other duties



- A User Group allows you to easily configure role assignments for all members of the group
  - Introduced in v19.0 LTR
  - Can be created and/or synced from an LDAP server
  - ❖ Requires Admin privileges (User Manager Role) to create or modify User Groups
- Create an “All TWC Users” group!
  - Contains every TWC users!
  - Provides an easy mechanism for granting “global” access to resources and categories
  - Example: You want to make sure all TWC users have **read** access to the Examples category and **write** access to the Sandbox category
    - Create and add all users to the “All TWC Users” group
    - Assign the group the Resource Reviewer role for the Examples category
    - Assign the group the Resource Contributor role for the Sandbox category
    - Make sure all future TWC users get added to the “All TWC Users” group





***Library Model or Model Library** = A model that is intended to be used by one or more models as a Project Usage*

- Typically used by multiple models across different projects, organizations, or business units
  
- Generic Examples:
  - Common Acronym Library
  - Common Component Library
  - Common Requirements Library
  
- There are two key areas to consider when planning for model libraries in TWC:
  1. Access & Organization
  2. Notifications & Feedback



# Model Libraries: Access & Organization

- Keep your library models organized and easy to find!
  - “Public” Libraries (aka models used by multiple projects, teams, or organizations)
    - Place in the highest-level category possible
    - Category should have a name that indicates it contains library models
    - Keep non-library models out of the category
    - Give the model a good name and description
      - Descriptions for TWC models can be added or modified from TWAdmin!
  
- Make sure everyone who needs access to model has access!
  - Users of a model library typically have read access (Resource Contributor)
  
  - Ensuring everyone has access can be difficult
    - Use User Groups!
  
  - Lack of at least read access to project usages is a common problem people face!
    - Especially with indirect project usages (aka a used project of a used project)

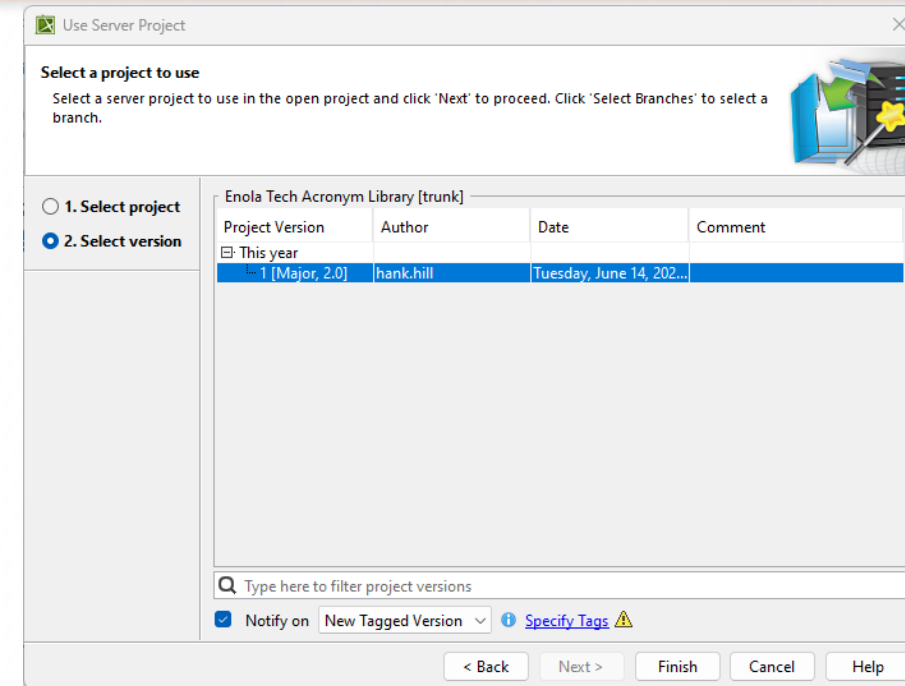


## ■ Notifications

- Model libraries will likely change over time and users will need to be notified when a new version has been released
- Leverage MagicDraw's Project Usage options!
  - Notify on "Any New Version" or "New Tagged Version"
  - Needs to be a standard process for all Project Usages
  - (Optional) Use tags so users only get notified of major/minor releases

## ■ Feedback

- Provide a way for users to submit feedback on library models!
  - Can be formal (Service Desk Ticket) or informal (email library owner)
- Bonus points for having a "catalog" of library models with descriptions, POC's, etc.
  - Can be hosted on a wiki or webpage (Confluence, SharePoint, etc.) or as a downloadable reference guide
  - Include information such as the language (SysML, UML), framework (UAF, DoDAF), and version it was created with (2021x R2)



- TWC has a robust REST API
  - Provides methods for both model and server management
- Metrics
  - Examples:
    - Get all Users with details
    - Get all Resources with details
    - For each resource get all commits
    - Get all Roles assignments
  - Connect a Business Intelligence (BI)
    - Insight into growth and usage
    - Monitor for old, unused resources
    - Make smarter purchasing decisions
    - Keep an eye on global access roles assignments!

- Automation Examples
  - Disable accounts that haven't logged in a specified period
  - Verify and update User Group members
  - Manage user access control from a SysML model!



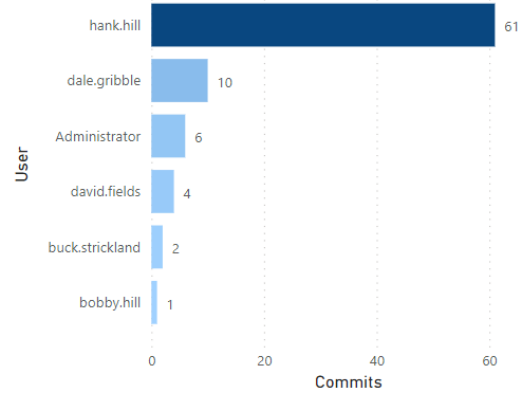
# TWC Metrics in Microsoft Power BI

**84**  
Total Commits

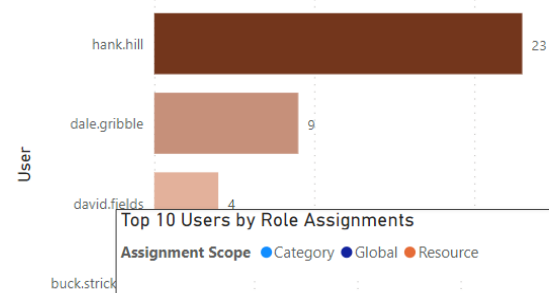
**6**  
Commits in the Last 24 Hours

**17**  
Average Commits per Day

Users by Total Commits

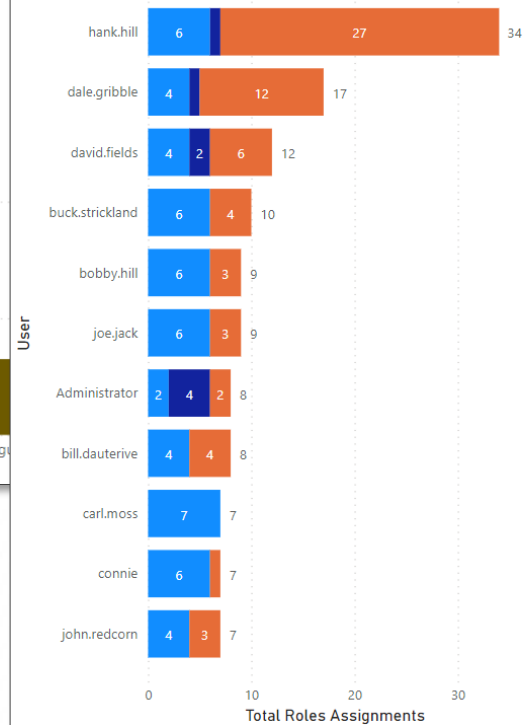


User by Resources Created



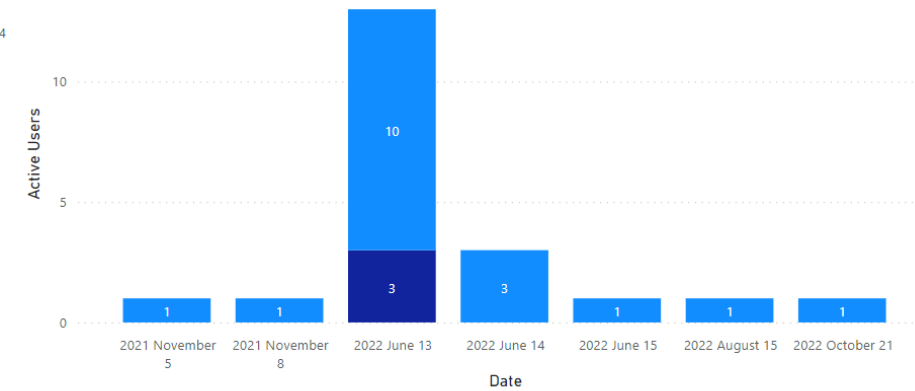
Top 10 Users by Role Assignments

Assignment Scope: Category (Blue), Global (Dark Blue), Resource (Orange)

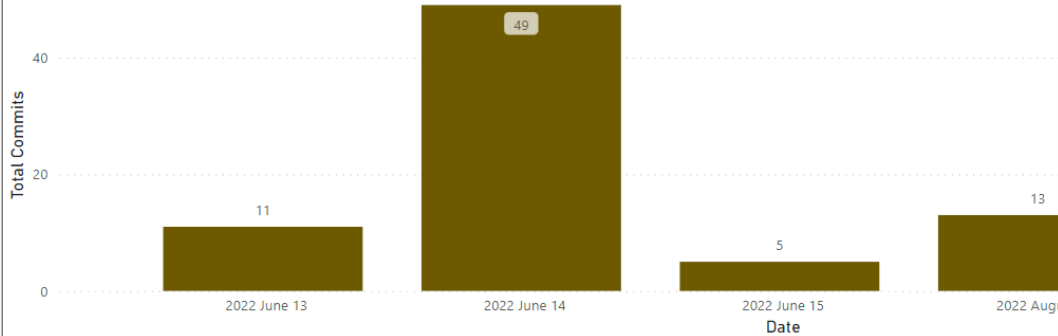


Active User by Date

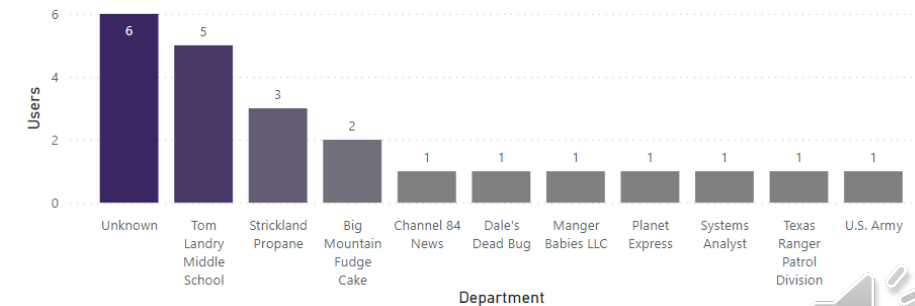
Type: External (Dark Blue), Internal (Light Blue)



Commits Over Time



Users by Department



# QUESTIONS?



**ENOLA TECHNOLOGIES**