TACTIC Setup

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Setup Introduction

The role of Setting up TACTIC is to configure and maintain the structure of the TACTIC projects.

These responsibilities may include:

- Creating Projects
- Defining Project Schema
- Defining Project Workflow
- Managing Users and Groups
- Configuring Group Access Rules
- Managing the Project Sidebar
- Automating Notifications and Processes using Triggers.
- Defining naming conventions for the File system

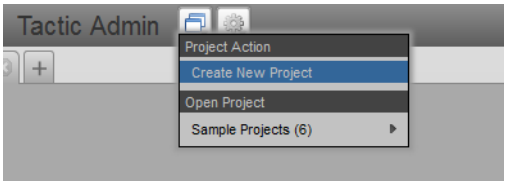
This section will help you to understand how to approach this setup and configure your system properly.

Create Projects

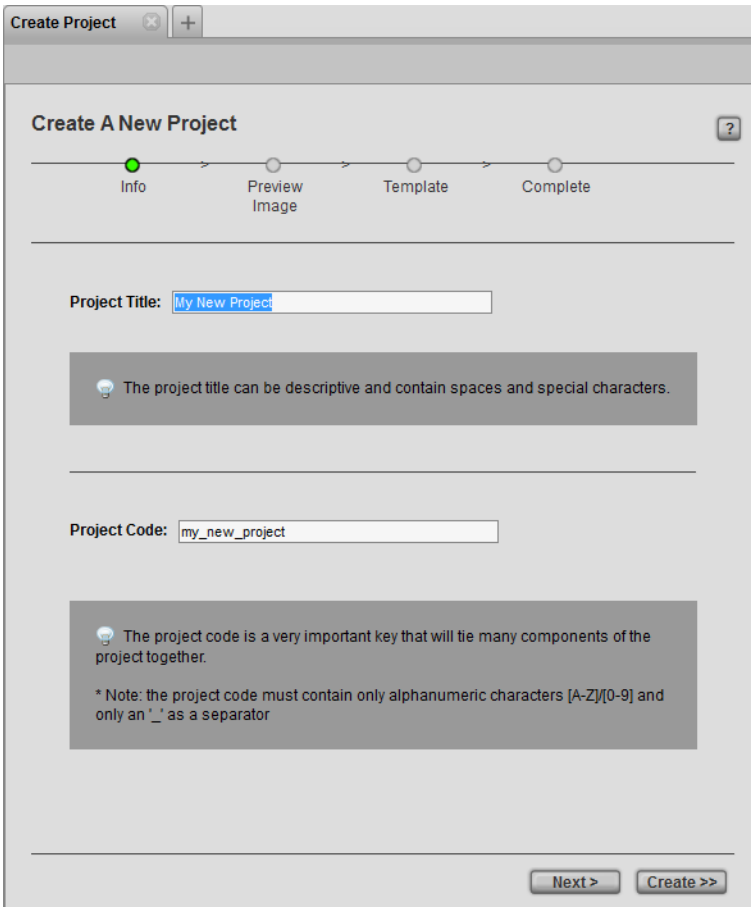
Create a New Project

Stepping Through the Create a New Project Wizard

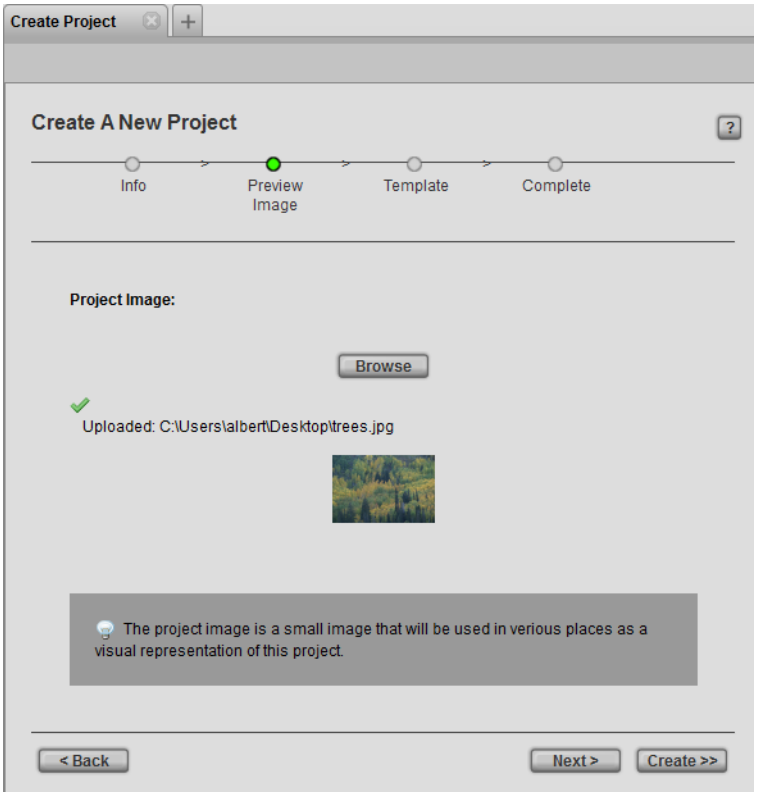
To create a new project in TACTIC, go to the top header and from the **Project Menu**, select **Create Project**. The Create New Project wizard will open.



In the **Create New Project Wizard**, specify the **Project Title** and hit tab to go to the next field. Notice that a suggested **Project Code** is automatically filled in. The **Project Code** can be changed but it must only contain alphanumeric characters and only an underscore as a separator. Click **Next** to continue specifying more details or click **Create Project** to create the project with the defaults.

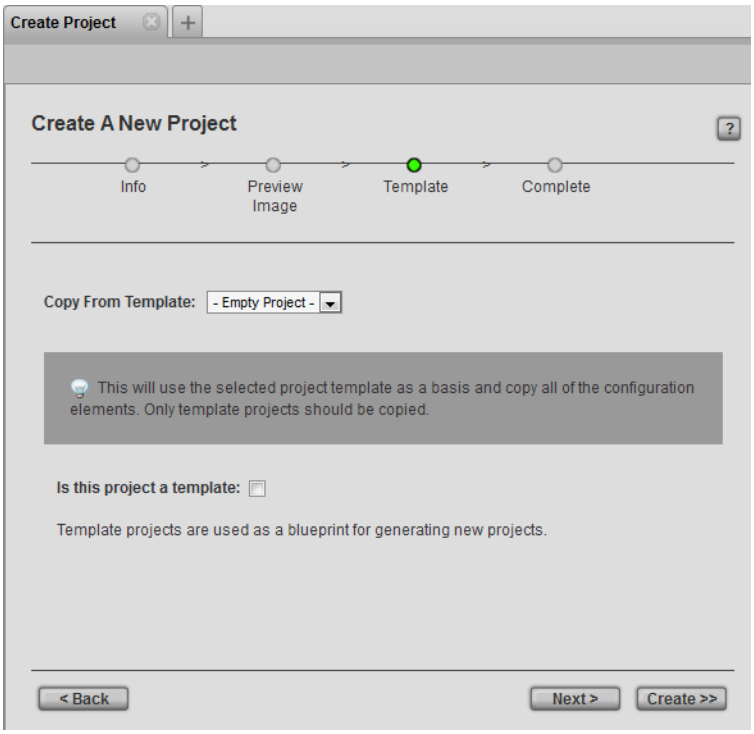


Next, browse to select a **thumbnail** image to represent the project (optional):

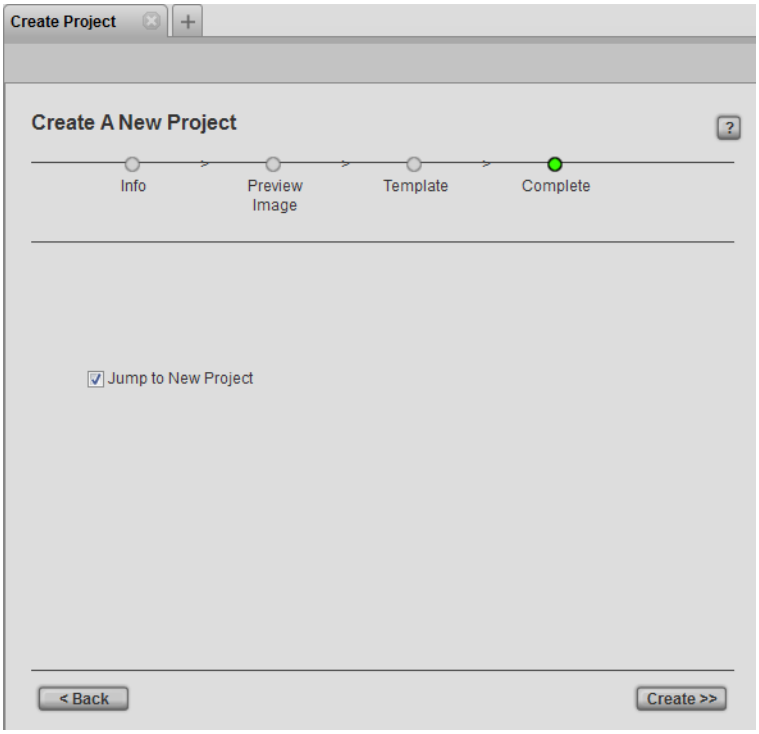


Next, specify a template to use to create the project. Otherwise, the empty project will be used by default.

Indicate if this new project will be used as a project template. (The default is no checkmark):



Finally, confirm and create the new project by clicking the **Create** button:



Create Project Options

Project Title	The **Project Title** is displayed in many places in the TACTIC interface. Choose a human readable string, like the full project title, so that it is understandable to all users.
Project Code	A suggested **Project Code** is automatically generated once the **Project Title** has been entered. This code is a unique identifier for the project that should only contain alphanumeric characters or the underscore "_" character. This code is used in many areas in the database which tie all elements of the production together. For this reason, a **Project Code** cannot be changed after the project has been set up and saved after completing the wizard.
Copy From Template	This option facilitates and speeds up the creation of a new project from an existing project. The **Copy From Template** option creates a new copy of all your project records to the new template project, such as asset libraries, task records, pipelines and workflow configurations. Once the new project has been created, the admin user can then make any additional modifications required to suit their new project. Please note that only template projects should be copied.

Accessing Projects from a Web Browser

The new project can be access from the web browser using the URL:

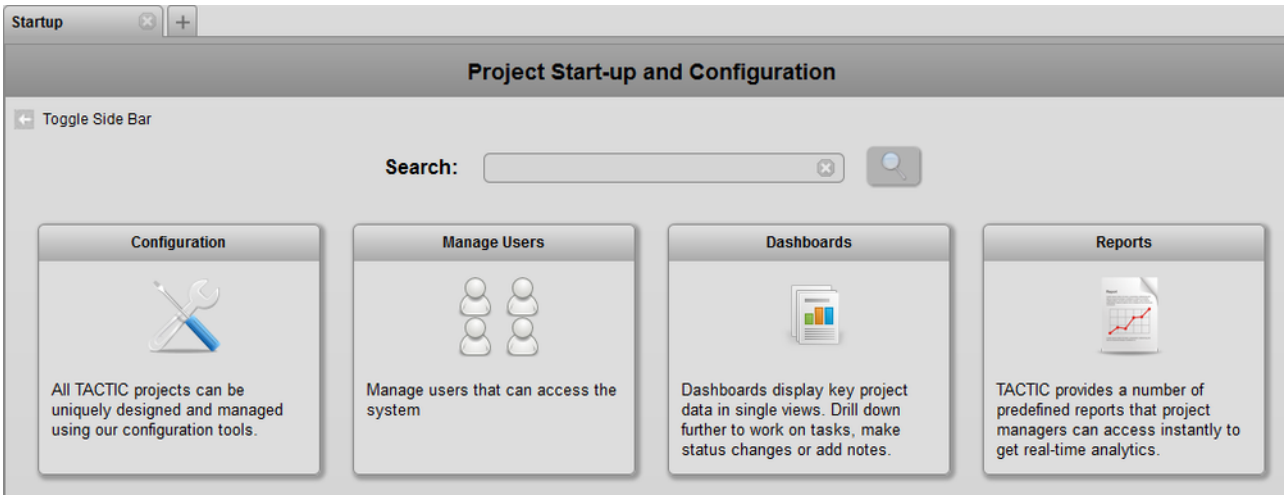
http://(server)/projects/(code)/

For example, for a project with the code "test" on a server called "tactic", the URL would be:

http://tactic/projects/test/

Project Startup and Configuration

Once the new project has been created, the **Startup** view will automatically appear. This view provides guidance on how to set up a project.



To continue through the Project Startup view, please see the doc titled **Project Startup and Configuration**.

Can a New Project Be Undone?

Unlike most operations in TACTIC, when a new project is created, it is not easily undo-able. It not easily undo-able because of the following complex actions that took place:

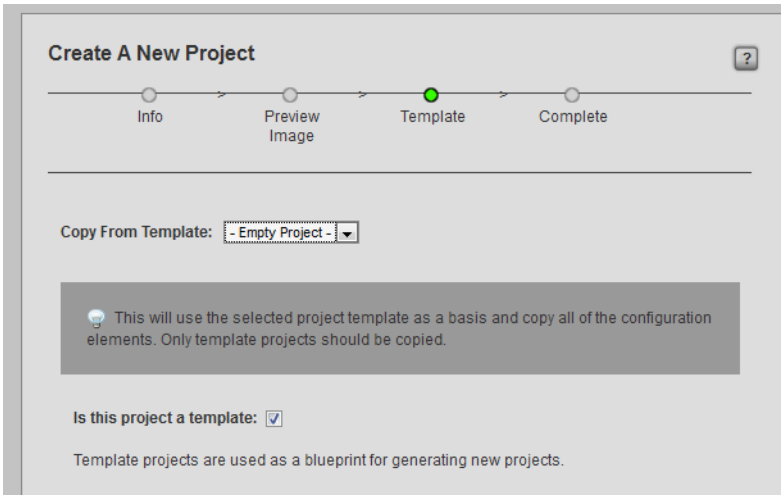
1. It creates the database for the project and copies the schema designated for this type of project.

2. It creates project sites in the sites directory.

3. It registers the site in TACTIC.

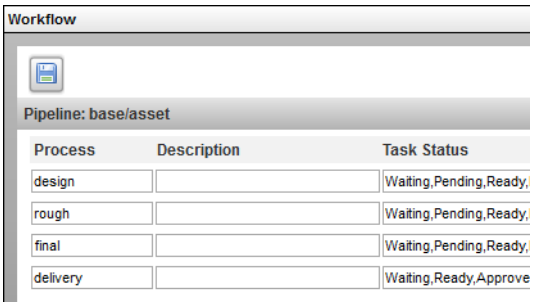
If a project is accidentally created, then it is best to **delete** the project immediately.

Project Templates



When a new project is created based on a **template** project, the following internal structure will be copied over:

search types and **custom columns**	The **sTypes** and their **custom columns** are copied over from the template. eg. project/asset. Keep in mind that the instances of these types are not copied over ie. the items themselves are not copied over **List of Searchable Types** Title / # Item Asset / 13 iter Asset Category / 5 item Budget / 30 iter Burndown / 10 iter Expenses / 22 iter The **custom columns** are copied over from the template. **Existing Columns** Column / Data Type code / text keywords / text description / text location / text pipeline_code / text asset_category_code / text
pipeline and **task statuses**	The **processes** and the **task statuses** are copied over from the template. eg. **processes**: design, rought, final, delivery

	
notifications and **triggers**	The **notificaions** and **triggers** are copied over from the template.
sidebar	The links of the views in the sidebar are copied over from the template.

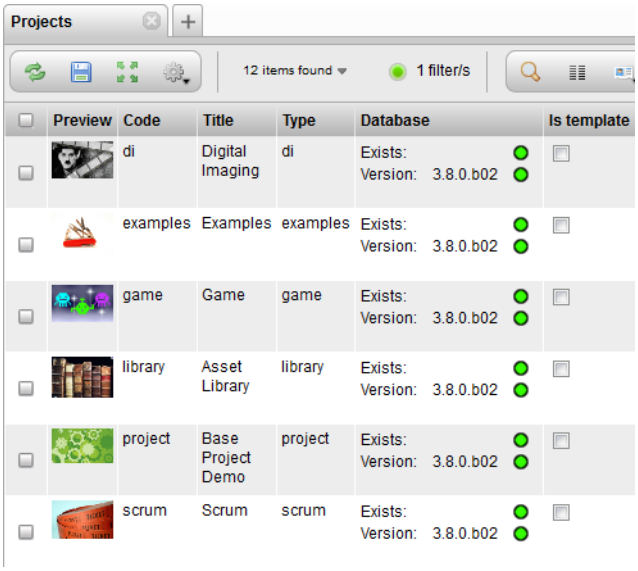
Note

The only difference between a project that is a template and a regular project is simply a checkmark in a column named **is_template** in the projects table.

To toggle the **is_template** attribute of a regular project, as the administrator go to:

Admin views -> Site Admin -> Projects

Add the column **is_template** and remove the Search Filters.



Notice that there exists the following view for convenience:

Admin views -> Site Admin -> Template Projects

Note

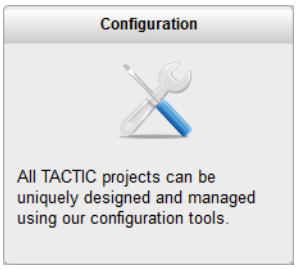
After a new project is created based on a template, any changes made to the template will not affect the new project.

ie. only the structure that existed in the template at the time the project was created will be used

Project Startup

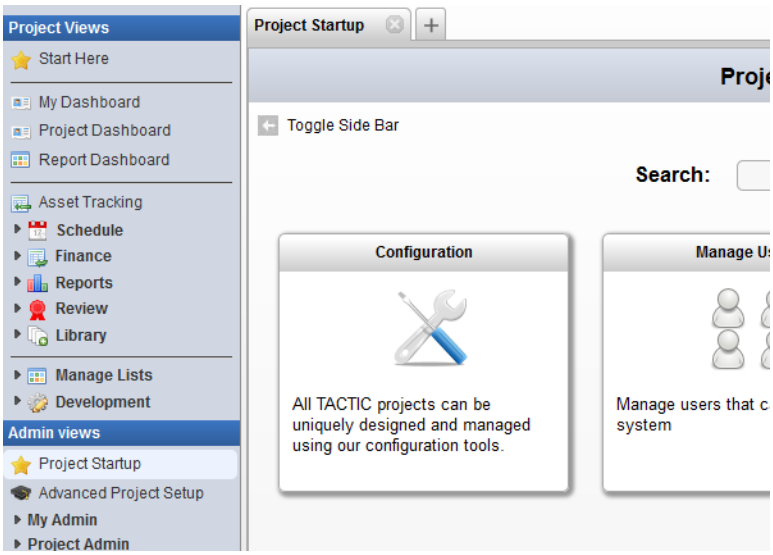
Configuration

Project Startup - Configuration

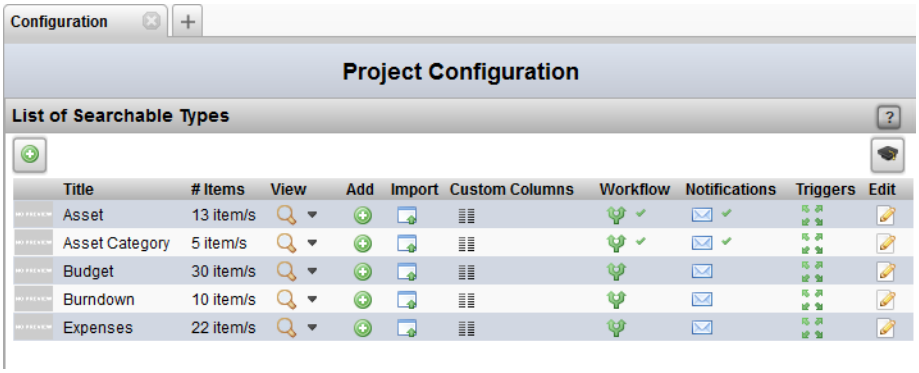


1) First, open the **Configuration View** under:

Project Startup -> Configuration



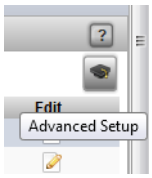
2) In the **Project Configuration** view, the following tools are provided (once the first Searchable Type has been created):



View	Load the list of the items for that Search Type in the panel below. The drop down selection next to the View button switched the layout view between: Tile, List, Content, Task Schedule, Check-in, Overview, Tools.
Add	Add new item to Search Type.
Import	Import items from a CSV file into that Search Type.
Custom Columns	Add custom columns of a datatype to the Search Type.s
Workflow	Add processes to the workflow and specify the different Task Statuses
Notifications	Add an email notification: on an event, perform an action.
Triggers	Add a trigger: on an event, perform and action.
Edit	Edit the Search Type.

Note

(Advanced) To go to the **Advanced Project Setup Tools** click on the button on the top right with the black graduate cap.



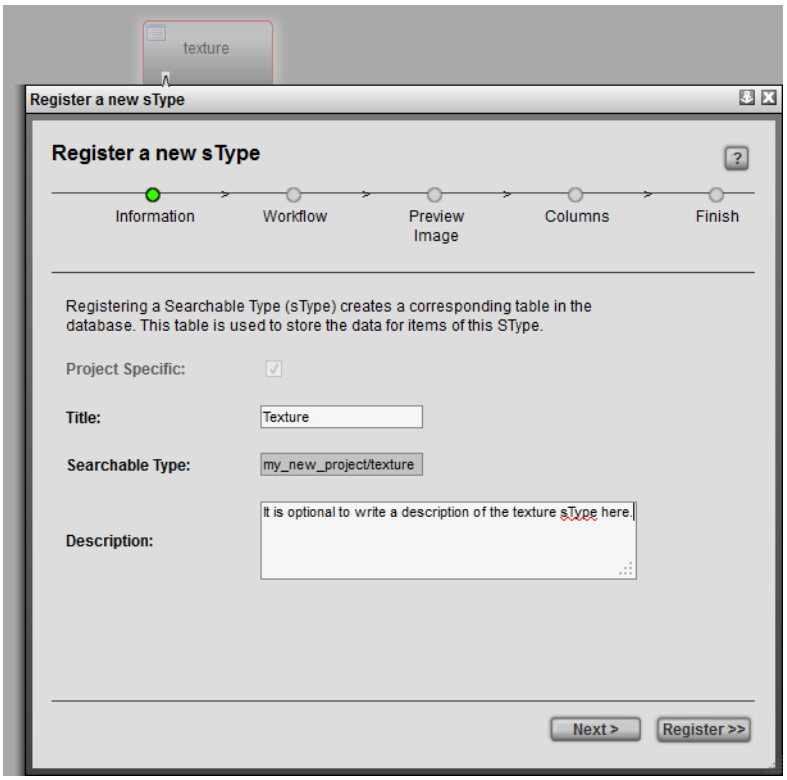
3) (Advanced) In the **Project Configuration** view, the following tools are provided (once the first Searchable Type has been created):

Add new sType

Registering a new sType or "Searchable Type" in TACTIC provides opportunity to track separate list of items. From a technical standpoint, a new sType is a separate table in the project's database. This allows for the following configuration aspects:

- Views
- Custom Columns (properties)
- Workflows processes and status
- Notifications
- Triggers
- Tools
- Security
- ...and more

To register a new sType, click the [+] button in the top-left of the configuration page. The **Register a new sType** wizard will appear:

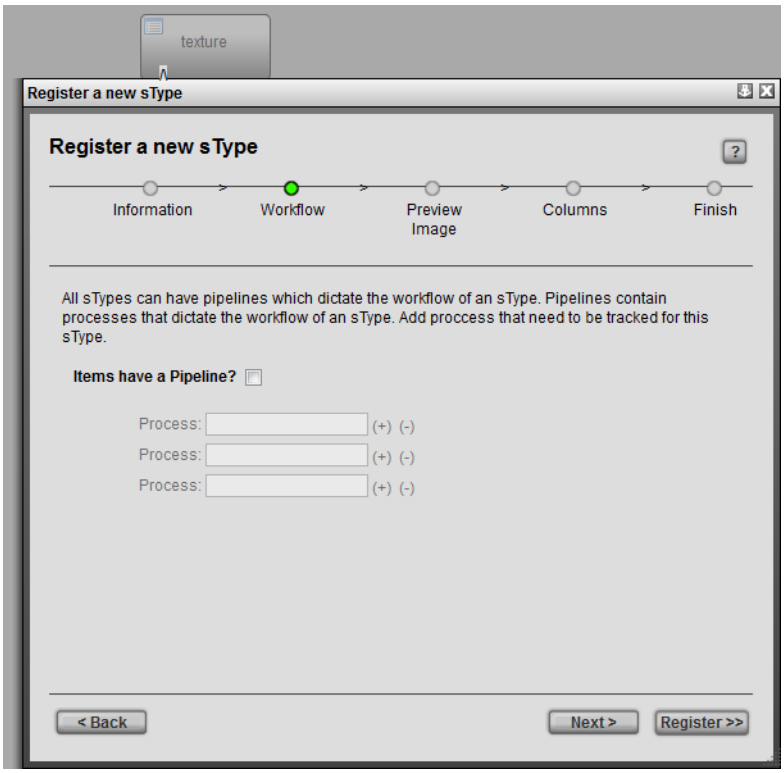


Information

Project Specific	*(available when creating a new sType for a project that is based on a template)*
Title	The title for the sType is used in the UI for display purposes.
Searchable Type	Refers to the database name for the sType. in a "<project>/<name>" format. If no project is defined (i.e.. "art/") than the current project namespace will be used.
Description *(optional)*	An optional description of the sType.

Once the fields are completed, press "Next" or press "Register" to complete the registration process. Note: It is recommended to go through the series of steps outlined in the "Register a new sType" wizard, as this allows for quick and easy configuration of the new sType that is outside of the TACTIC defaults.

Workflow

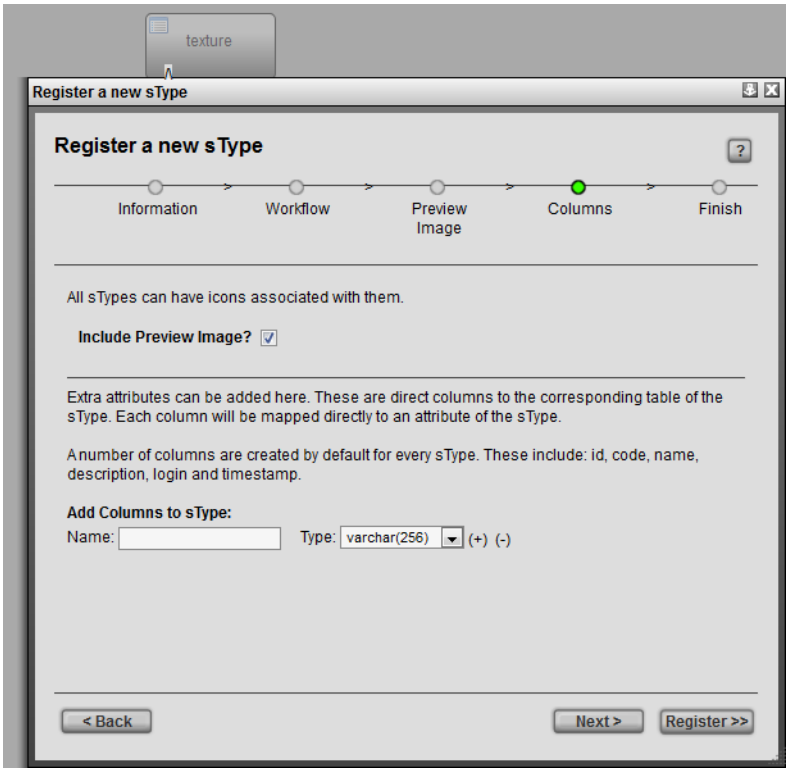


Items have a Pipeline?	When selected, sets up an association for a pipeline workflow for the sObjects in that sType. *The section below describes this relationship in more detail*
Process *(optional)*	Stages in the process. *eg. processes for an asset sType: design, model, texture, rigging eg. processes for a shot sType: layout, animation/fx, lighting, render, comp*

Preview Image

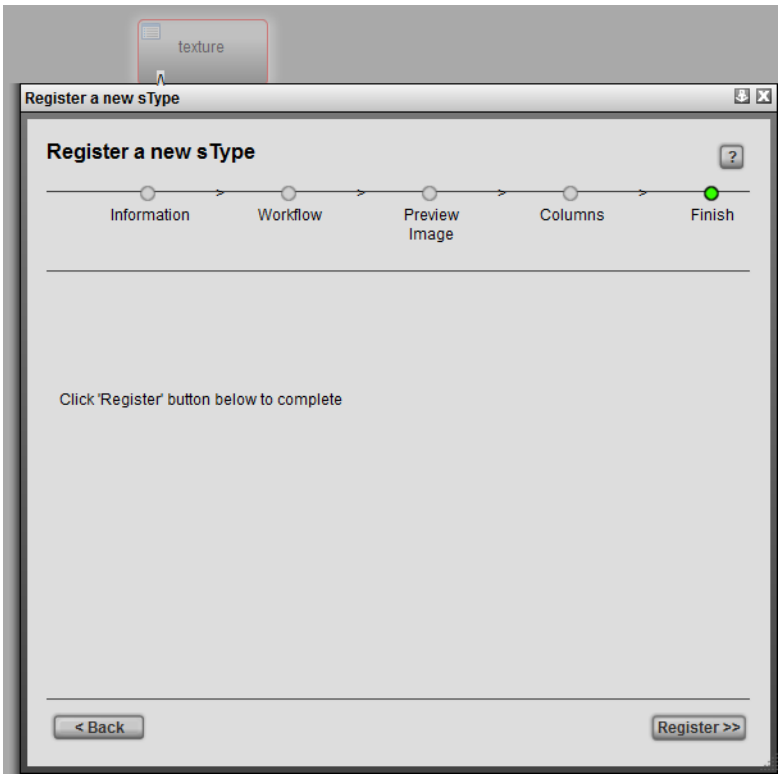
Preview Image *(optional)*	Browse to select a preview image for the new sType.

Columns



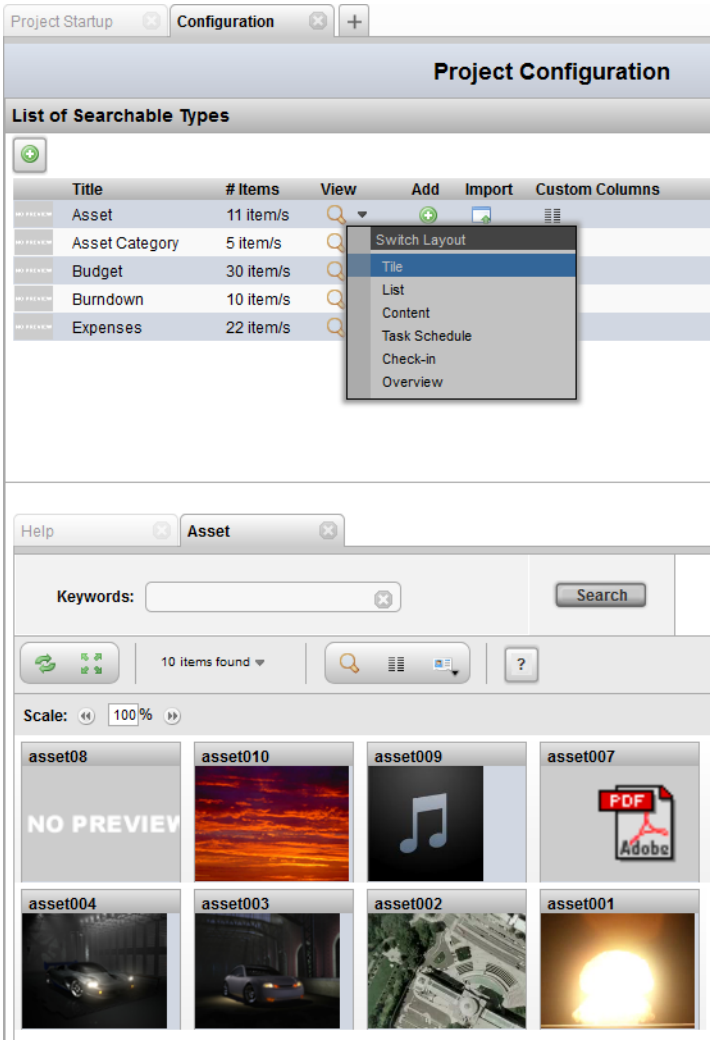
Include Preview Image?	Preview image for each item (sObject) of that sType.
Add Columns to sType *(optional)*	During the registration process, default columns are added to the new sType table. You can also add additional columns during this process. Note - columns can be added after this process using the Table Manager

Finish



Finish	To complete the registration process, press "Register". A this point, the option is provided to go back and change any information by clicking on the "Back" button.

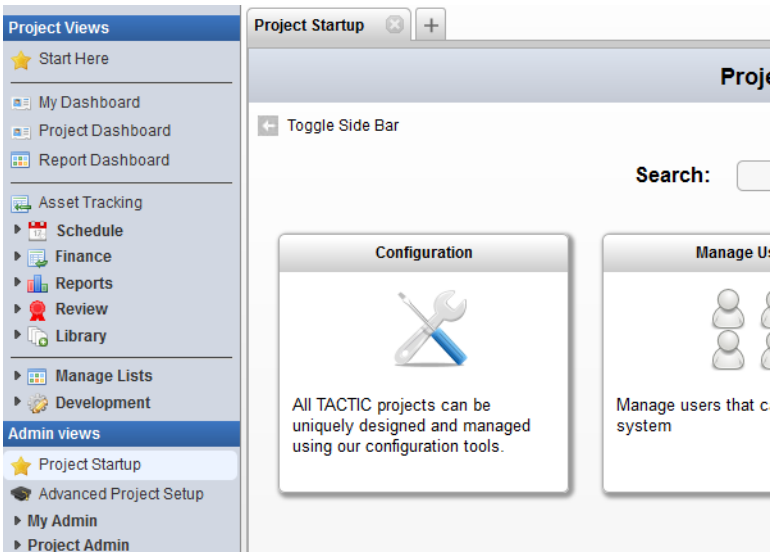
View Items



How to view items for a Search Type

1) First, open the **Configuration View** under:

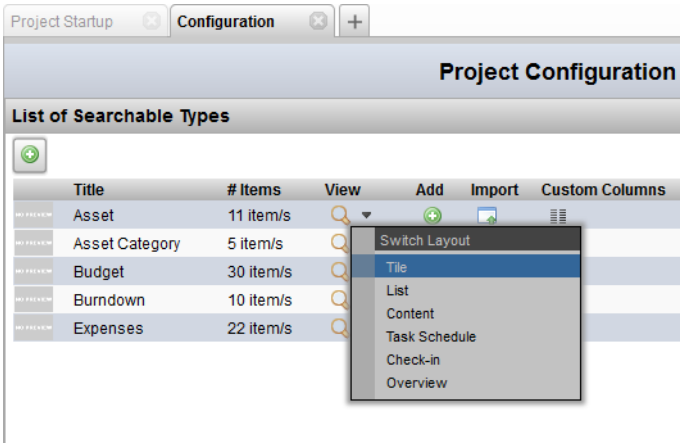
Project Startup -> Configuration



2) Next (assuming a Searchable Type has already been created), click on the **View** button corresponding to the type to view items for.

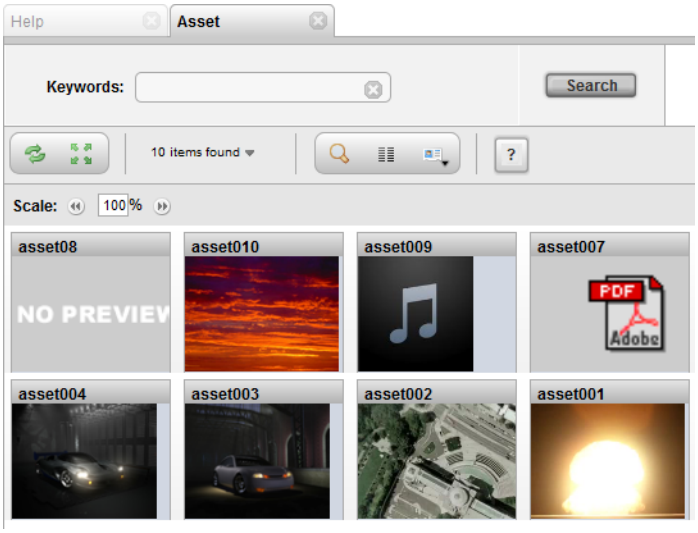
Note

Next to the **View** button is down arrow which opens up a selection list. This list contains different layouts to display the items below.

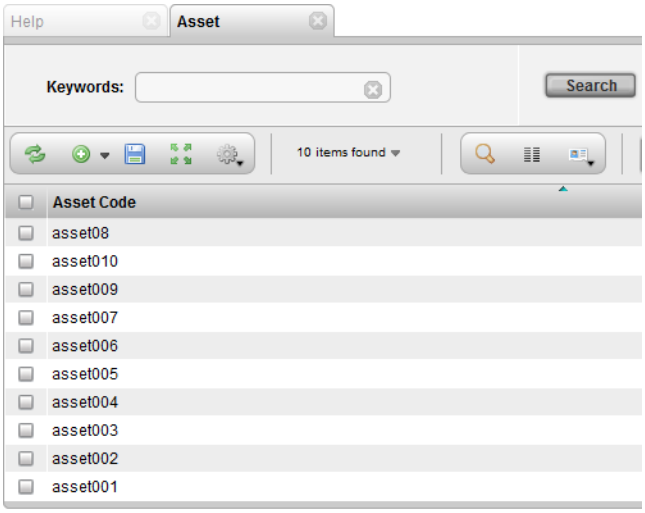


3) Finally, look in the lower panel for the view of the items for the requested Search Type. Below is a sample of the different item layouts.

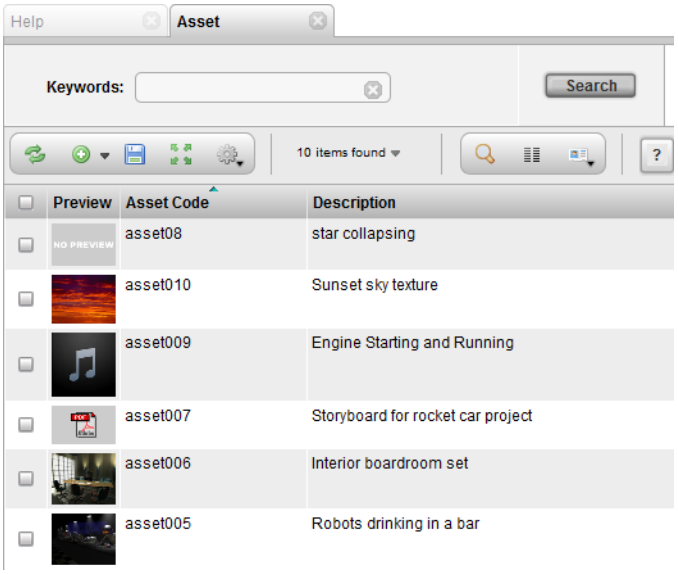
Tile View



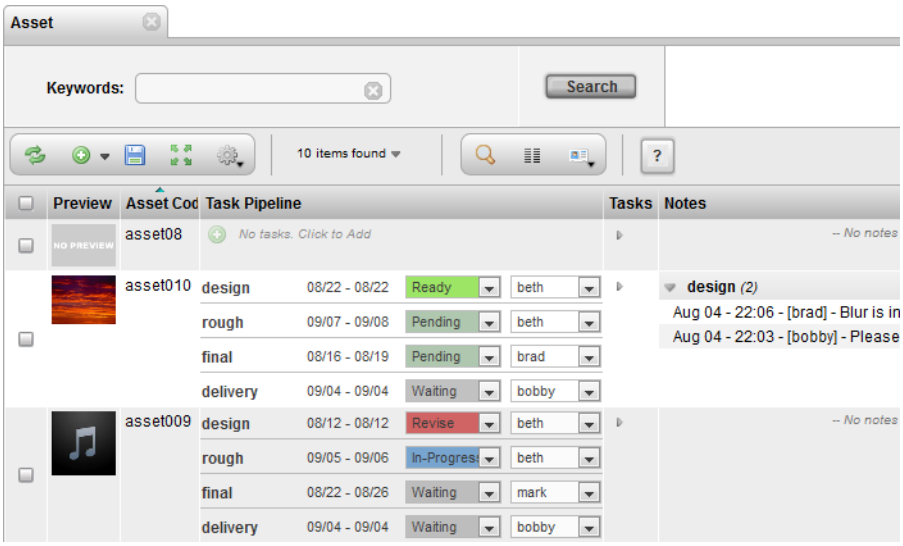
List View



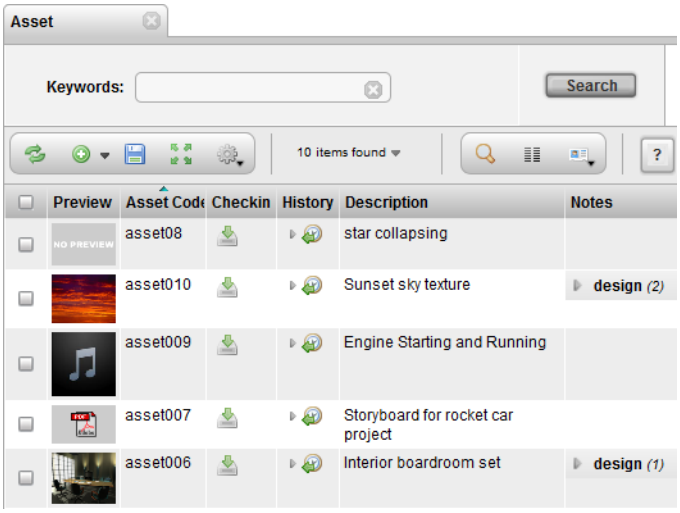
Content View



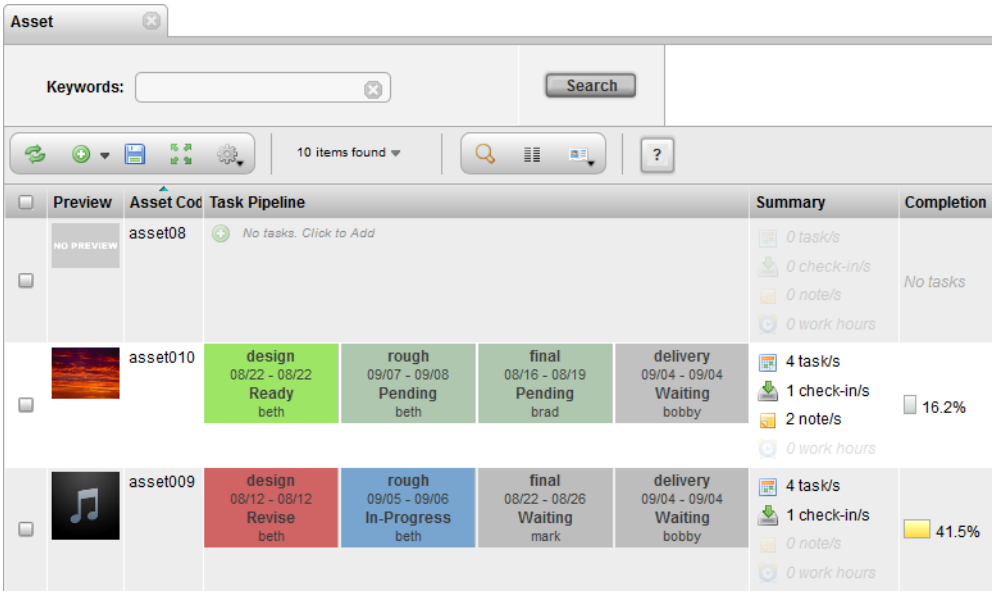
Task Schedule View



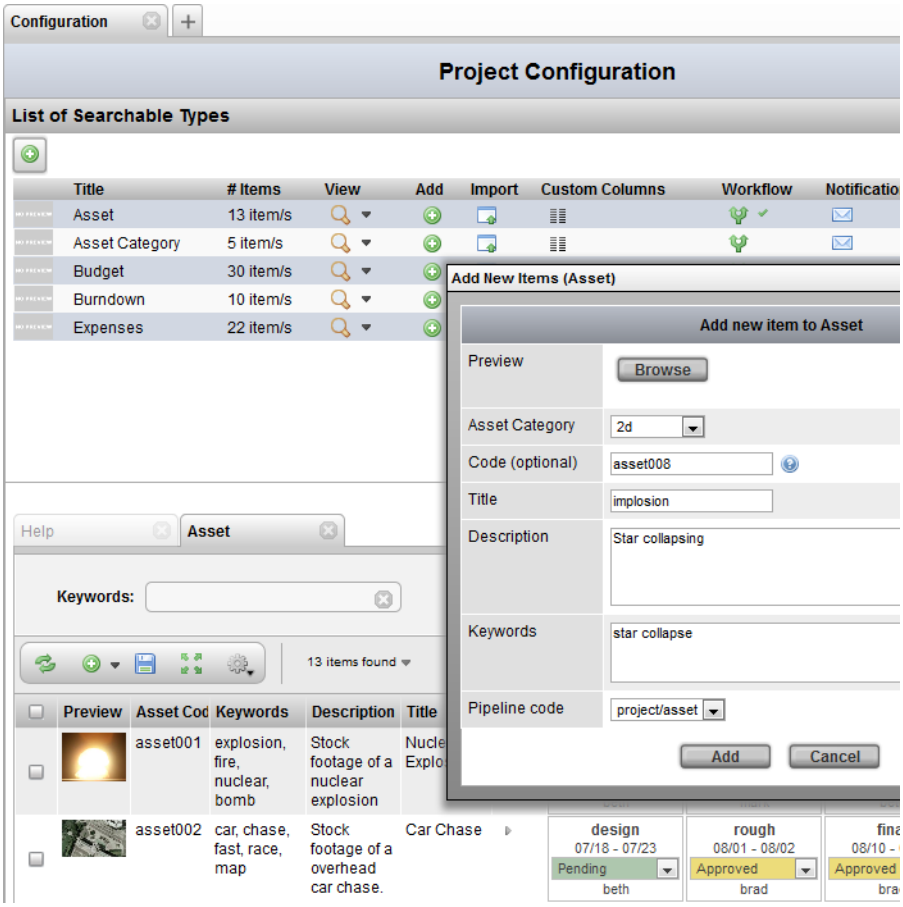
Checkin View


Asset
Keywords:
Search
10 items found
?
Preview
Asset Code
Checkin
History
Description
Notes
asset08
star collapsing
asset010
Sunset sky texture
design (2)
asset009
Engine Starting and Running
asset007
Storyboard for rocket car project
asset006
Interior boardroom set
design (1)

Overview


Asset
Keywords:
Search
10 items found
?
Preview
Asset Code
Task Pipeline
Summary
Completion
asset08
No tasks. Click to Add
0 task/s
0 check-in/s
0 note/s
0 work hours
No tasks
asset010
design 08/22 - 08/22 Ready beth
rough 09/07 - 09/08 Pending beth
final 08/16 - 08/19 Pending brad
delivery 09/04 - 09/04 Waiting bobby
4 task/s
1 check-in/s
2 note/s
0 work hours
16.2%
asset009
design 08/12 - 08/12 Revise beth
rough 09/05 - 09/06 In-Progress beth
final 08/22 - 08/26 Waiting mark
delivery 09/04 - 09/04 Waiting bobby
4 task/s
1 check-in/s
0 note/s
0 work hours
41.5%

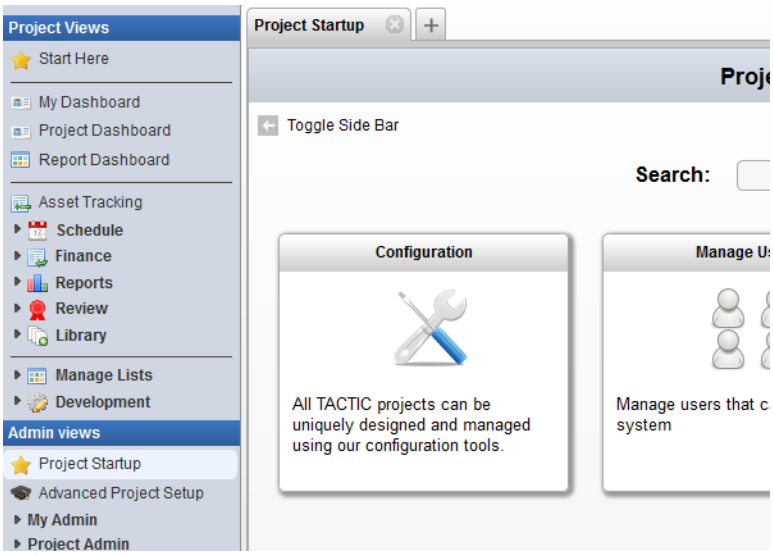
Add Items



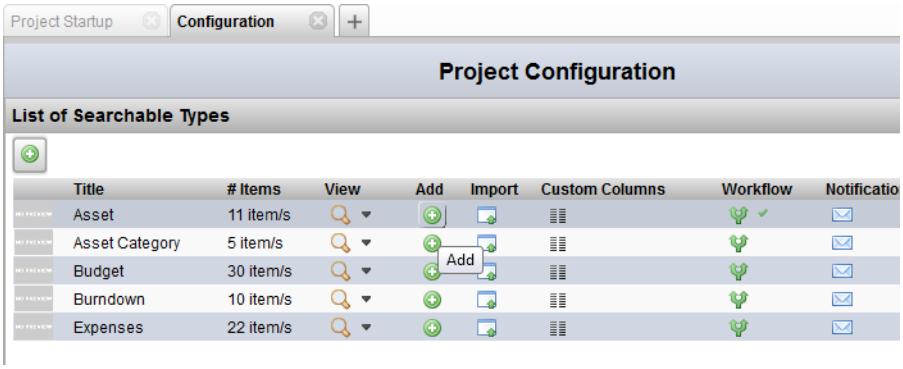
How to add an item to a Search Type

1) First, open the **Configuration View** under:

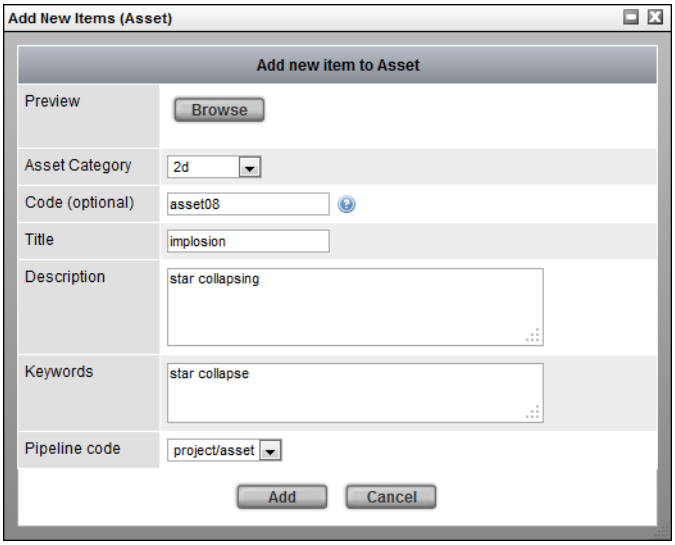
Project Startup -> Configuration



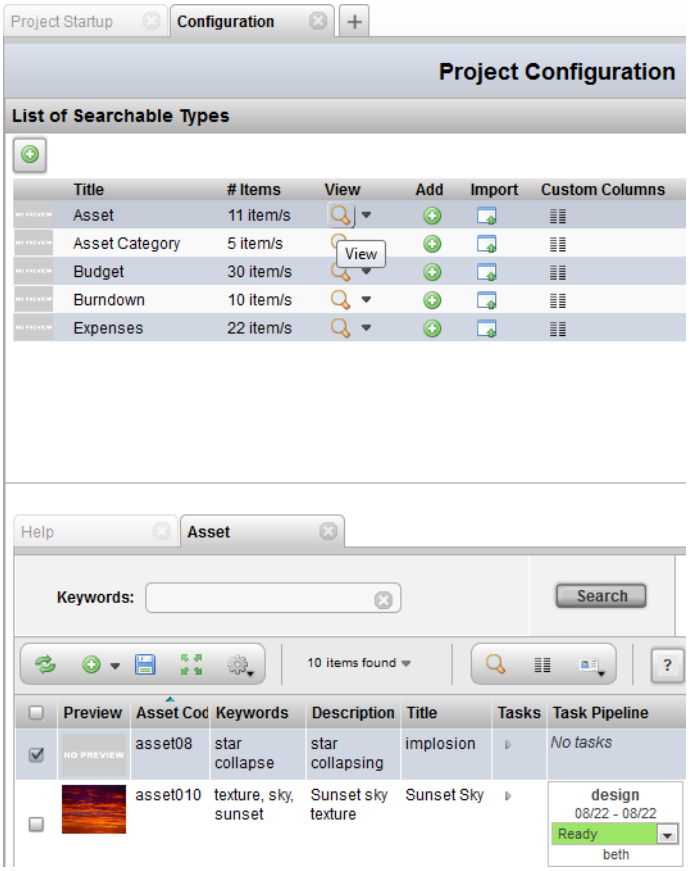
2) Next (assuming a Searchable Type has already been created), click on the **Add** button corresponding to the type to add an item to.



3) The **Add New Item to Asset** pop-up will appear. Fill in the input fields and hit **Add** to add the item to the type.

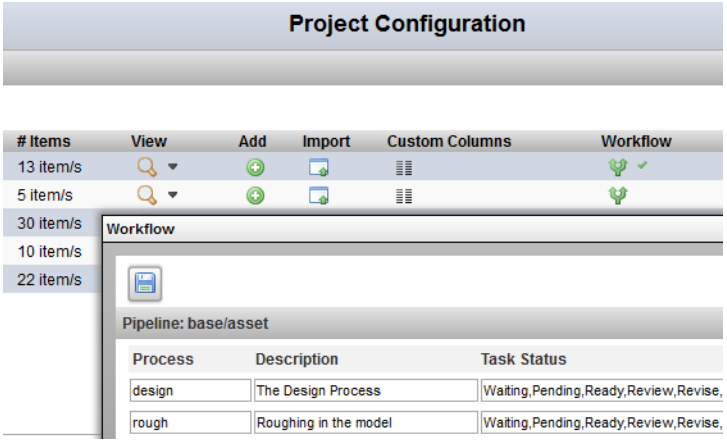


4) Finally, to view the newly added item, click on the **View** button to view all the items for that type.



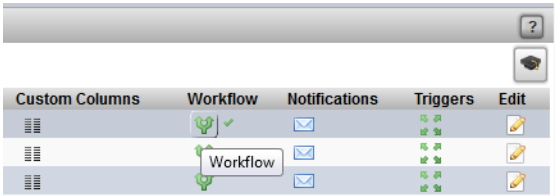
Import Items

Workflow



How to Edit the Workflow for a Search Type

1) In the **Project Startup -> Configuration View** (assuming a Searchable Type has already been created), click on the **Workflow** button corresponding to row of the search type to edit.



2) In the Workfllow pop-up:

First, add or subtract rows which represent processes in the workflow.

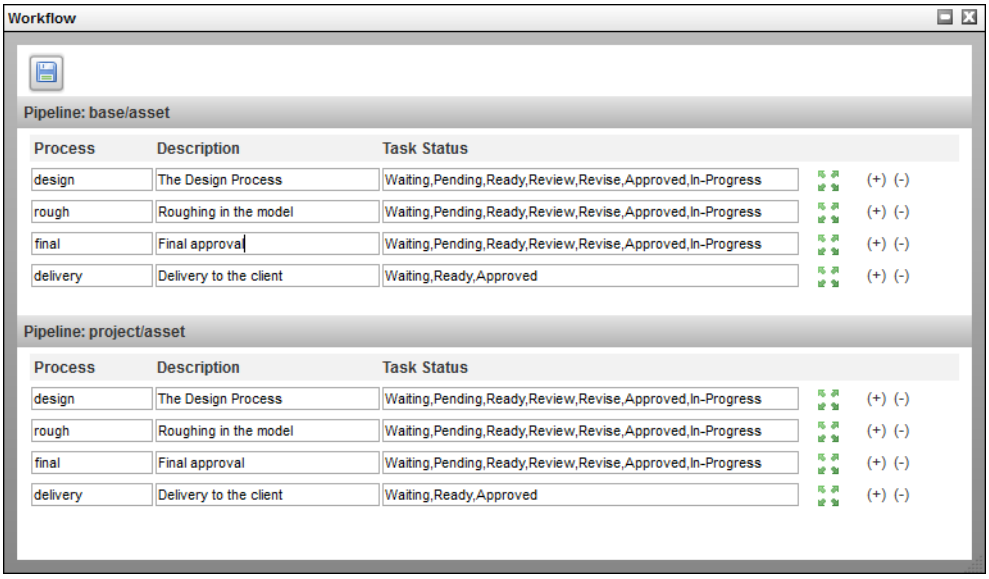
Examples of entries for the **Process** field:

```
design
rough
final
delivery
```

Next, modify and/or re-order the comma separated list of Task Statuses.

Example of an entry for the **Task Status** field:

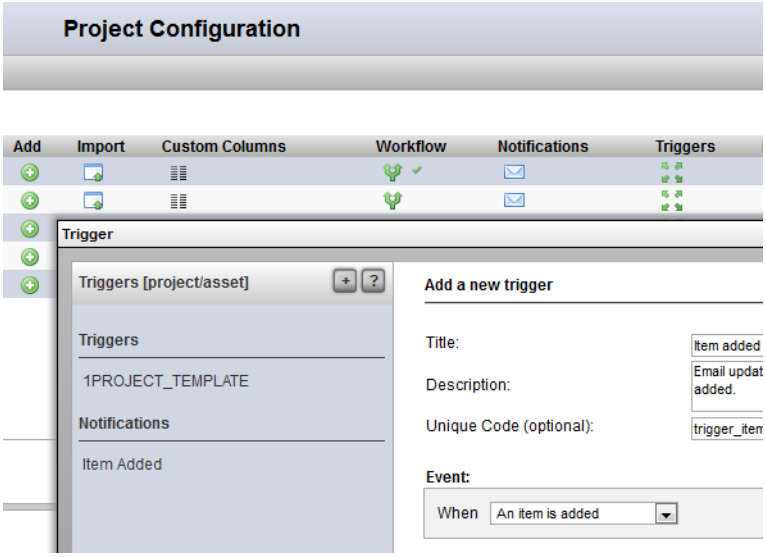
```
Waiting, Pending, Ready, Review, Revise, Approve, In-Progress
```



3) (Optional) To add triggers for the process, click on the trigger button just on the left of the plus/minus buttons to create a new trigger for this process.

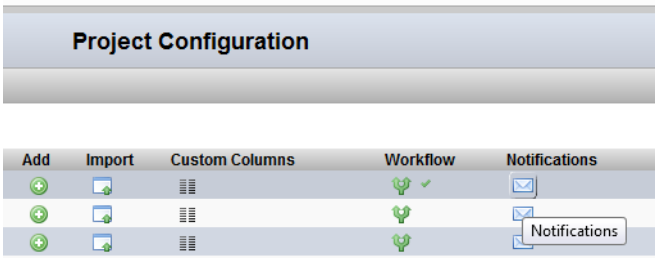
For further help on how to add a new trigger, refer to the **Project Automation - Triggers** documentation by clicking on the question mark **[?]** in the Triggers UI to show the help for this interface.

Notifications



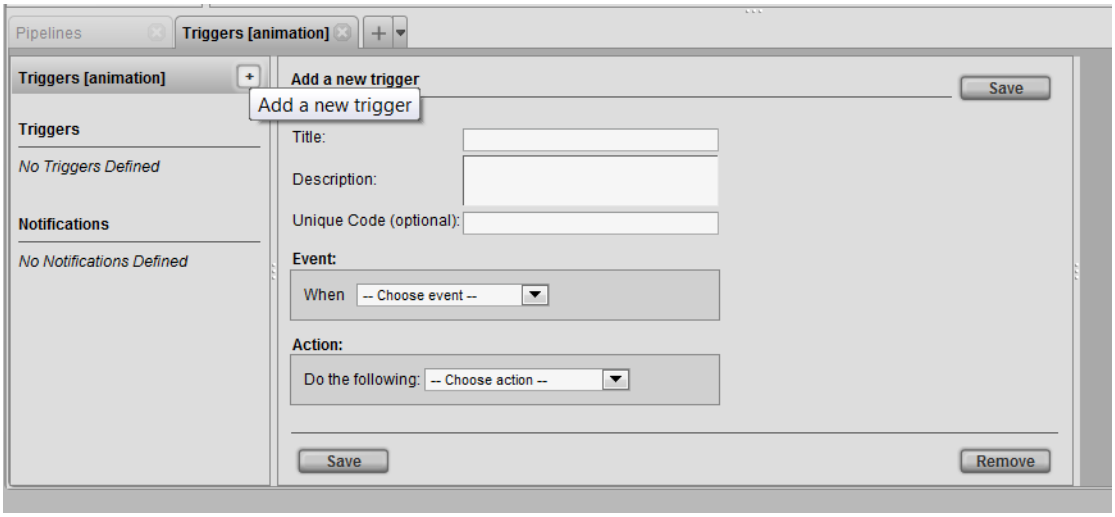
How to Add a Notification for a Search Type

1) In the **Project Startup -> Configuration View** (assuming a Searchable Type has already been created), click on the **Notification** button corresponding to row of the search type to edit.



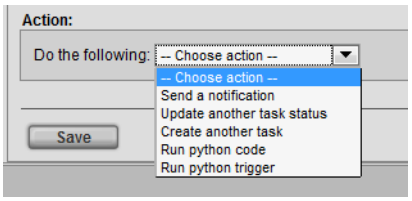
2) In the **Notifcation** pop-up (the title for the pop-up might be labelled **Trigger**):

Click on the plus **[+]** button to create a new notification. This will open the trigger/notification UI.



Notifications and Triggers work together in many ways. A notification is defined as an Action. To send a notification, an event must occur.

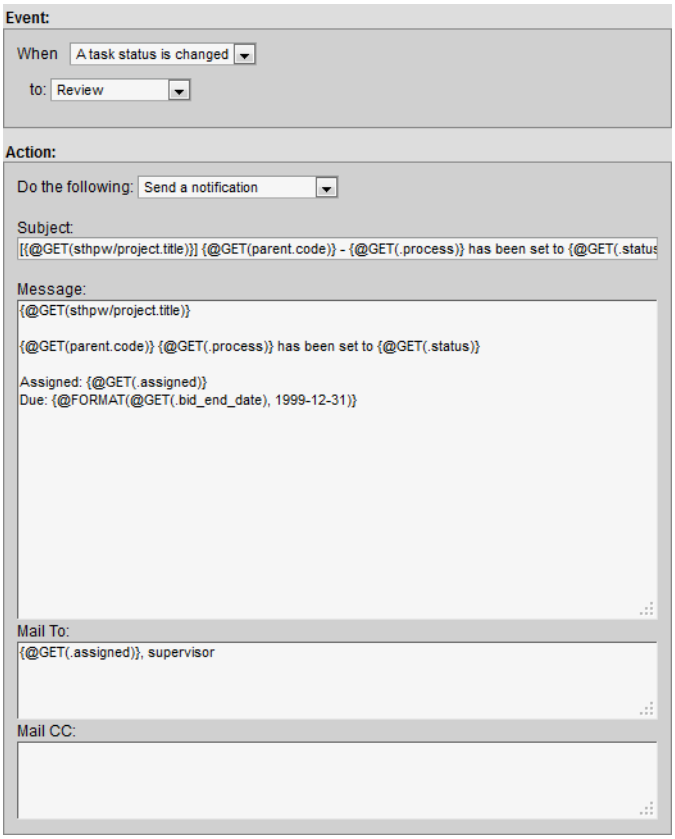
In the Action drop down list **Send a Notification** must be selected.



Send a Notification - This action will send a notification. The action box will open additional options to insert a subject and message.

Example 1

Below is an example of a notification being sent on the event when a task status is changed to review:



The **Mail To:** and **Mail CC:** input fields accepts the following types of input:

Email - Capability to add regular emails allows to send personal email addresses e.g. joe@my_email.com

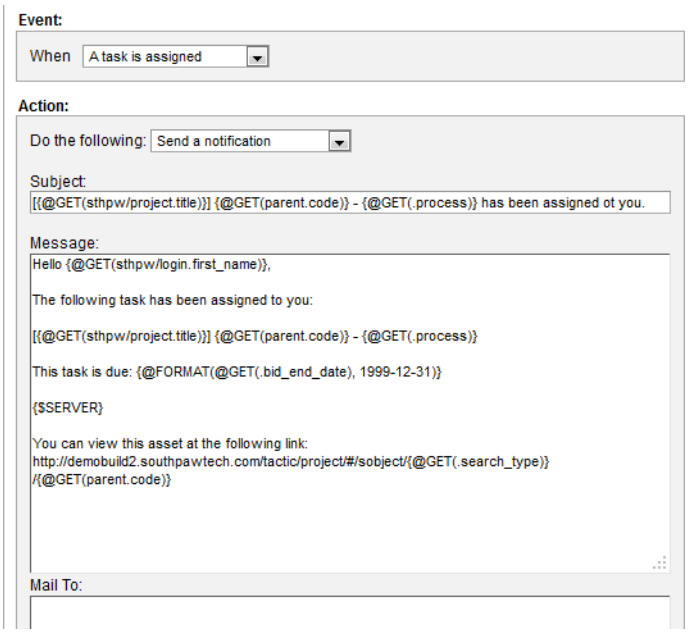
Group - Capabilty to send to a group of users in TACTIC e.g. Supervisor

Expression - Capabilty to insert expressions that specifies a user in TACTIC. All expressions are identified by curly brackets "{}". e.g. {@SOBJECT(sthpw/login)}

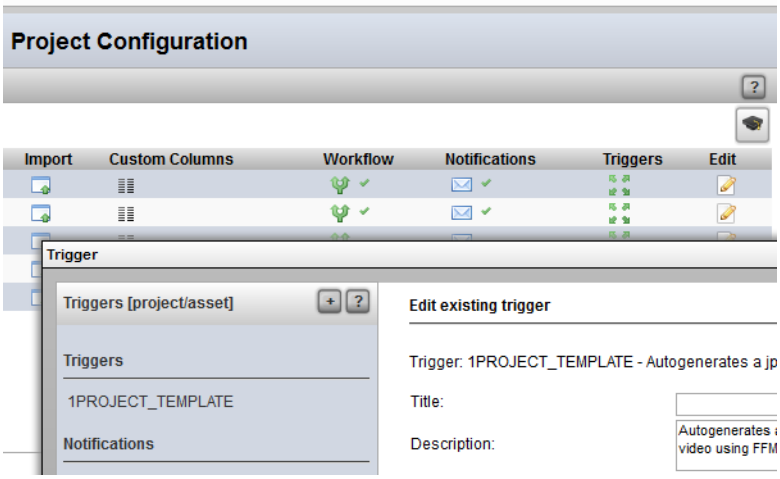
Send a Notification - This action will send a notification. The action box will open additional options to insert a subject and message.

Example 2

Below is an example which uses more expressions for a notification being sent whenever a task is assigned.



Triggers

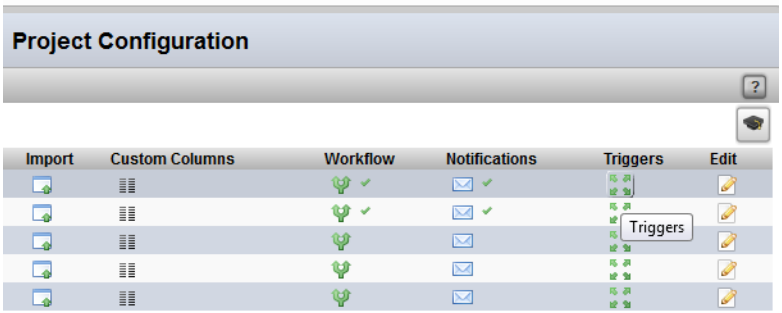


How to Add a Trigger for a Search Type

Note

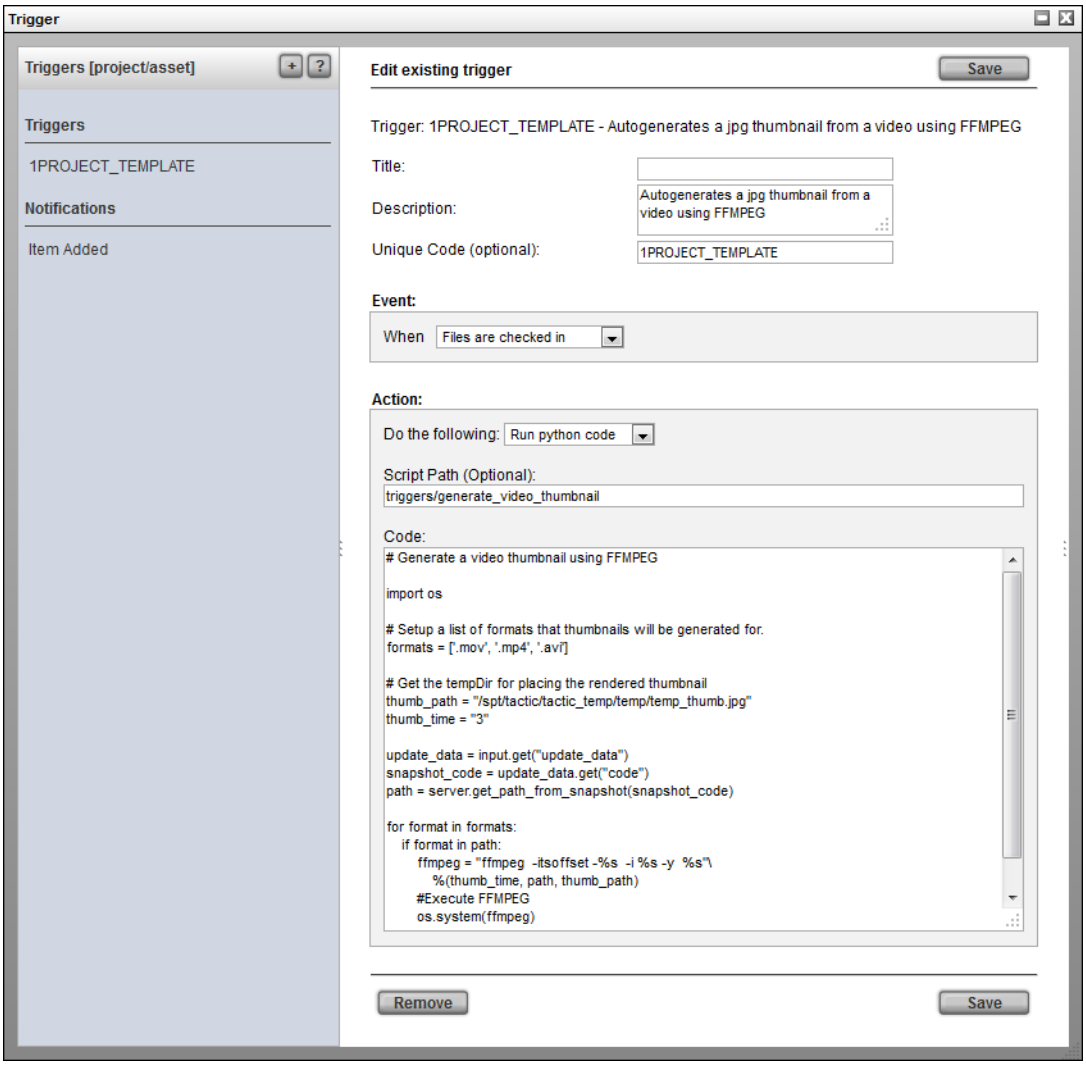
These workflow triggers are the same as the regular triggers but are scoped/filtered for the particular process.

1) In the **Project Startup -> Configuration View** (assuming a Searchable Type has already been created), click on the **Triggers** button corresponding to row of the search type to edit.



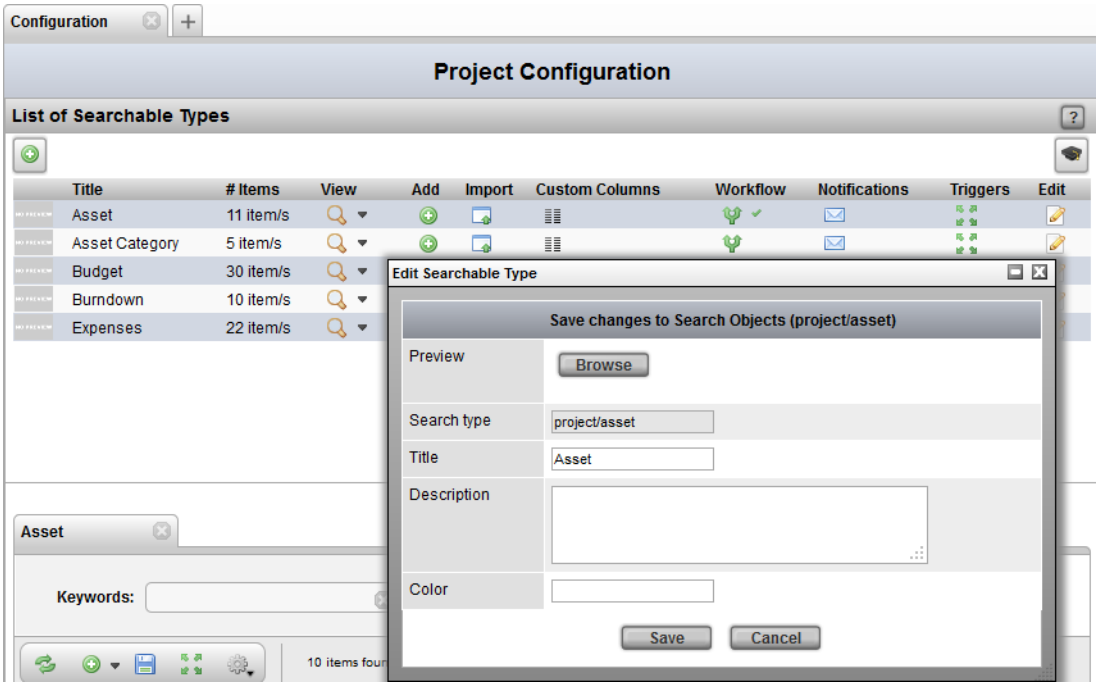
2) In the **Triggers** pop-up:

Click on the plus **[+]** button to create a new trigger. This will open the trigger/notification UI.



For further help on how to add a new trigger, refer to the ***Project Automation - Triggers*** *documentation by clicking on the question mark* ***[?]*** *in the Triggers UI to show the help for this interface.*

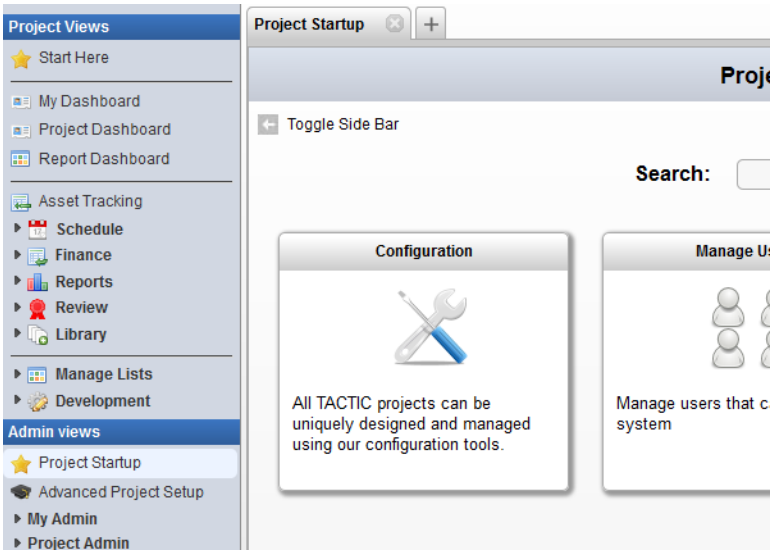
Edit sType



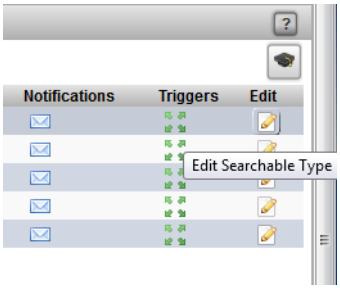
How to Edit a Search Type

1) First, open the **Configuration View** under:

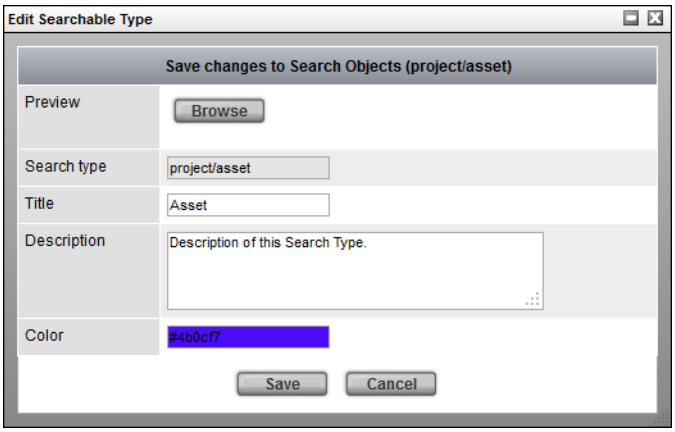
Project Startup -> Configuration



2) Next (assuming a Searchable Type has already been created), click on the **Edit** button corresponding to the search type to edit.



3) Finally, the edit pop-up will appear to allow modifiications to the sType.

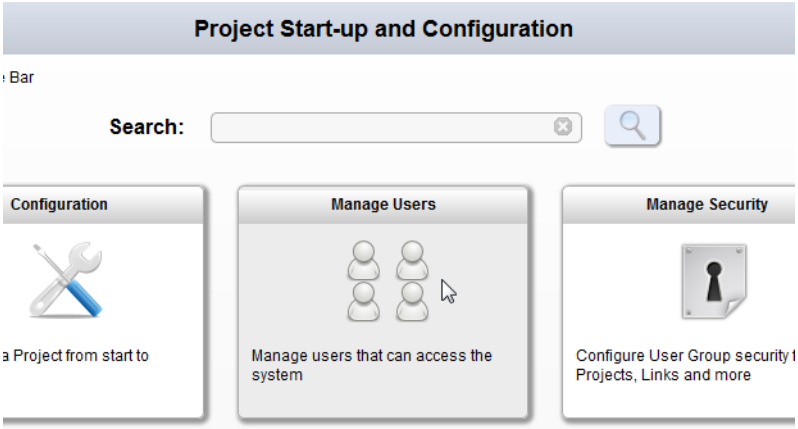


Note

The field **Search Type**, indicating the name of the Search Type cannot be modified once the type has been created.

Users and Groups

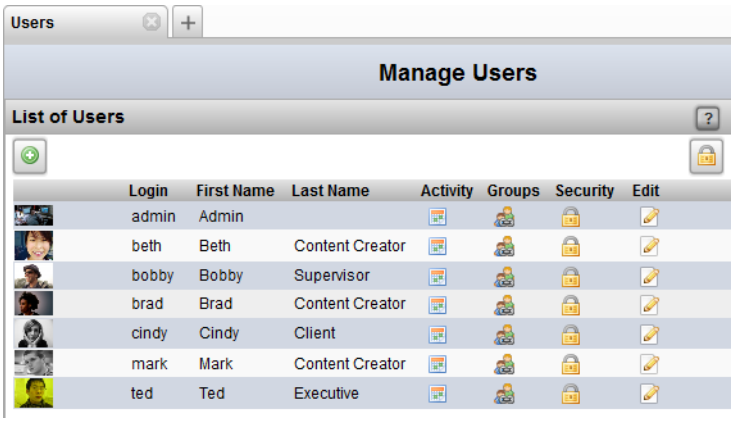
Manage Users



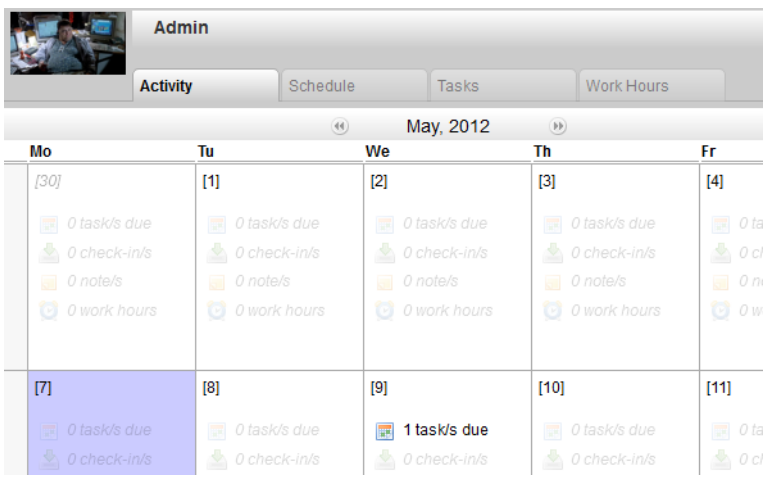
1) First, open the **Manage Users** view under:

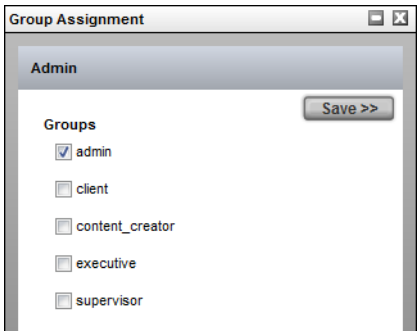
Project Startup -> Manage Users

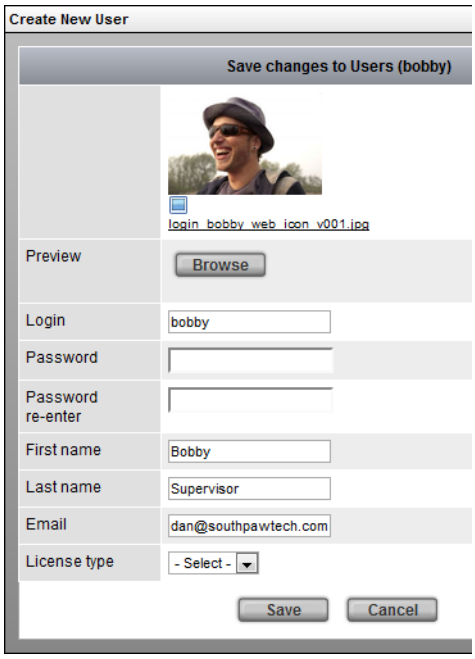
2) In the **Project Configuration** view, the following tools are provided:



Activity	Displays the calendar for a count of the user's: tasks due, check-in's, notes and work hours.

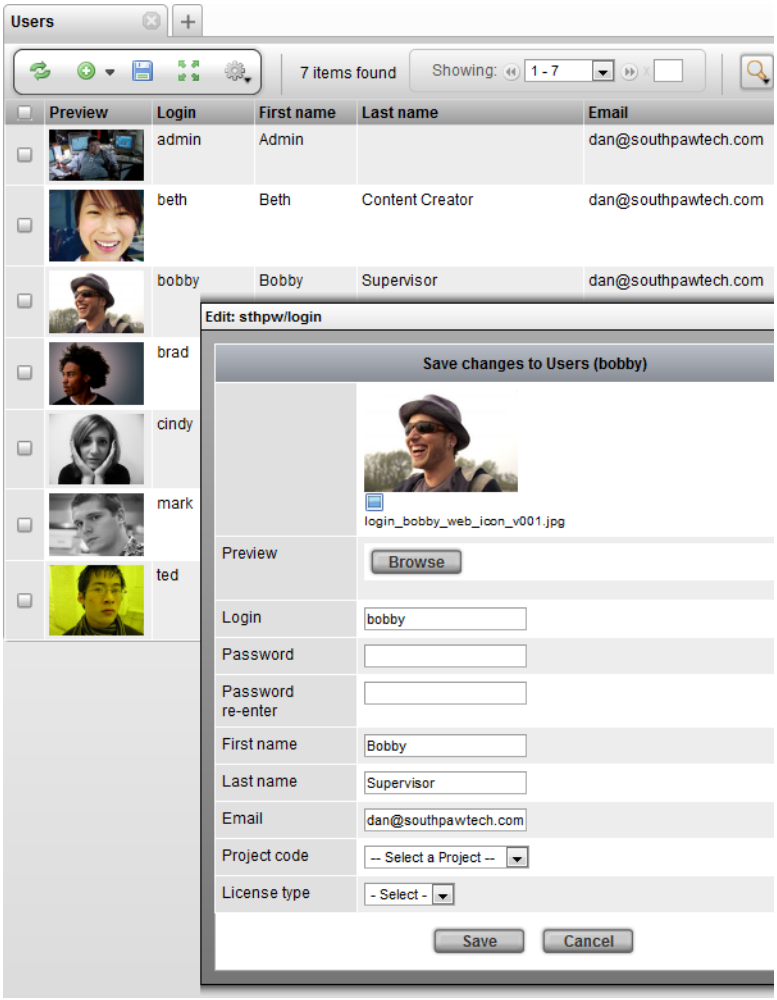


Groups	Displays the groups that the user has been assigned to. 
Security	Displays the security access rules associated to the users. .
Edit	Display the UI to edit the: preview image, login, password, first name, last night, email address and license type.


Create New User
Save changes to Users (bobby)
login_bobby_web_icon_v001.jpg
Preview
Browse
Login
bobby
Password
Password re-enter
First name
Bobby
Last name
Supervisor
Email
dan@southpawtech.com
License type
- Select -
Save
Cancel

.

Insert a New User



Users and Groups

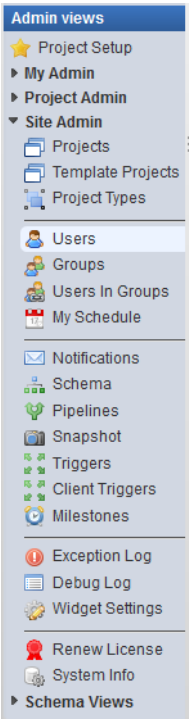
Login access to TACTIC is controlled by a user login system. In TACTIC, users can also be assigned to groups, which are used to apply various access rules.

Note

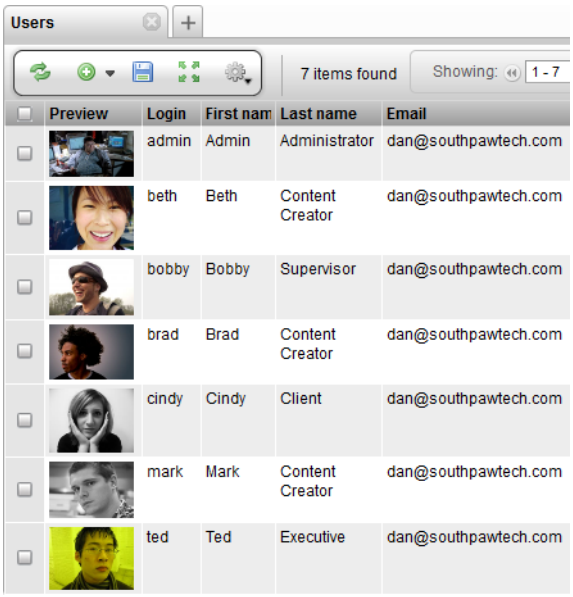
ActiveDirectory/LDAP can be used as the authentication method. Please refer to the index for those instructions.

User logins are tracked, as well as what transactions they executed. This information allows for accountability throughout the system for all users (i.e. "who did what and when").

To manage and insert users, open the **Users** view under Admin View->Site Admin->Users.

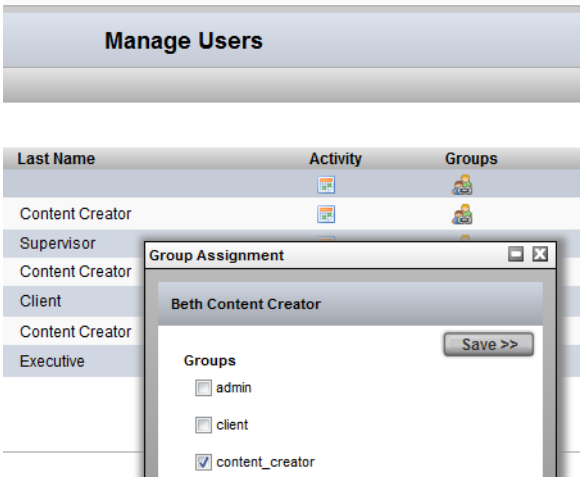


This view shows the list of all TACTIC users in the system. You must add users here for TACTIC to recognize them. To insert a new user, click on the Insert button and fill out the appropriate fields.



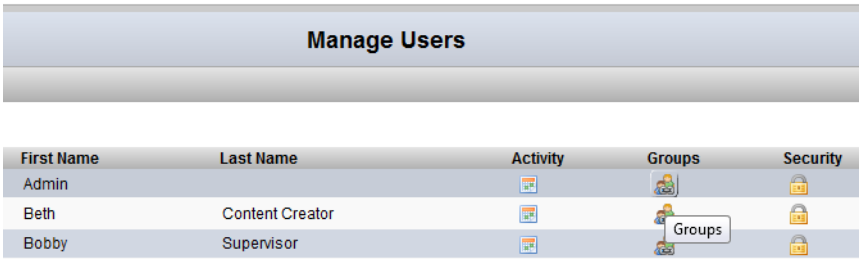
To edit an existing user, right click on the row and select **Edit** from the context menu. The user's password can be set here.

Group Assignment

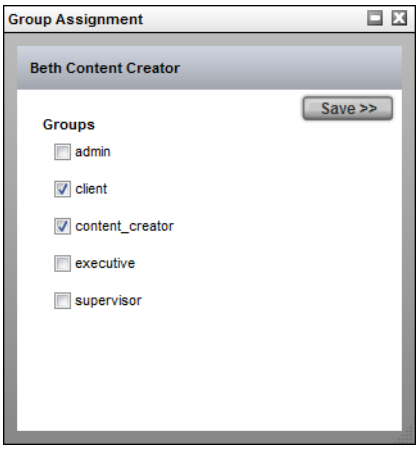


How to Assign a User to a Group

1) In the **Project Startup -> Manager Users**, click on the **Groups** button corresponding to row of the user to modify the group of.



2) In the **Groups** pop-up, add a check mark next to the group to assign the user to it. Hit **Save** to save changes.



Note

To create a new group, please go to the side bar and open the view:

Server -> Groups.

User and Group Security

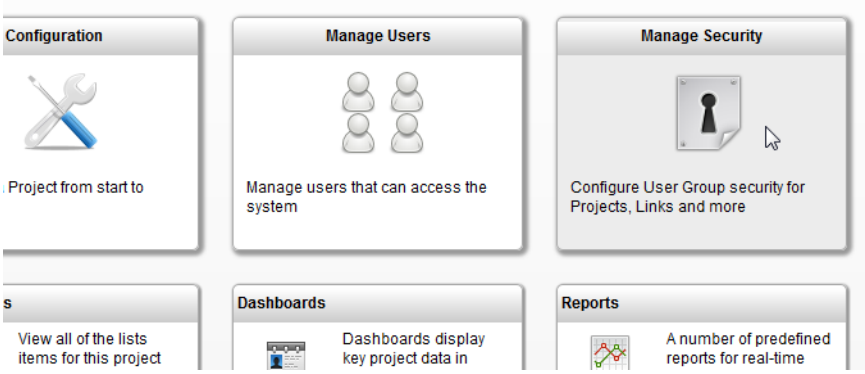
Manage Security

What the Manage Security View Provides

This document only applies to security level 2. This security level can be set in the TACTIC config file.

To open the **Manage Security** view, go to the sidebar under:

Project Startup -> Manage Security



Note

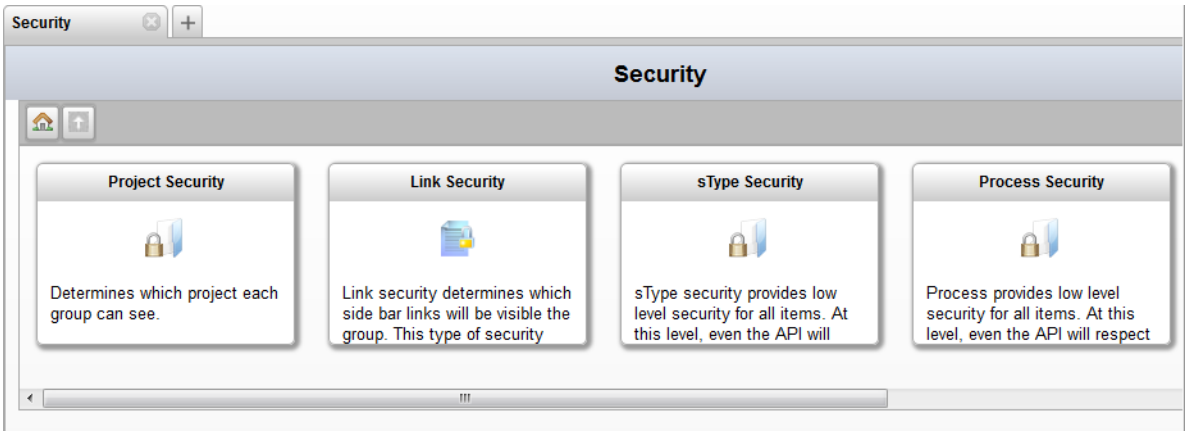
The default security level for a fresh install of TACTIC 3.7 is security level 1.

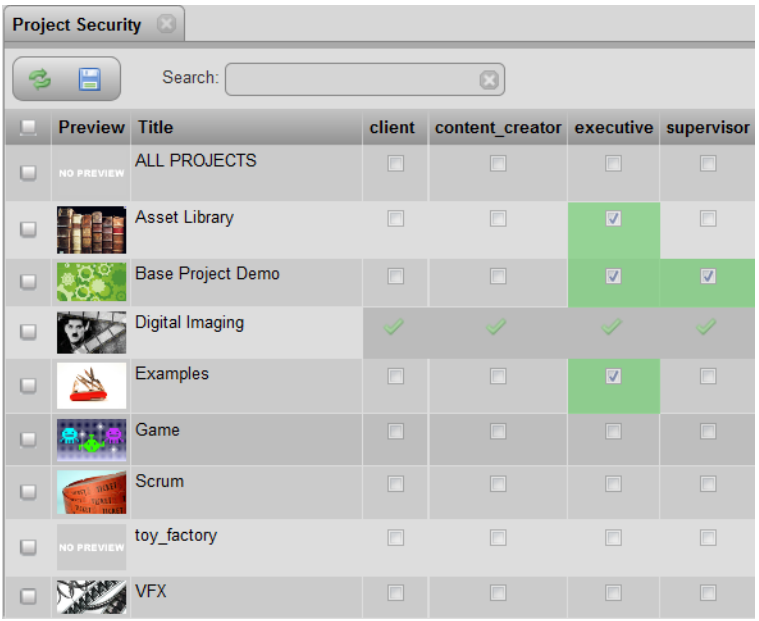
The default security level for a fresh install of TACTIC 3.8 is security level 2.

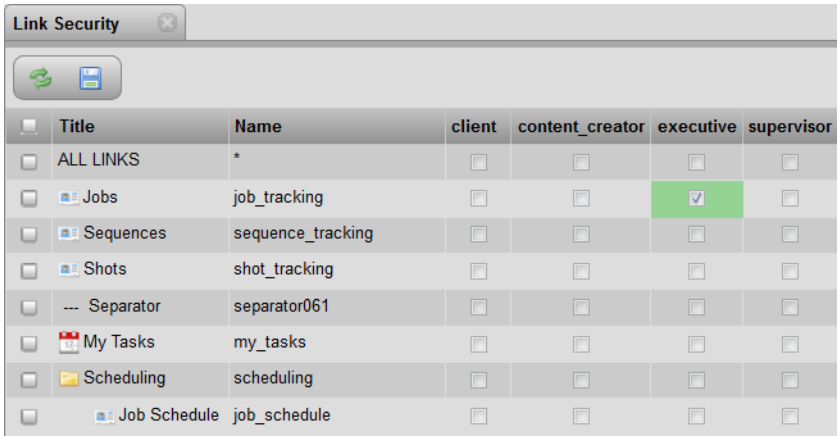
If upgrading from TACTIC 3.7 to 3.8, the security level is not affected (and will probably be level 1).

The security level can be set in the TACTIC config file.

In the **Manage Security** view, the following tools are provided:



Project Security	Determines which project each group can see. Each project is listed with checkboxes for each group. Adding a checkmark allows the users associate with that group to see the project. 
Link Security	Determines which side bar links will be visible to the group. This type of security applies only to the interface.

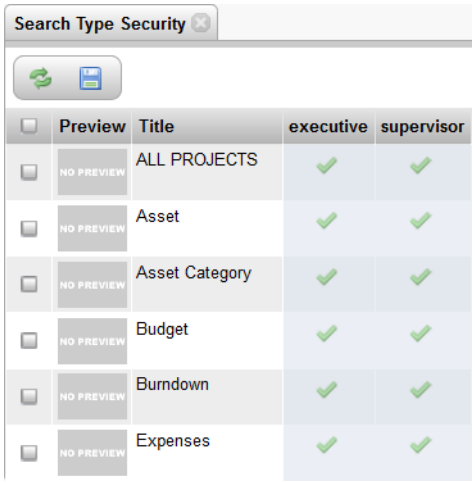


Note

If no columns of groups (eg. client, content_creator, etc.) appear in this view, go to Project Security and allow some groups to view the current project.

sType Security

Provides low level security for all items. At this level, even the API will respect these security levels.

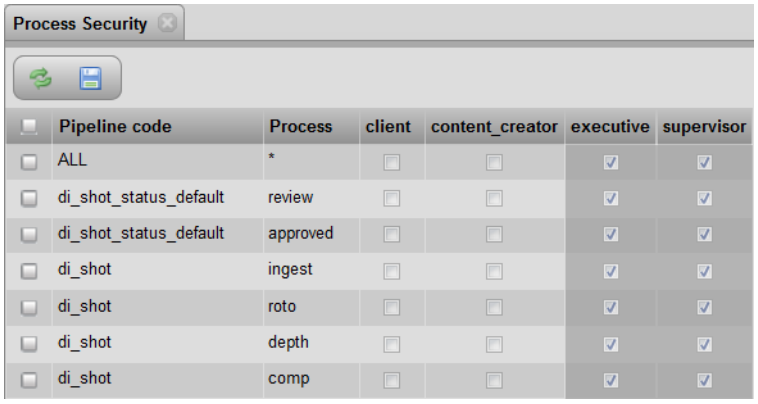


Note

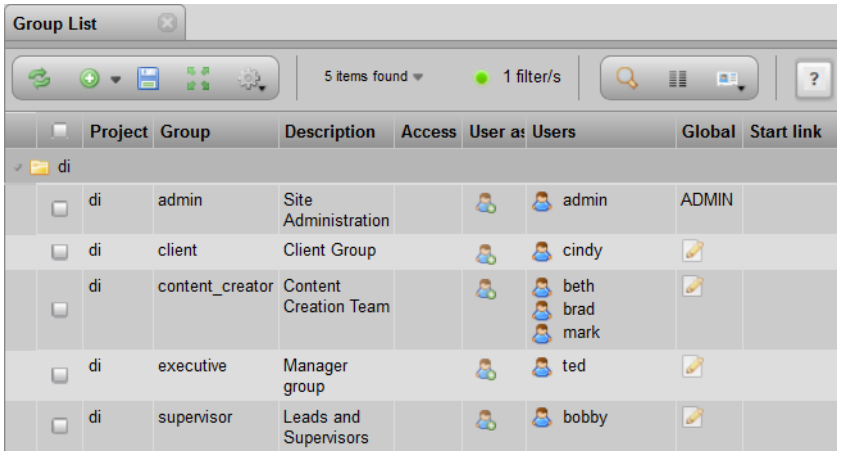
If no columns of groups (eg. client, content_creator, etc.) appear in this view, go to Project Security and allow some groups to view the current project.

Process Security

Provides low level security for all items. At this level, even the API will respect these security levels..



Groups List	Lists all the groups. The following fields can be modified: **group, description, users, global access ruls, start link**



Understanding Predefined Security Access Levels

TACTIC provides a set of predefined security access levels (i.e. none, low, medium, high) to make it easier to start setting up what a group can see. Associating a group with an access levels presets all the security settings. After that, the administrator can return the Managing Security tool to allow further access in addition to the presets. The presets are outlined in the table below.

access level: **none**	Description of access privilege:		
	Can see the project?		[No]
	Can see all the links in the sidebar?		[No]
	Can see all the processes?		[No]
	Can see all search types?		[No]
access level: **low**	Can see the project?		[No]
	Can see all the links in the sidebar?	[Yes]	[No]
	Can see all the processes?	[Yes]	
	Can see all search types?		

access level: **medium**	Can see the project?	[Yes]	[No]
	Can see all the links in the sidebar?	[Yes]	
	Can see all the processes?	[Yes]	
	Can see all search types?		
access level: **high**	Can see the project?	[Yes]	
	Can see all the links in the sidebar?	[Yes]	
	Can see all the processes?	[Yes]	
	Can see all search types?	[Yes]	

Note

In the **Group List** view, if the field name **Project Code** is left empty, then the group can see all the projects.

If the field named **Project Code** is filled in, then the access rules are specific to that project.

How the Access Levels are Built Up

To better understand the differences between the Access Levels, the following is an explanation of how the levels were built up:

Access Level **None**: cannot see anything.

Access Level **Low**: can see all *search types* and *processes*.

Access Level **Medium**: can see what **low** sees and all the *projects*.

Access Level **High**: can see what **medium** sees and all the *links*.

Where To Find the Access Levels

To set the access level for a group go to the sidebar under:

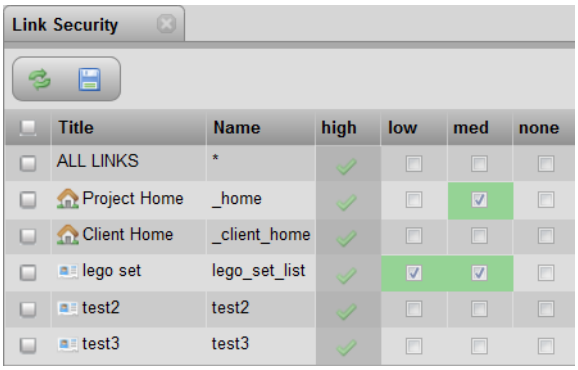
Project Startup -> Manage Security -> Groups List -> Access Level

The Different Check Mark Indicators

The solid green check mark indicates that a privilege is due to the Access Level associated to the group that the user is in. In order to remove the green check mark, the user must be removed from this group or the group's Access Level must be changed.

If additional privileges are added, the check marks are blue with a green background.

In the screen shot below, the group (named 'high') is the only group with Access Level **High**. The TACTIC Administrator added the other privileges for the other groups.



For more advanced access control (such as controlling access to edit individual columns), please see the setup doc title: **Advanced Access Rule Configuration**

Dashboards

Built-In Dashboards

Reports

Built-In Reports

Advanced Project Setup

Schema

TACTIC Anatomy Lesson

What is TACTIC and how is it all put together?

TACTIC is a project-based system that can be configured to accommodate the custom requirements of many different project scenarios.

Any project or asset management scenario can have a large number of items to manage. These items can be people, files, tasks or information and the management of these items are often a hurdle. The primary goal of TACTIC is to assist in generating placeholders, controlling workflow and managing these items.

The TACTIC Server

The Tactic server is a system which runs the TACTIC application. This server is often housed in your facility as a website which runs on your private network, or can be opened up to the world wide web like any other website.

For Tactic to run there are 4 main services:

Database Server	**This is where Tactic stores all of the meta data** The "database is the base location for all of your data. This data is all information often tracked in spreadsheets, emails, sticky notes, whiteboards etc. A database provides a powerful central location for this information which helps keep everything in one place.
File server	**This is were TACTIC stores the files.** Files in TACTIC are managed externally on a file system. For example, most businesses have a file server that users save to. The file server typically has a root 'assets' directory where TACTIC handles the directory and filenames for the entire file system.
TACTIC Application	**This is the central hub for all processing.** All processes and interactions are managed through TACTIC transaction system. The TACTIC Application sends/retrieves information from the database, and files from the File Server. TACTIC's web interface can be delivered in multiple configurations based on the needs of the end user.
Web Server	**The Web Server delivers the interface to the end user** The Web Server delivers the TACTIC Interface to the end user's web browser. The Web Server is a web portal to the TACTIC Application.

What is a TACTIC Project?

A TACTIC project stores all inserted information and configuration. In the back-end, each project is a complete "database".

There are 2 major components to a TACTIC Project database; Setup (configuration) and Meta Data

Project configuration - Each TACTIC project can be unique based on the desired end-user experience. TACTIC is extremely configurable which make various end-user workflows possible.

Project Information (Meta Data) - Once you have a project setup and configured, it stores all that data in the project. Because all data is centralized in a database, it makes real-time updates and collaboration on project tasks possible.

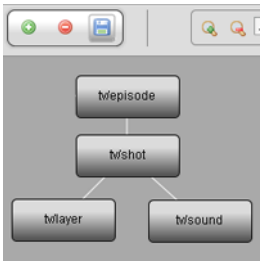
Tactic can house multiple projects at the same time with each being a separate project configuration. Within a project, there can be a hierarchy of different types of objects in your project design.

Project Structure

There are 2 major components to setting up the base structure of a TACTIC Project:

- The **Project Schema** which represents **what you manage and produce, and how these objects relate to each other**.
- The **Project Workflow** which represents **processes and workflows these objects travel through during their life-cycle**

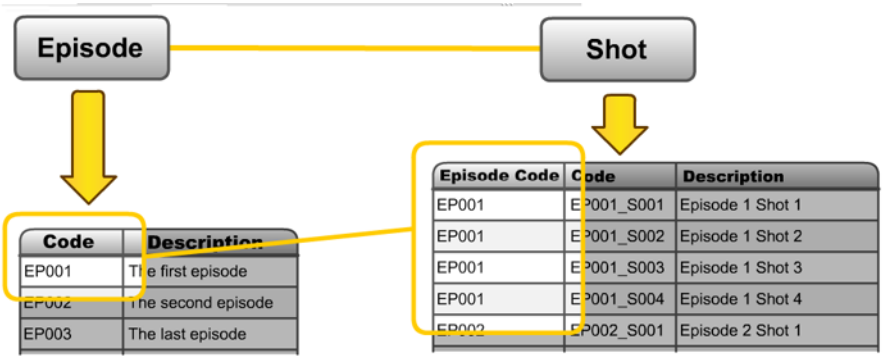
Project Schema



The project Schema is the central hub for traversing a project, and is the most important aspect of the project setup. The Schema node (sType), is a type of object you manage. i.e.. episodes, shots, sound.

For example, a television series may have multiple episodes, and each episode may have multiple shots. By relating Episodes to Shots, this will display all shots in a particular episode in one TACTIC view.

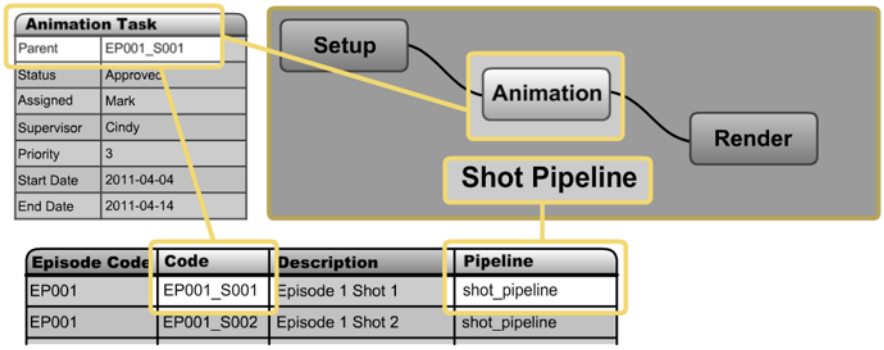
The layout of a Project Schema will depend on how the project is managed and how the sTypes relate to each other.



Project Workflow

The Project workflow is a layout of a pipeline processes. Each pipeline defines a set of processes that a single object can travel through. These pipelines also represent the dependencies between the processes. For example, each process

inherently knows which processes are upstream, and which are downstream. This can be leveraged with automated notifications, emails, status updates and external trigger processing tools.



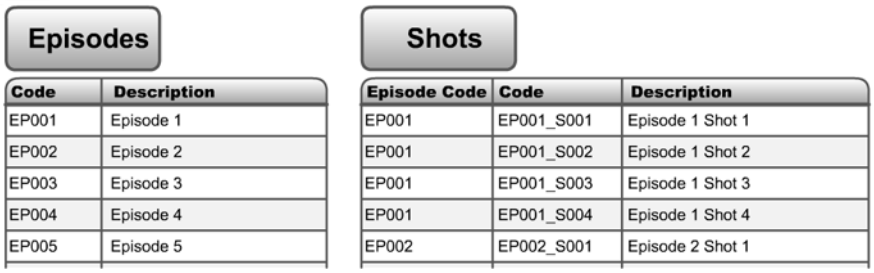
The Project Schema and the Project Workflow Editor are connected. The Schema is used to layout the sTypes individually, and the Work-flow Editor is used to create the pipelines the sTypes will flow through.

Searchable Types (sType)

What are "sTypes"?

Within the schema for a project there are various "types" of manageable objects that are defined when a node is created. These items are called Searchable Types (sTypes). Each of these Types are actually a table in the database and each column represents a property relevant to that sType.

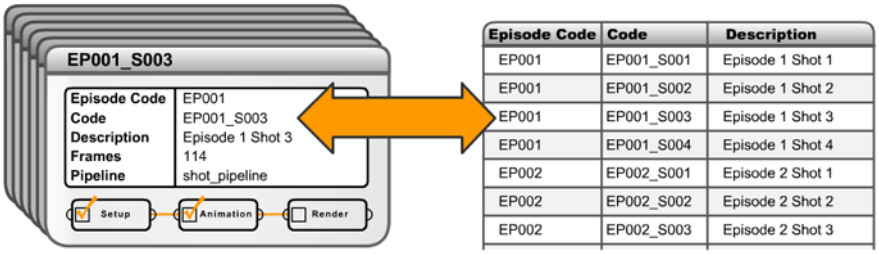
A project configuration can have various views, pipelines, naming conventions, access rules etc, which are all defined based on an assignment to a sType.



Searchable Objects (sObjects)

What are **Searchable Objects (sObjects)** and how are they related to **sTypes**?

Searchable Object or sObjects are the entries in the sType's table. Each entry can be thought of as a 'container' or 'placeholder' for the object it represents (a shot, an episode, a document etc). For example, Shot EP001_S003 is the sObject, which we can see is an entry in the Shots table (sType) on the right.



Common TACTIC sTypes

TACTIC provides a set of default sTypes:

- **Tasks**

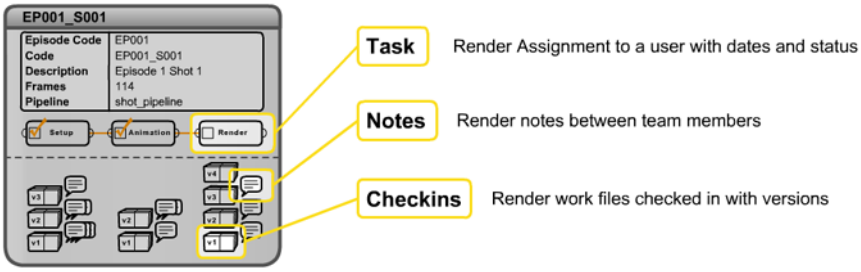
  Tasks can be created based on the pipeline associated to a particular sObject. Tasks provide tracking for various processes such as; Status changes, Start and End date, Assigned User, Assigned Supervisor, etc. Users can be provided with a view that displays all assigned tasks, when each task is due, and what tasks to expect in the future etc.

- **Snapshots**

  When you check in a file, it may involve one file or it might be 1000 files. A snapshot represents a complete package of that sObject at the point of check-in. Snapshots store the version and revision information, as well as the location of the file(s) in the file system. Snapshots can also store "dependencies" to other Snapshots. Dependencies provide a trail to indicate that one check-in is dependant on one or more other Snapshots.

- **Notes**

  Notes can be added to any task or snapshot and provide instant feedback and real-time collaboration between end users. These Notes and update information can be sent to the user via TACTIC Notifications and/or email.



Within an object being tracked in TACTIC (shot, episode, document etc), separate child objects are stored and categorized by a '**process**'. For example, the "design" process has notes, tasks, snapshots etc. All of these would be stored within the shot EP001_S001. Through this concept, all of the life-cycle information regarding an object is easily accessible and organized and more importantly are used to drive the object through it's pipeline.

TACTIC Interface

Searching for Types of Objects

TACTIC interface allows users to search for information (sObjects) in the TACTIC system. End users are able to quickly find and display information relevant to their day-to-day tasks. The information can be displayed in a variety of ways such as simple tabular data, dynamic reporting or dashboards for example.

Built-in STypes

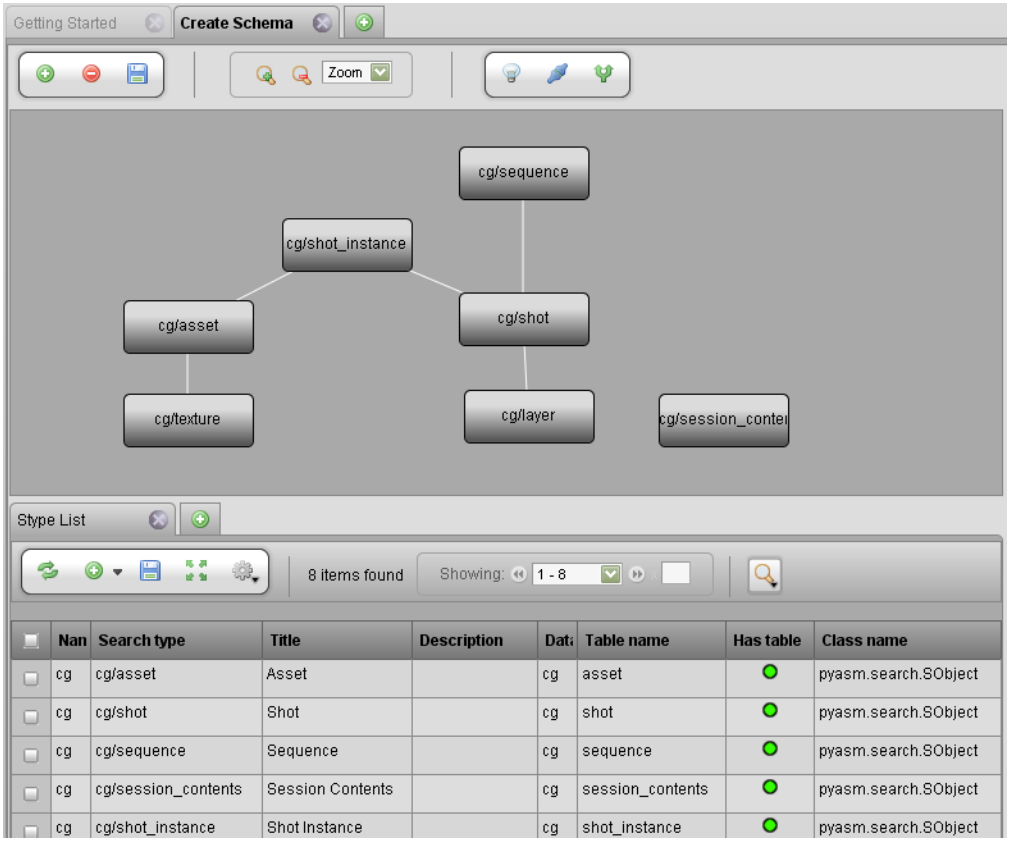
When using the expression or adding widget config entries for built-in STypes, you would want to get familiar with how to represent notes (sthpw/note) or tasks (sthpw/task) for example. Below is the full list:

Name	SType
File	sthpw/file
Login	sthpw/login

Name	SType
Login Group	sthpw/login_group
Milestone	sthpw/milestone
Note	sthpw/note
Project	sthpw/project
Pipeline	sthpw/pipeline
Schema	sthpw/schema
Status Log	sthpw/status_log
Snapshot	sthpw/snapshot
Task	sthpw/task

Project Schema

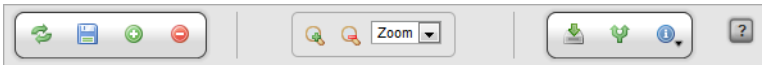
The project schema is used to create structure or a "data model" of a project. The Schema view defines the type of items managed by using a visual graphical node editor. The Schema Editor displays the layout of the created sTypes and the connections between them.



The Project Schema Editor is available through the Getting Started link in the side bar which is available after creating a project, or under the Admin Views under Project Admin -> Project Schema in the side bar.

The Project Schema editor is an essential tool used for the creation of new project templates. This editor is used to layout the various types of objects (files, assets) that will be managed and produced on a project. These types (sTypes) are searchable within TACTIC. Node based layout and work-flow, allows for simple manipulation and creation of these various sTypes and their relationships to each other.

Editor Button Shelf



Main Editor Buttons

Add	Add a new node to the canvas. This represents an unregistered sType
Delete	Delete the selected nodes or connections from the canvas
Save	Save all changes to the schema

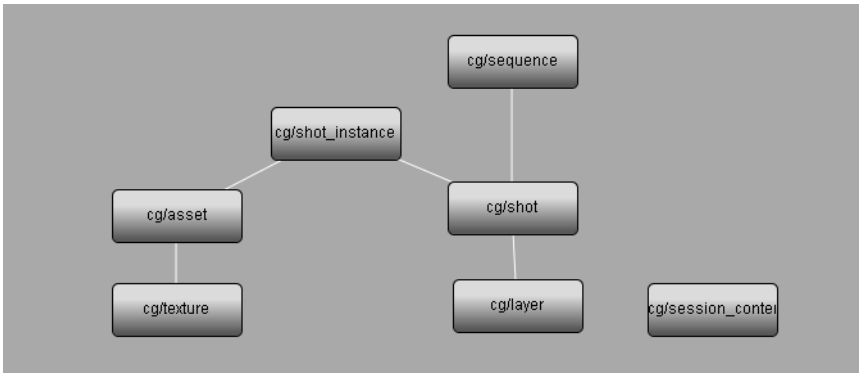
Editor Zoom Controls

Zoom In	Zoom the canvas in
Zoom Out	Zoom the canvas out
Zoom Options	Allow for choosing the zoom level.

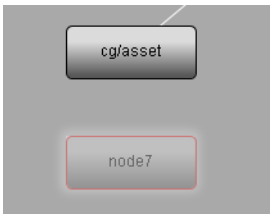
Node Options (Applies to the selected nodes or connections)

Register sType	Registers the selected nodes as new Searchable Types using the registration wizard. If more than one node is selected, the sTypes will be registered in batch.
Edit Connection	Load the connection editor pop-up.
Edit Pipelines	Load the Project Work-flow (pipeline) editor.

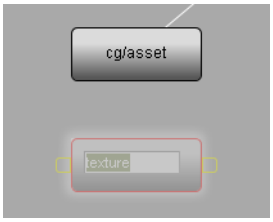
Laying out the sTypes



To create a new Searchable Type (sType) in the schema, add a new node to the canvas using the [+] button in the editor. It's also possible to create a new node from an existing node by simply dragging a connection line from the output handle of the existing node.



Once the type has been created on the canvas, it can be renamed by right clicking on the node or using a "CTRL-click" on the node.



Note

It is important to note that during this initial process, you are creating a "blueprint" for your project. The next steps are to **register** the sTypes. Each sType in TACTIC is represented as a table in the project database, this table is required to go through a registration process. This process will generate the table as well as provide the opportunity to add columns (properties), a pipeline, default views for the sidebar and more.

Workflow (Pipelines)

Where applicable, you can add the pipeline attribute to a search type to allow for association of the sObjects to a particular pipeline. Having a pipeline assigned allows an sObject to travel through a set number of processes. For each of these processes, a task can be created and assigned to a user, files can be checked in, notes can be submitted and work hours can be logged.

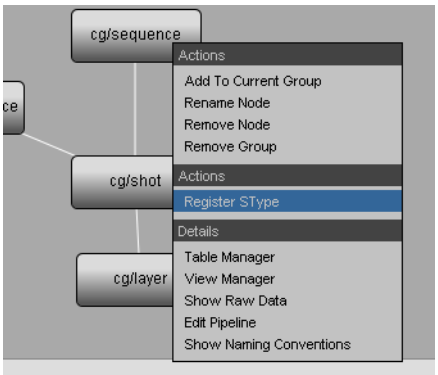
By choosing "Has Pipeline" on creation, an extra "pipeline_code" property will be added to store pipeline associations and a Pipeline will be created and registered for the new sType.

Note

To edit the pipeline, you can click the pipeline link in the top of the editor or, in the sidebar navigate to Project Admin -> Project Workflow.

Node Options

Once registered, each node provides options for further configuration of sType related project setup and configuration, which can be executed through the main shelf buttons or by right-clicking on a node:



Editor Actions

Add to Current Group	Adds the selected node(s) to the current group (pipeline)
Rename Node	Rename the node (sType)
Remove Node	Remove the node (sType)
Remove Group	Removes the group (pipeline)

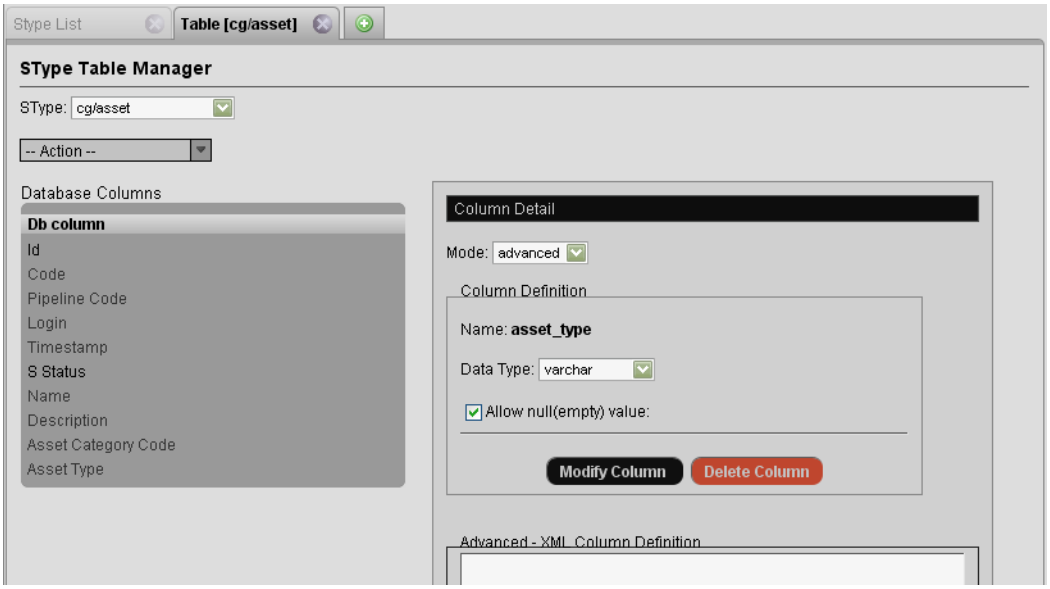
Node Actions

Register sType	Loads the sType registration wizard

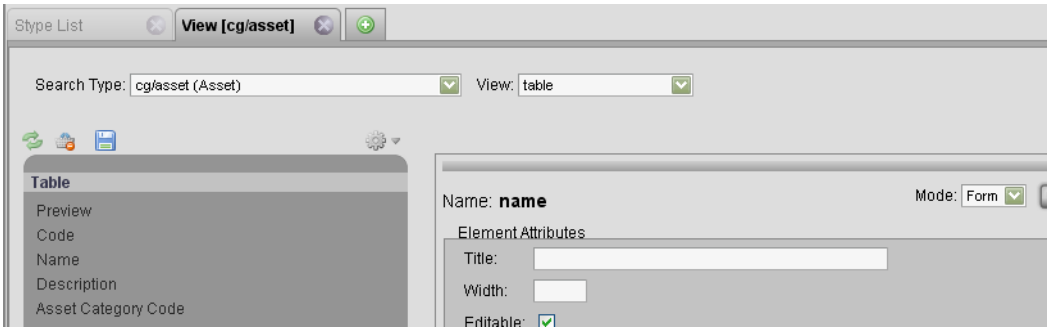
Node Options

Table Manager	Load the Database table manager for the selected type *(see "Table Manager" below)*
View Manager	Loads the view manager for the selected sType *(see "View Manager" below)*
Show Raw Data	Loads the Raw database data in a table for the selected sType *(see "Raw Data" below)*
Edit Pipeline	Loads the Workflow Editor allowing access to edit the pipelines related to the selected sType.
Show File Naming	Loads the file naming table for the selected sType *(see "File Naming" below)*

Table Manager

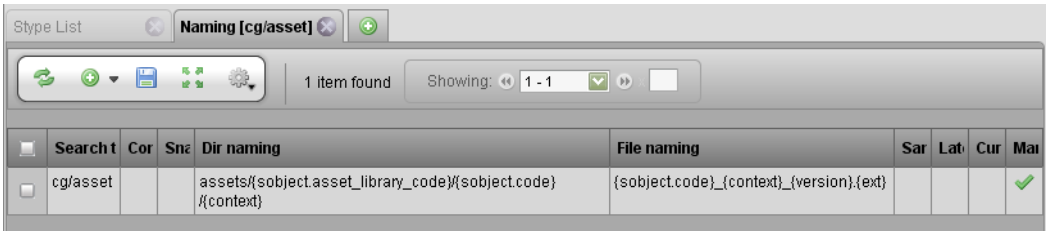


View Manager



Raw Data

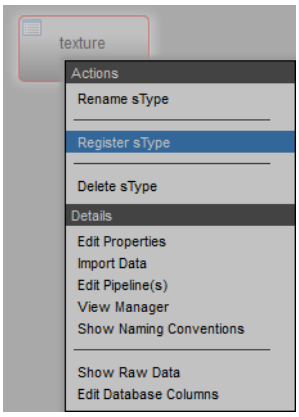
File Naming



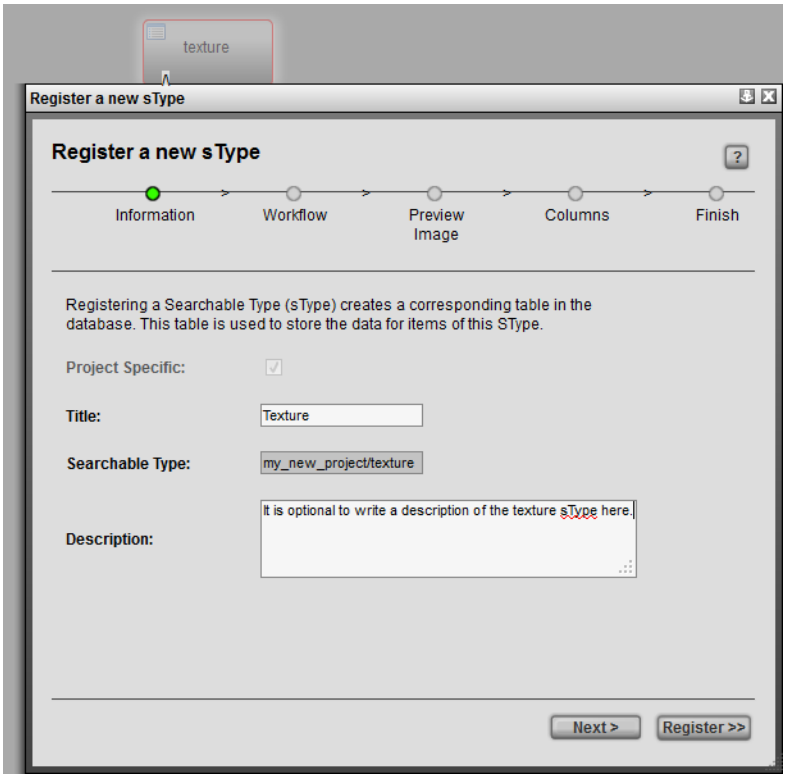
Register sTypes

sTypes (also know as **Search Types**) can be registered either: one at a time, or in batch. The benefit of registering each sType individually is the opportunity to configure and select properties of the new sType that are outside of the TACTIC defaults.

To register an sType, right click on the node to bring up the context menu and choose **Register sType**.



The **Register a new sType** wizard will appear:



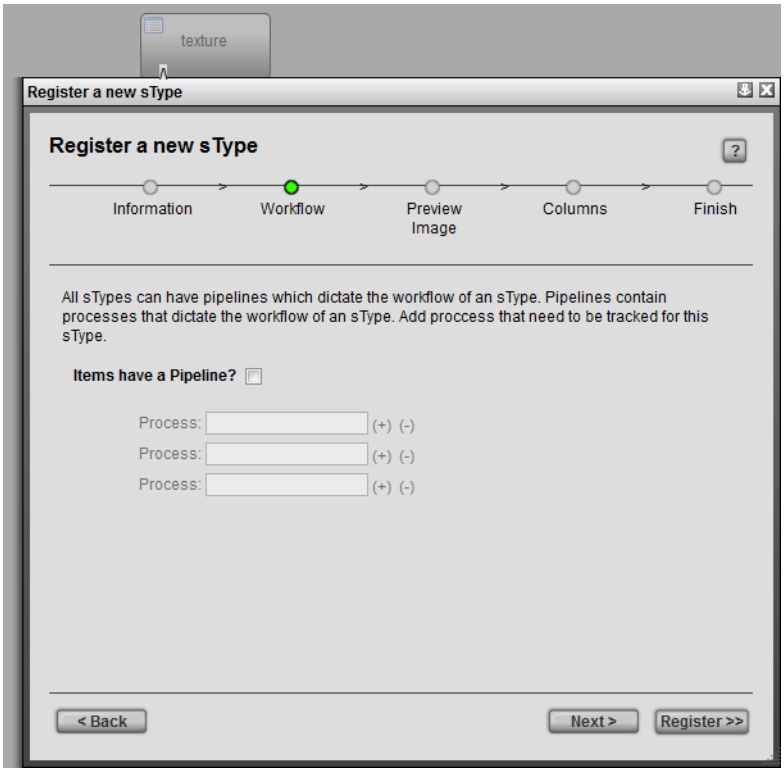
Information

Project Specific	*(available when creating a new sType for a project that is based on a template)*

Title	The title for the sType is used in the UI for display purposes.
Searchable Type	Refers to the database name for the sType. in a "<project>/<name>" format. If no project is defined (i.e.. "art/") than the current project namespace will be used.
Description *(optional)*	An optional description of the sType.

Once the fields are completed, press "Next" or press "Register" to complete the registration process. Note: It is recommended to go through the series of steps outlined in the "Register a new sType" wizard, as this allows for quick and easy configuration of the new sType that is outside of the TACTIC defaults.

Workflow

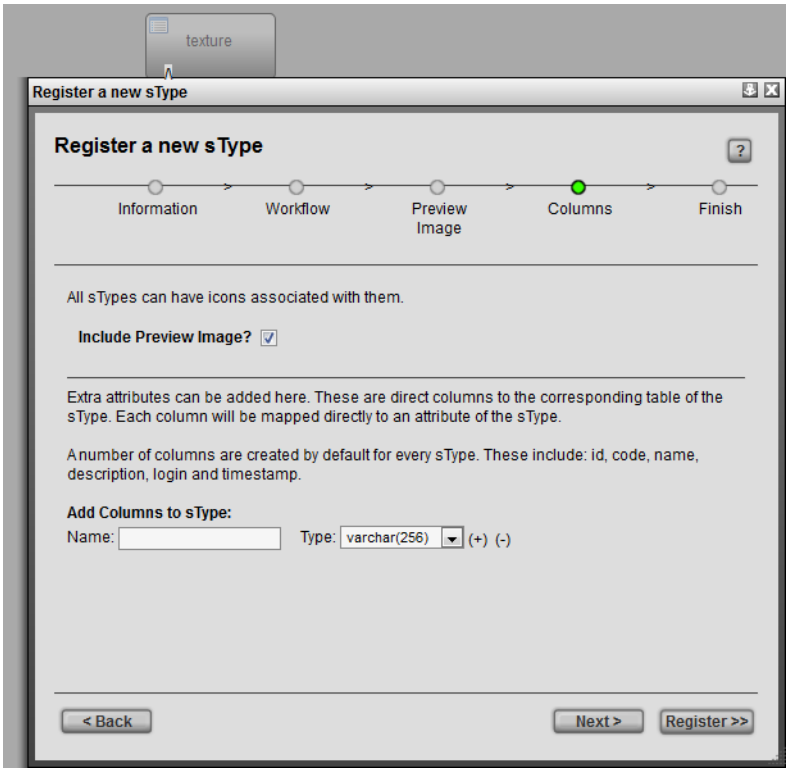


Items have a Pipeline?	When selected, sets up an association for a pipeline workflow for the sObjects in that sType. *The section below describes this relationship in more detail*
Process *(optional)*	Stages in the process. *eg. processes for an asset sType: design, model, texture, rigging eg. processes for a shot sType: layout, animation/fx, lighting, render, comp*

Preview Image

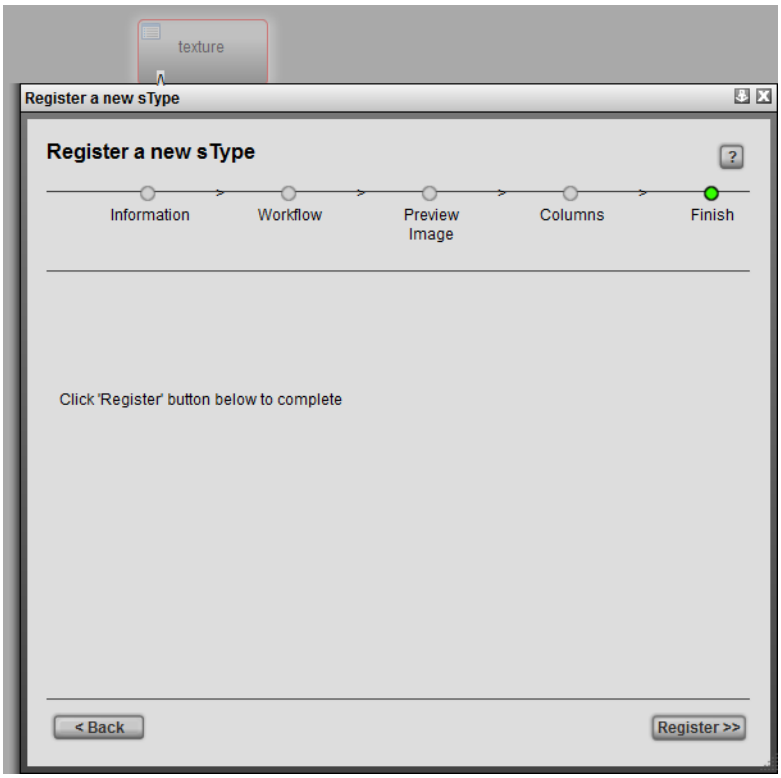
Preview Image *(optional)*	Browse to select a preview image for the new sType.

Columns



Include Preview Image?	Preview image for each item (sObject) of that sType.
Add Columns to sType *(optional)*	During the registration process, default columns are added to the new sType table. You can also add additional columns during this process. Note - columns can be added after this process using the Table Manager

Finish



Finish	To complete the registration process, press "Register". A this point, the option is provided to go back and change any information by clicking on the "Back" button.

Connecting sTypes

In a project, items (ie. files, assets) may be related to each other. For example, a car is built with various parts that can be identified separately but are all related to the same car. Another example can be found cinematic film production. The cinematic footage of one movie is commonly broken down into sequences and shots.

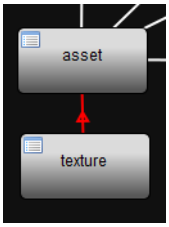
How do these relationships work in TACTIC? - Each sType is represented as a table in the database and each entry in the table represents an sObject. The relationships are created when storing matching data "properties" in each of the tables. In the example tables below there are "Sequence" and "Shot" sTypes. The "code" column matches the "sequence_code" column which illustrates which shot is related to which sequence.

code	description
SEQ001	The first sequence
SEQ002	The first sequence

sequence_code	code	description
SEQ001	SEQ001_001	Sequence one shot one
SEQ001	SEQ001_002	Sequence one shot two
SEQ002	SEQ002_001	Sequence two shot one

In the Schema Editor, relationships are represented by lines connecting the nodes. When these connections are made, the columns used to relate the sTypes can be chosen in the Connection Editor.

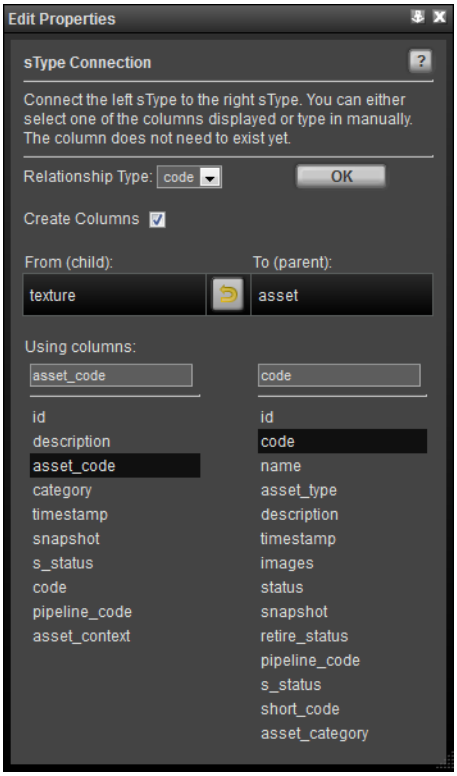
To create a new connection, hover over a node and click-drag a connection to the desired node (sType).



Note

The direction of the arrow in the connection indicates from child to parent.

After a connection is made, the Connection Attributes editor will open to enable the choice of column relationships. It is also possible to create new columns from this editor.

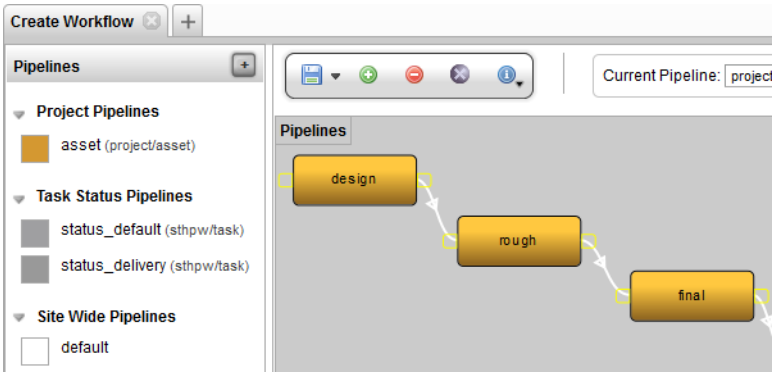


Note

The yellow **Switch** button in the middle of the tool toggles which node is the child and which one is the parent.

Advanced Workflow

Workflow Editor



Introduction

The Workflow Editor is a graphical tool in TACTIC used to interactively create pipelines (workflows). It is a node-based tool which creates processes in a pipeline and connects them. The Workflow Editor makes it easier to create large complex pipelines to filter and process information and file system flow.

The Workflow Editor is simple to use and similar to node base utilities commonly found in other applications. Nodes can be created in the canvas and connected together. Each node represents a process (with attributes associated to it) and each connection represents information being delivered from one process to the other. Together, the Workflow Editor helps you create a definition of the pipeline document and drive much of the information flow in TACTIC.

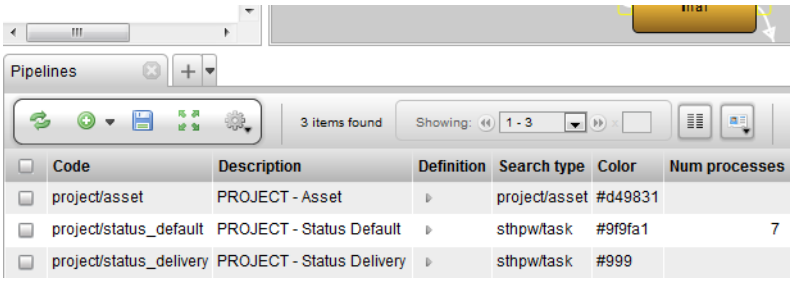
Access the Workflow Editor

Access the Workflow Editor by going to:

Admin Views -> Project Admin -> Project Workflow

Insert a new pipeline

When the option for "Has Pipeline" is selected during the registration of the sType, this defines a default pipeline for that sType. This pipeline can be found defined in the Workflow Editor in the sidebar under **Project Pipelines**. To add a new pipeline manually, the select the [+] icon in bottom panel of the Workflow Editor.



Interface Walk Through

The buttons at the top of the Workflow Editor allow various operations on the canvas:

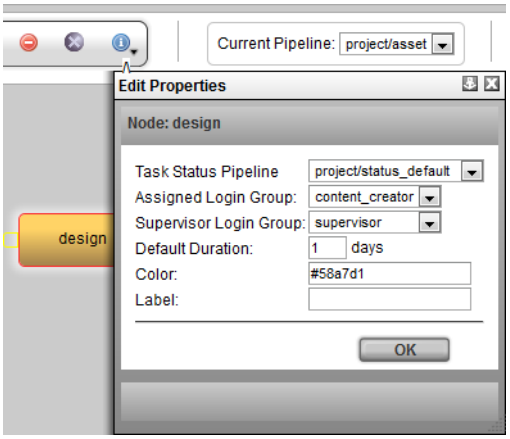
- **Create:** Creates a new node on the canvas.
- **Delete:** Deletes the selected node.
- **Save:** Saves the current state of the pipeline to the database.
- **Clear:** Clears the canvas.
- **Properties:** Opens the Node Properties panel.

Edit Properties of a Pipeline

To edit the properties of a pipeline, first select a node in the pipeline and then click on the **Edit Properties** button on the tool shelf.

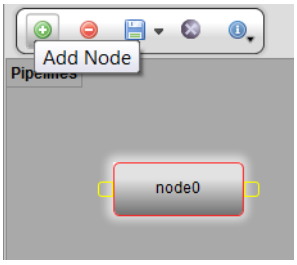
Note

For more information regarding the Process Options, refer to the section Project Workflow -> Pipeline Process Options

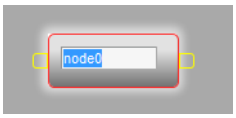


Lay Out a Pipeline

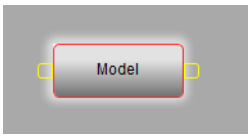
When you click the green plus button, **Create**, a new node will appear on the canvas.



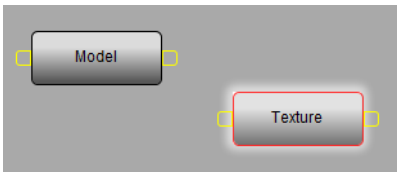
Rename the node: Select the new node and press CTRL-LMB to rename the node. Alternatively, right click and select **Rename Node** from the context menu.



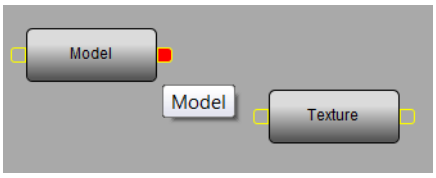
Type in the new name for the node ("Model," in this example), and press **Enter**.



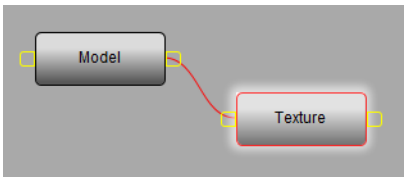
Create another new node (called "Texture" in this example).



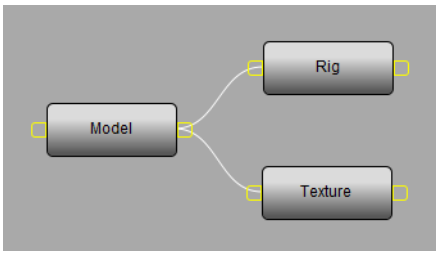
To create a connection between the two nodes, click on the handle on the right side of the "Model" node. This will create a connector which will follow the cursor.



Click on the left handle of the "Texture" node to complete the connection. Now, the 2 nodes are connected together. Once 2 nodes are connected, they will stay connected unless the connector is selected and deleted.



It is also possible to have one node connect to more than one node. In the following example, the "Model" process delivers to both the "Texture" process and a "Rig" process:



Pipeline Workflow Automation

Repetition and daily components that make up a user's workflow can be made easier through automation of notifications, file/directory naming and triggering custom logic. Automations such as these can vary from simply

sending an email or automatically setting upstream and downstream task statuses to running custom Python scripts and tools to encode files, submit renders, generate previews, deliver files to clients, etc.

On the Workflow Editor's canvas, right-clicking on a node will bring up the context menu where the automation interfaces can be loaded into the lower half of the interface. These options include:

Show Properties	Loads the Node Properties window.
Show Triggers/Notifications	Loads the Triggers and Notifications setup Interface
Show File Naming	Loads the Directory and File naming convention setup Interface

Note

Each of the menu options are explained in the "Project Automation" section of the documentation.

Mouse and Keyboard Shortcuts

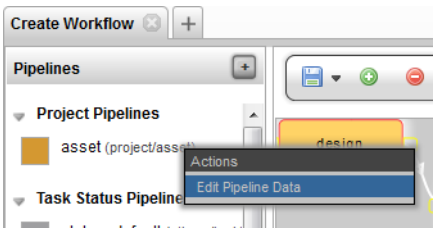
When the cursor is over the canvas in the pipeline editor, the following mouse and keyboard shortcuts are available:

LMB on a node	Select the node
LMB on the empty canvas space	Clears selection
LMB + Ctrl click on a node	Edits the name of the node
LMB + Shift click on a node	Add node to selection
LMB + drag on a node	Drags the node around the canvas
LMB + drag on the empty canvas space	Pans around the canvas
LMB + Shift + drag to form a selection box	Forms a selection box
LMB + Ctrl + drag to the left or the right	Zooms in or out on the canvas
DELETE	Deletes the selected node(s)

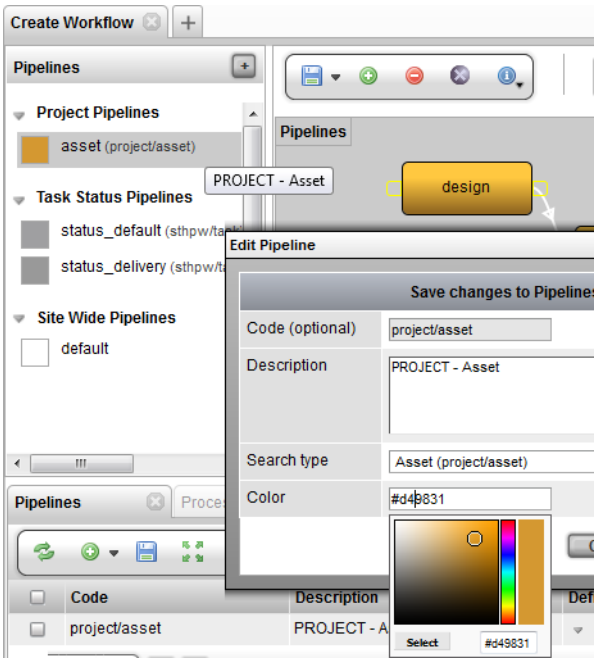
To Change Node Color

To change the node color, go to the **Workflow Editor -> sidebar**

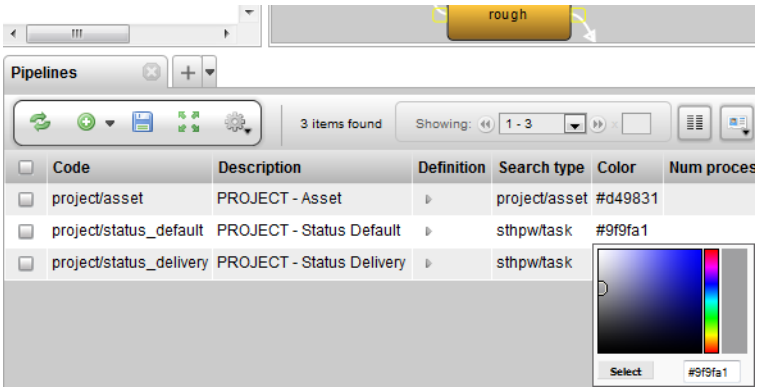
right click on the pipeline and select **Edit Pipeline Data**



Next, click on the color input field. A color swatch will pop-up. Select the new color for this pipeline from the color swatch.

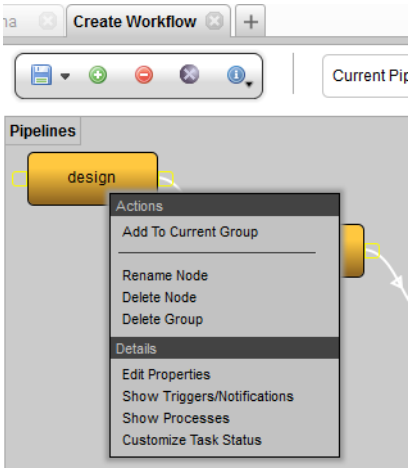


Another way to change the color is in the **Workflow Editor -> Pipelines tab (panel at the bottom)** click on the **color** column and pick the color from the color swatch.



Pipeline Node Context Menu Options

Right click on the pipeline node will display the following menu options:



Add To Current Group	Add the selected node to the current group
Rename Node	Rename the current selected node
Delete Node	Delete the current selected node
Delete Group	Delete the group for the current selected node
Edit Properties	Edit the properties for the current selected node
Show Triggers/Notifications	Display the triggers and notifications view in the bottom panel
Show Processes	Display the processes in the bottom panel
Customize Task Status	Create a custom task status pipeline for the process (refresh the Workflow Editor to see it added to the sidebar)

Advanced

Behind the scenes, the pipeline is an XML text document. This document is how TACTIC stores its representation of the pipeline structure of nodes and connections.

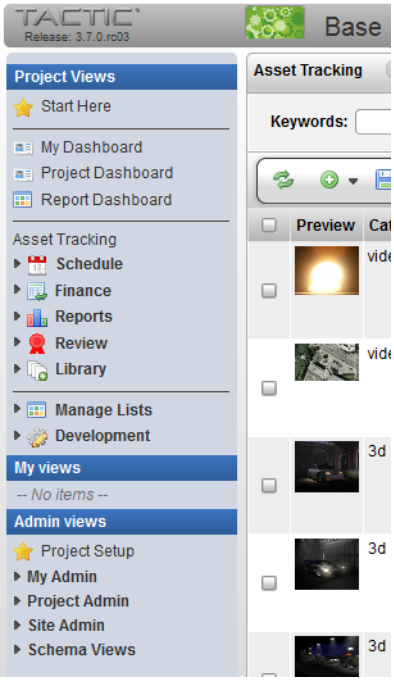
Although it is rare to need to manually edit the pipeline XML structure, it is available at the bottom of the Workflow Editor in the pipelines table in the **Data** column.

Below is an example of the pipeline XML for the **Model -> Rig / Texture** pipeline:

```
<?xml version='1.0' encoding='UTF-8'?>
<pipeline scale='100'>
  <process name='model' ypos='-95' xpos='-138'/>
  <process name='rig' color='blue' xpos='38' completion='80' task_pipeline='task' ypos='-165'/>
  <process name='texture' ypos='-51' xpos='42'/>
  <connect to='rig' from='model'/>
  <connect to='texture' from='model'/>
</pipeline>
```

Sidebar

Sidebar Configuration



Description

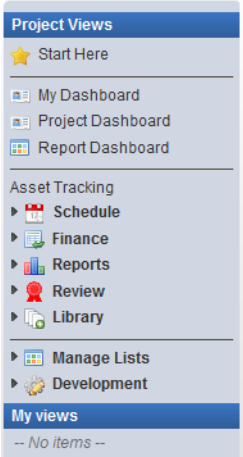
The TACTIC sidebar is the main menu system for navigating through the views of all TACTIC search types. The access rules applied to a specific account determine the contents of the sidebar as well as which views and search types are displayed when a user is logged in.

The items in the sidebar provide links to existing views of the different search types within a project. These views are built by your organization's production manager based on a selection of columns (properties), layouts (order and column width) and a search. If a search view is available, it provides a dynamic report based on the definition of the search.

Users at different levels can configure the sidebar to include only those views they need, or to include views that manage items and their relationships. For example, a user may want to set up a view where only the name, code and description of their own "storyboards" as in the view. Or, the user may set up a view where, for example, only those storyboards with a name containing the word "episode" and where child tasks have a status of "review" are in the view.

The sidebar is divided into three different categories, "Project Views", "My Views" and "Admin Views".

Project Views and My Views



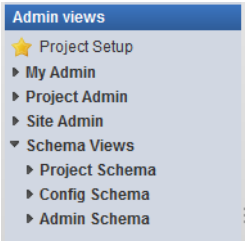
The Project Views provides a way to save project wide views that everyone across the entire project would want to see. It also has a manageable list of custom user views.

The Project Views can be defined by the person in the role of the project manager. Views can also be hidden from specific user groups.

My View contains a list of links to views that were created by the login user themselves. These usually are created by the user to cater to their own personal work flow.

Admin Views

Admin Views displays the project schema and the TACTIC system and administration schemas. Access to the Admin Views section of the sidebar is generally reserved for admin level users.

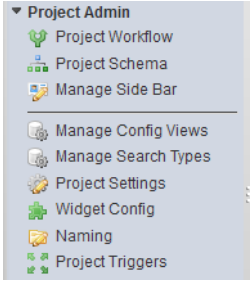


Project Setup - After initial creation of the project, this view contains the tools to setup the project: Create the Schema, Create Workflow, Manage the Side Bar.

My Admin - My Admin holds views that will allow the users to manage My Views and My Preferences.

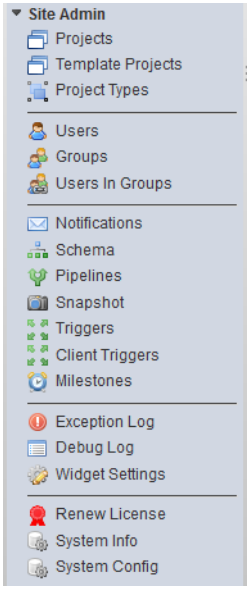
Manage My Views	Edits the views saved in the "My Views" section.
My Preference	Preferences include: Debug, Web Client Logging Level, Color Palette, Language, Quick Text for Note Sheet Thumbnail Size

Project Admin - Project specific views to manage the Project Workflow, Schema, Side Bar, Config Views, Search Types, Naming, Triggers.



Project Workflow	Workflow Editor for creating and editing processes and task status pipeline.
Project Schema	Schema Editor for creating and editing types and relationship connections.
Manage Side Bar	Edit the links and folders in the side bar.
Manager Config Views	Edit the asset view for each type.
Manage Search Types	Edit the columns for each type.
Project Settings	Set project settings such as use_icon_separation.
Widget Config	Look up and edit widget configuration by category, type, view name or key words in configuration.
Naming	Edit the automatic file naming and directory naming for checkin's.
Project Triggers	Edit the triggers by event, process, class name, script path, description, mode.

Site Admin - Site Administrator view to manage the Project, Templates, Types, Users, Groups, Users in Groups, Notifications, Schema, Pipelines, Snapshot, Triggers, Client Triggers, Milestones, Exception Log, Debug Log, Widget Settings, System Info, System Config



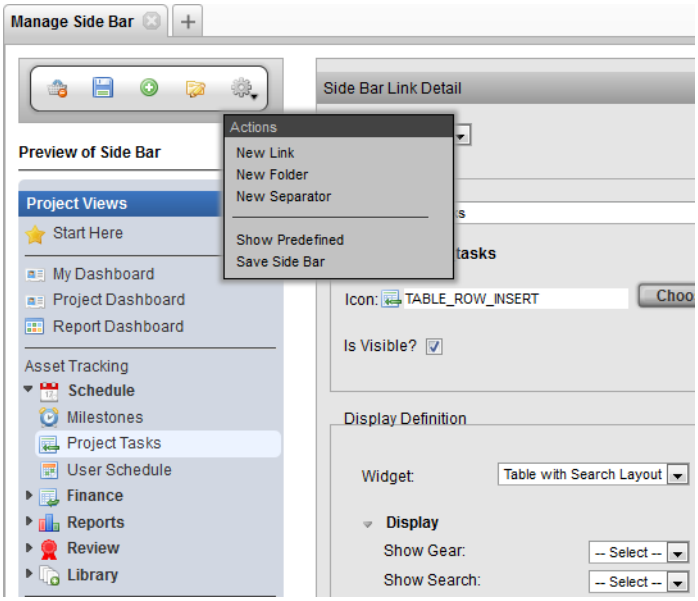
Projects	Edit the project info: preview, category, title, is_template, color scheme palette
Template Projects	Edit the project info for projects marked as template projects.
Project Types	Edit the project type info: dir naming cls, file naming cls, node naming cls, sObject naming cls, repo handler cls
Users	Edit the list of TACTIC users: preview, first name, last name, email, licence type

Groups	Edit the list of TACTIC groups: add group, users, description, global rules, access rules
Users in Groups	Drag and drop interface to assign users to one or more groups.
Notifications	Email notification configuration: email test, event, description, subject, message, group, rules, process, mail to,
Schema	Edit schema configuration, schema relationship connections.
Pipelines	Edit workflow pipelines: color, description, type, project code
Snapshot	Edit snapshots taken: preview, files, context, version, revision, login, description, is_current, is_latest
Triggers	Edit triggers: event, class name, script path, description, mode, project code
Client Triggers	Edit client triggers: event, callback, description
Milestones	Edit the list of milestone information: due date, lists tasks for that milestone, completion display
Exception Log	Lists all the exceptions when they occur: login, timestamp, class, message, stack traces.
Debug Log	Lists the debug log: category, level, message, timestamp, login
Widget Settings	Lists all the widgets and their settings.
Renew License	List TACTIC server license information and allow to browse for a new license: TACTIC version, who licensed to, max users, current users, expiry date.
System Info	Lists TACTIC server system information: server info, client, load balancing, mail server, asset folders, link test, python script test, clear side bar cache
System Config	Edit TACTIC Server configuration setup: Asset Management Setup, Mail Server, Look and Feel.

Schema Views - The schema view provides a hierarchical view of all of the search types in a project. The schema view can be a starting point when to create a project or user view.

The **Admin Schema** appears in the schema sidebar and is accessible by users in the admin group. The Admin Schema provides access to types at the project and server level (e.g. users, groups, triggers and pipelines).

Managing the Sidebar



Introduction

The sidebar is a menu of views created by the administrator to present information on the items in TACTIC. Examples of views include: Asset Tracking, User Schedules, Milestones, Project Tasks, Expenses List, Budget, File Usage Report, Burndown Report, etc.

The tool to manage the sidebar can be found under:

Admin Views -> Project Admin -> Manage Sidebar

The Manage Side Bar view is divided into 3 panels:

- **Tool Shelf** - Quick links to access sidebar tools.
- **Preview of Sidebar** - Re-arrange the elements in the sidebar by dragging and dropping.
- **Element detail** - First, select a link from the preview of the Side Bar. Then, this panel allows for editing of the link element's properties.

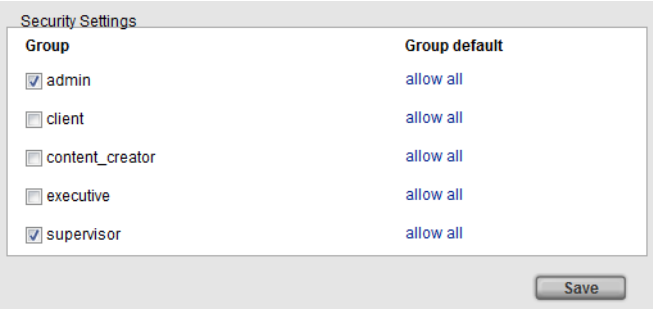
Preview of Side Bar

The Preview Side Bar panel allows for changes to be made and tested before committing to the actual sidebar. The following is a list of actions that can be carried out in the preview panel:

- Drag Links into folders
- Rearrange Links and Folders
- Rearrange separators
- Drag links and folders into the trash for removal
- Selection of a link or folder to edit the properties or security

Side Bar Link Detail

When editing the properties of a link, at the bottom of the Side Bar Link Detail panel are security settings. This section provides the opportunity to select which groups can see and the folder or the link. Changes to security to other users take effect when those users refresh their sidebar.



The security section provides a method of simplifying what is presented to team members of different user groups. The security settings behaves in a hierarchical manner. If a specific security is applied to a folder, its child links will inherit the same security setting. The security settings are applied at runtime (i.e. the child link does not have the security saved to it).

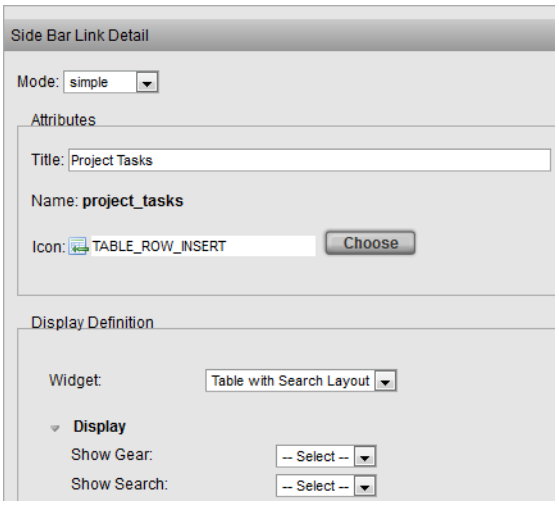
The Side Bar Link Detail panel allows for editing of Link properties in either simple or advanced mode.

After choosing the groups which should access a link, click the Save Definition to apply the security.

Note

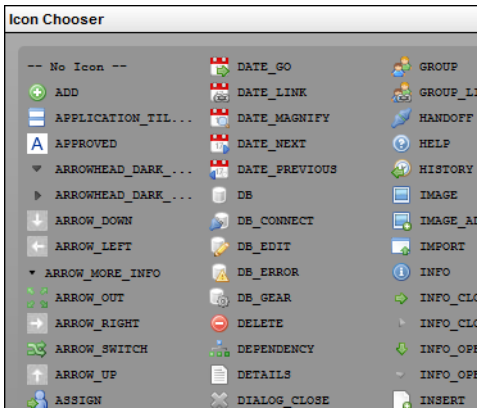
The security configuration settings are saved as XML access rules and can be found under: **Admin Views -> Site Admin -> Groups**

Simple Mode

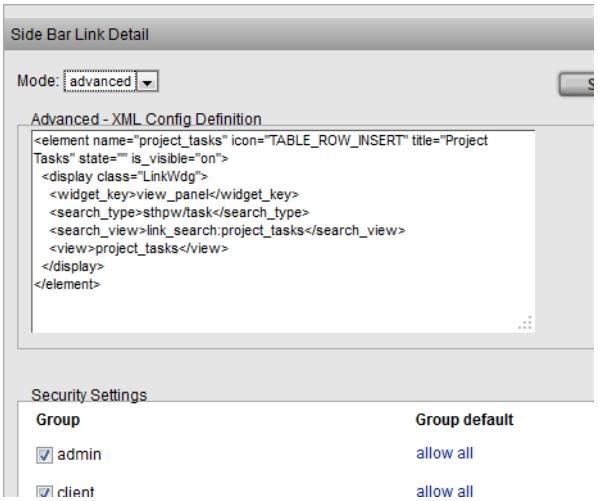


In simple mode, the following aspects can be edited:

- **Title:** The title of the Link.
- **Icon:** An icon can be selected in the interface below by clicking the **Choose Icon** button



Advanced Mode

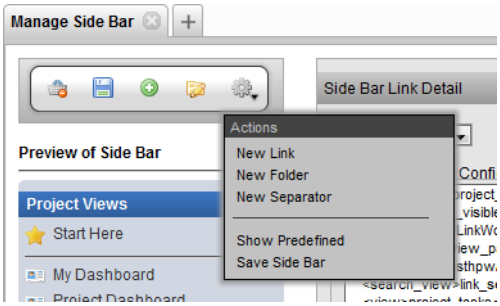


Advanced mode shows the raw XML used to configure the Link Element. The element is saved to the definition view for the sidebar.

Action Menu

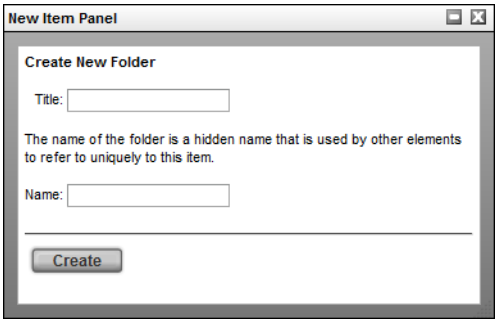
The project views manager **Action Menu** provides links to tools for managing the sidebar.

New Entry



The Add new link option adds a new link to the sidebar which is linked to the default table view for the chosen Search Type

New Folder

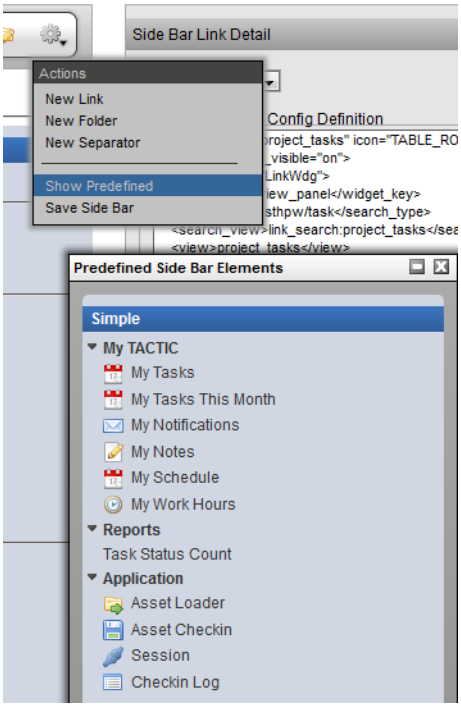


Adds a new folder to the sidebar. Items can be dragged into the new folder in the pop-up then saved or, Items can be dragged into the folder at anytime in the editor.

New Separator

Adds a new separator to the sidebar, these a can be used to further organize the folders and links

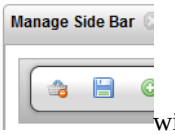
Add Predefined



The predefined views are delivered as part of a project module. These predefined project can be utilized to expedite the setup process.

If the project is a custom (simple) project, only the **My Tactic** views will be available.

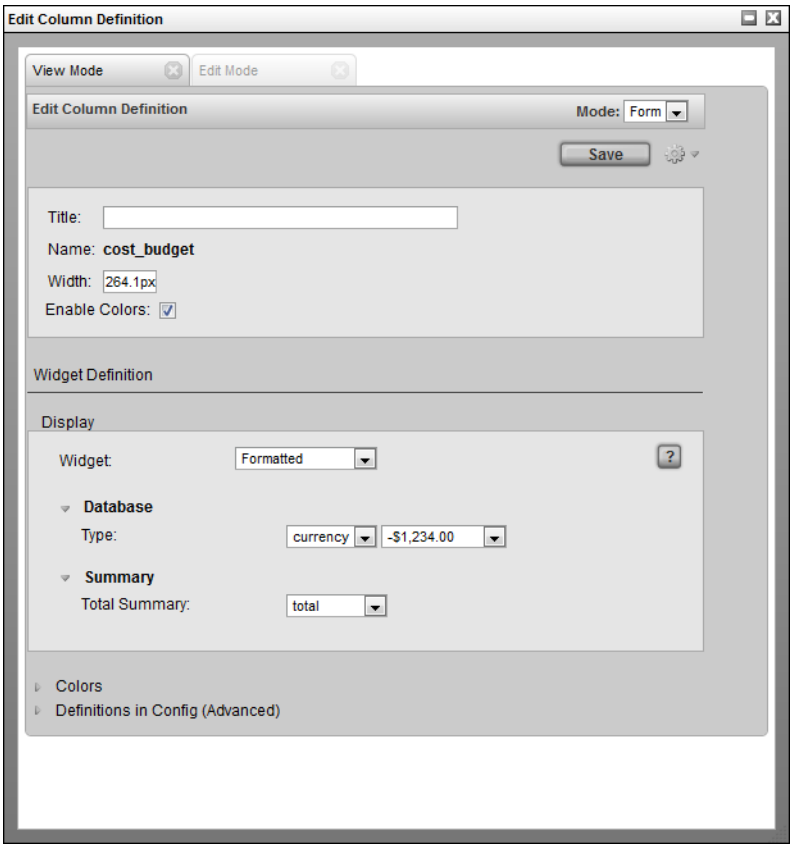
Save

Saves the current state of the Temp side bar. Clicking the save icon 

will also save the state.

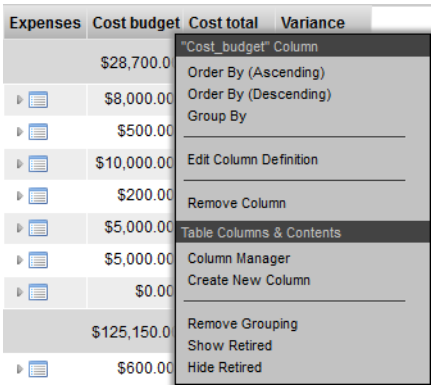
Element Definition Widget

Editing the configuration of widgets is an important part of configuring TACTIC. Widgets are drawing elements that display information on the TACTIC interface. Widgets can be configured for a wide variety of applications. The Element Definition Widget allows for the generic configuration of any widget using an easy to use interface directly in TACTIC.

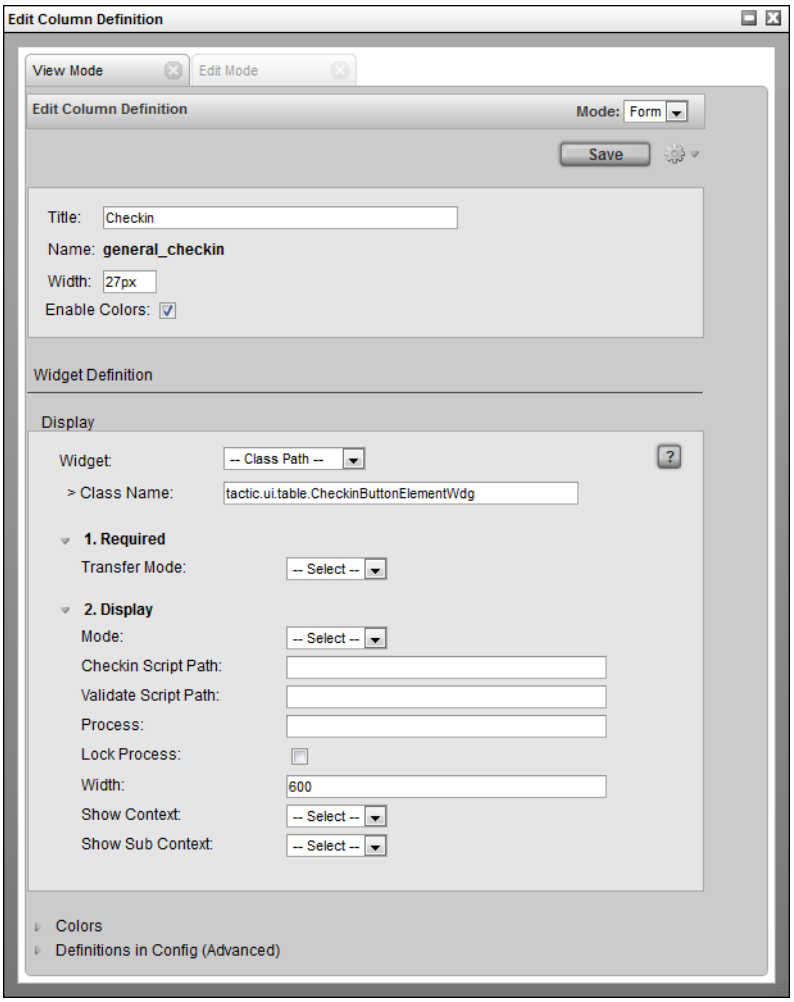


Accessing the Element Definition Widget

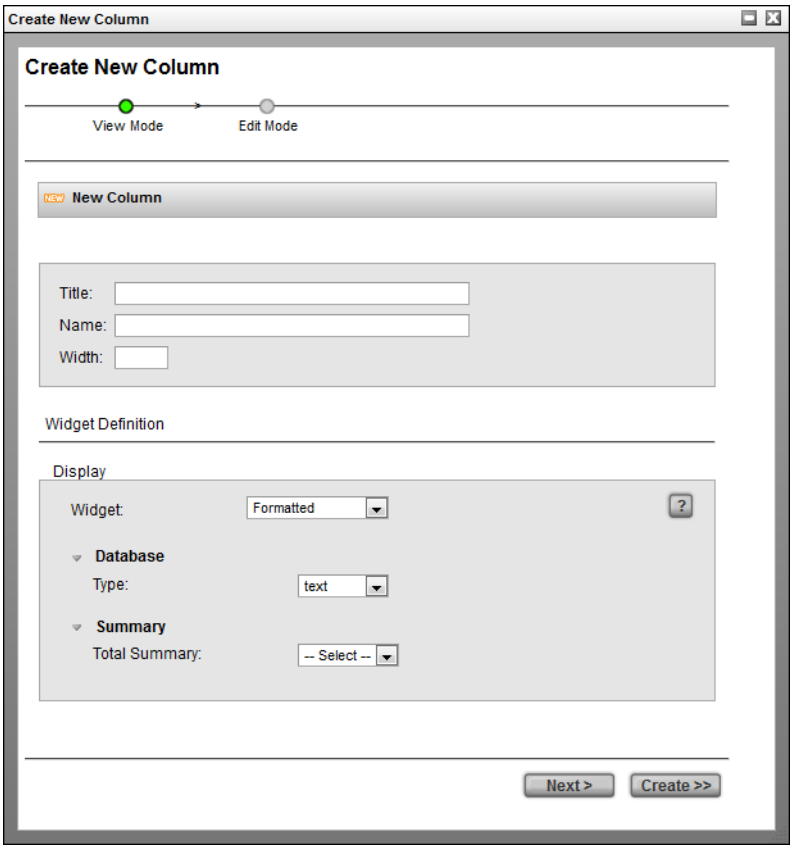
The Element Definition Widget can be used to edit existing widgets or to create entirely new ones. It can be accessed from a few locations. The common way to access the widget is by right clicking on the column header in the table. This will bring up the context menu:



Selecting **Edit Column Definition** opens a pop-up with the appropriate data filled in for the selected element.

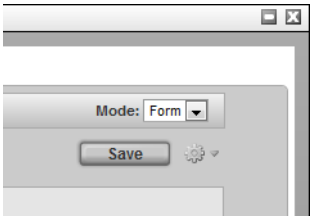


The "Create New Column" selection opens up an empty Element Definition pop-up so that new elements can be created.



Tool Bar

The tool bar can be found in the top right hand corner of this widget.



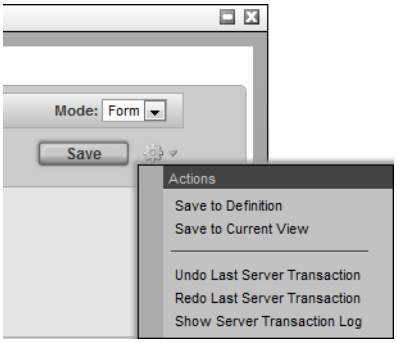
Mode: This can be set to either **Form** or **XML**. The **Form** selection is the default which displays the user interface for entering in attributes for this widget. The **XML** section is for advanced usage which allows direct control of the XML definition of the widget.

Save: This button will save the settings in the widget to the definition view.

Gear: Clicking on the gear menu will display a number of other options available as described in the next section.

Gear Menu

The gear menu contains a number of operations.



Save to Definition: This will save the current contents to the "definition" view. The definition view is a view where all widgets for a particular sType are defined.

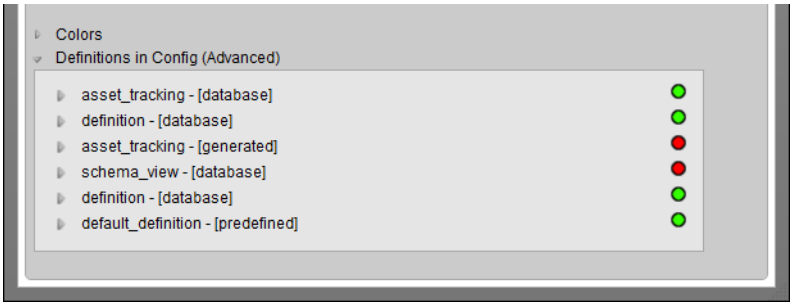
Save to Current View: Occasionally, it is desirable to save a view definition in the current view. This means it will not be available to other views, so this option should only be used if it is completely specific to this view.

The next 3 are the standard Undo/Redo/Show Server Transaction Log menu options for convenience.

Widget Sections

The Element Definition Widget is broken into sections:

1. **Attributes**: These are generic attributes to describe the overall drawing of this element. All elements possess these same attributes:
   - **Title**: The title to be displayed in the column header for this widget. If it is empty, then TACTIC will use the element **Name** for the title
   - **Name**: The name of the column in the database (autogenerated based on the title when creating a new column)
   - **Width**: The default width of the column
   - **Enable Colors**: Enables the cell colors as set under the Colors section.
2. **Display**: The display section defines the configuration of the widget that will be used to display data.
3. **Colors**: Set the color for the cell for specific cell values.
4. **Definitions in Config (Advanced)**: This is an advanced display and typically used to find out where in the config hierarchy a particular element definition is located.

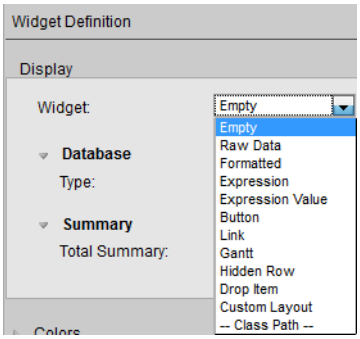


For those familiar with the widget config table, the underlying drawing mechanism does not change. XML defined widgets still drive the drawing engine, however, the Element Definition widget makes it much easier to create new elements and edit existing ones.

Display Section

Each element has uses a drawing widget which will determine how an element will draw itself. Each drawing widget contains a number of configuration attributes which alter the functionality of the widget. The attributes displayed depend on which widget is selected.

The following widgets are predefined in TACTIC and can be selected in the drop down.



Empty	Specifies that no widget is to be used.
Raw Data	Displays the data "as is" from the database.
Formatted	Formats the display of the data. eg. -($1,234.00)
Expression	Use a relative TACTIC Expression to calculate what to display for each item. One expression defines what to display for the entire column.
Expression Value	Allow each item to be able to have an absolute TACTIC Expression to calculate what to display. If there is an expression specified, the resulting value will be displayed in the cell.
Button	Display an icon button that runs a JavaScript action when clicked.
Link	Create a hyperlink button.
Gantt	Horizontal bar graph for dates.
Hidden Row	Toggle button to open a hidden row where another widget (element) is displayed. For example a Table, Custom Layout, Edit Panel etc.
Drop Item	Column where items from another view can be dropped.
Custom Layout	Use HTML to specify what to display. Supports TACTIC Expressions and MAKO.
-- Class Path --	The path to a fully qualified Python class for a custom widget.

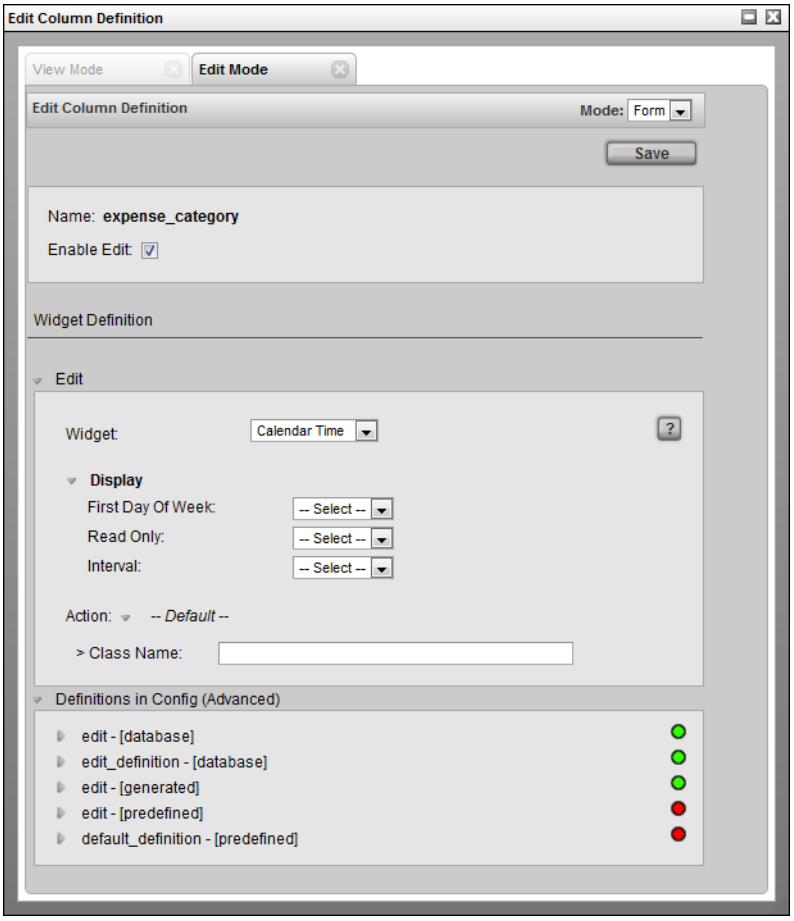
Full descriptions of each widget can be found in the widget documentation.

When "-- Class Path --" is selected, the input field to specify the path to a fully qualified python class appears. Arbitrary python classes can be specified to create complete custom widgets that are seamlessly integrated into TACTIC. Refer to the developer section below for details on how TACTIC creates the widget element interface.

When a widget or class path is selected, the available configuration attributes will be dynamically loaded.

Each widget will define its own attributes that will configure what gets displayed.

Edit Mode Tab

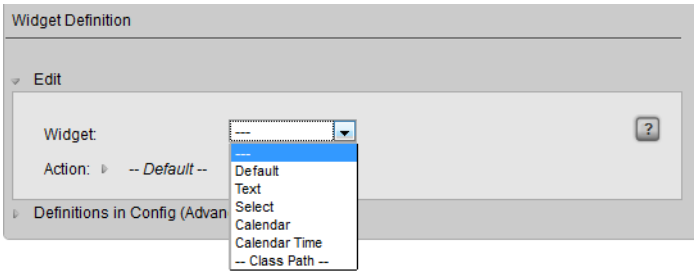


The edit section configures the edit-ability of this widget. It works very similarly to the display section except that the options are specific to edit inputs.

Edit Section

The widgets available here are:

Figure 1. Edit Mode Tab for the Element Definition Widget

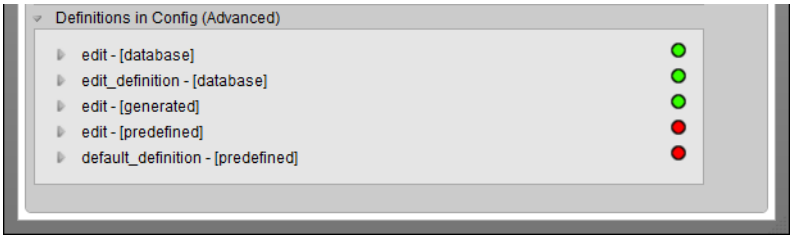


---	Specifies that no widget is to be used.
Default	Use the default input widget.
Text	Use the Text Widget as the input widget.
Select	Create a drop down selection menu and specify the selection options as the input widget.

Calendar	Use the Calendar Input Widget
Calendar Time	Use the Calendar and Time Input Widget
-- Class Path --	The path to a fully qualified Python class to a custom input widget.

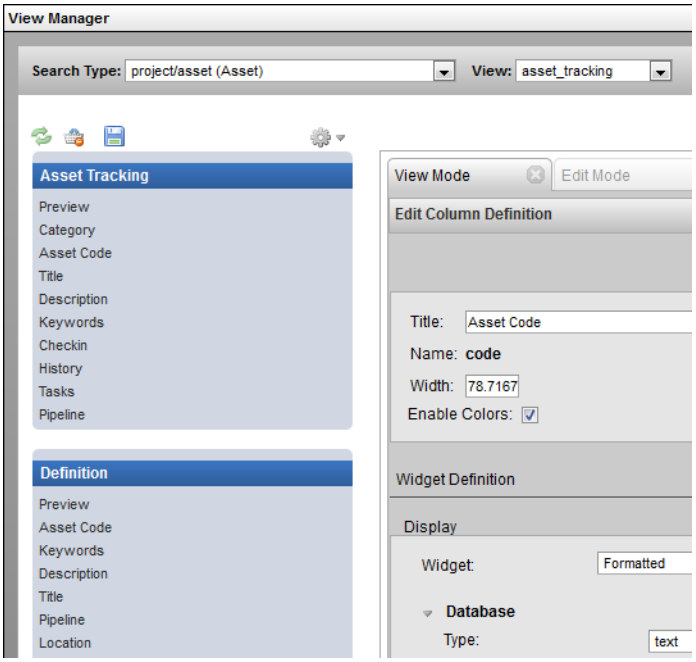
Advanced

This section displays the various definitions of this widget.



Views Configuration

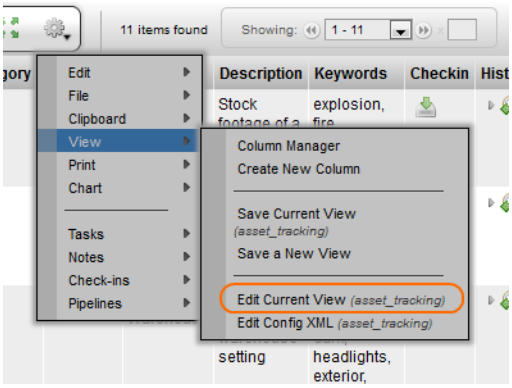
View Manager



Description

The View Manager provides the ability to create, edit and modify views.

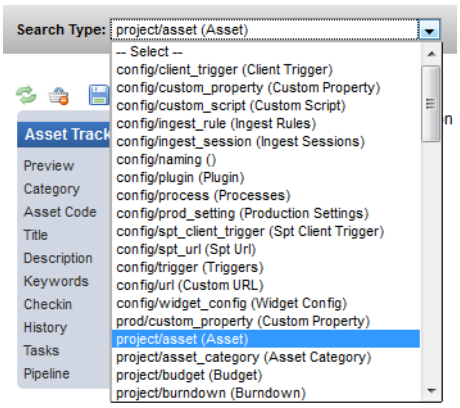
This tool can be opened to edit the current view under Gear Menu under: **View -> Edit Current View**

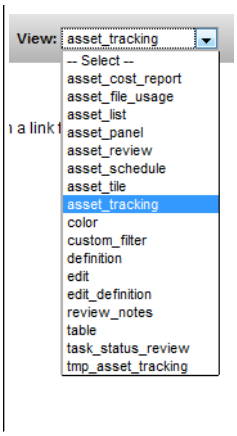


The tool can also be opened and will prompt to select a Search Type and View to open in the sidebar under: **Admin Views -> Project Admin -> Mange Config Views**.

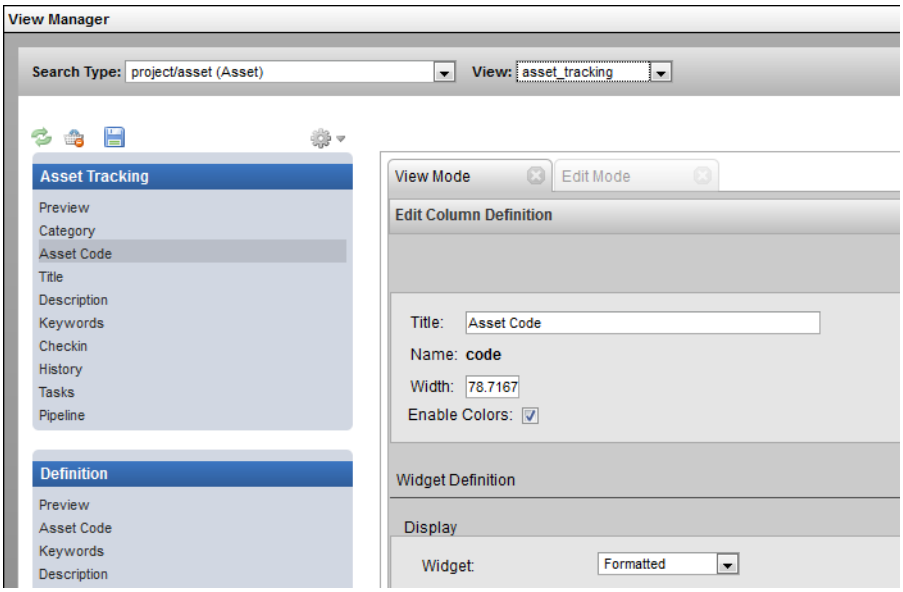
Implementation

In the View Manager, select the sType and View if not already selected for the current view. The drop down selection list provides access to quickly navigate through all the views available for the selected sType.

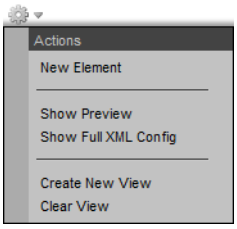




On the side panel on the left, select an element to open the Column Definition view. The properties for the column are displayed and can be modified.

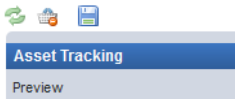


The gear menu in the View Manager provides the following options:



- **New Element** - Create and add a new custom element (column).
- **Show Preview** - Open a quick preview window of the current view.
- **Show Full XML Config** - Open an XML view of the current view in a new window.
- **Create New View** - Create a new view from the UI.
- **Clear View** - Remove all the elements from the view. *(not definition)*

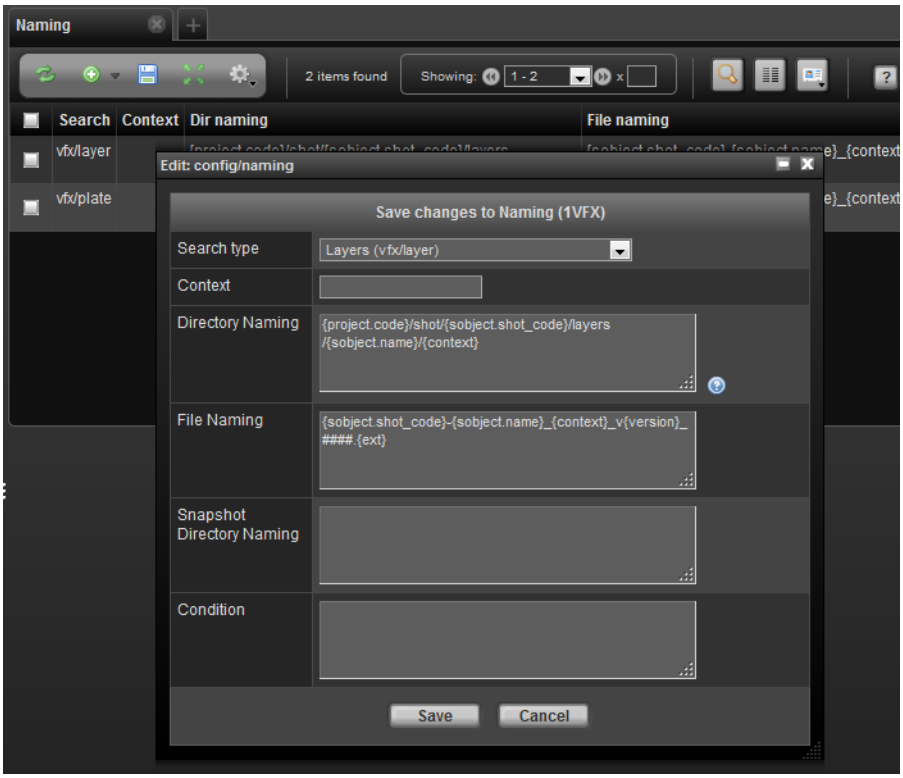
The **Refresh**, **Trash** and **Save** option buttons located to the left of the gear menu.



Naming Conventions

Project Automation - File Naming

Introduction



The naming page provides a way of controlling directory and file naming conventions through a simple expression language . Each naming entry can contain a directory naming and/or file naming. It is designed that so that a relatively non-technical user can create custom naming conventions for various sTypes.

The relative path expression language is a simple language, but in order to understand it you must know the basic components that generally make up a naming convention. The expression language allows access to almost any data in TACTIC. The keywords which are the most relevant in naming conventions are as follows:

parent:	The parent sObject to the current sObject defined by the search type attribute
sObject:	The actual sObject which is being referenced
snapshot:	The child snapshot generated or being referenced for the naming convention. This contains the context and version information.
file:	The file object pertinent to the check-in. This allows for reference to the original file name or extension.
login:	The user who is carrying out the check-in or check-out.
user:	The user who is carrying out the check-in or check-out.

The properties of these Search Objects are used to build up the naming convention.

A simple example of a relative path is as follows:

```
{project.code}/sequence/{parent.code}/{sobject.code}/{snapshot.context}/maya
```

which after translation could be translated into:

```
sample3d/sequence/XG/XG001/model/maya
```

This expression is explicit in that every variable scopes the object that the attribute comes from.

Another example is for a file name:

```
{sobject.code}_{snapshot.context}_v{snapshot.version}.{ext}
```

This can be translated into: `chr001_model_v001.ma` upon expansion.

The @GET(sobejct.code) or @GET(sobject.sthpw/snapshot.version) TACTIC expression language syntax can be used instead; however, the original keyword approach is more readable. In case you do decide to use the TEL syntax, here are the equivalents:

{basefile} = {$BASEFILE}

{ext} = {$EXT}

{project.code} = {$PROJECT}

{login} = {$LOGIN}

It is important to note that you can't fix TEL syntax with the keyword syntax in the same field of a naming entry.

3.0 Defaults

TACTIC will fall back on the default convention which would be represented by the following expression. These defaults are slightly different from previous versions:

```
Dir Naming: {project.code}/{search_type}/{sobject.code}/{context}
```

```
File Naming: {file.name}_{context}_v{version}.{ext}
```

Checking in the file **characterFile.ma** would create the following file and directory structure:

```
assets/sample3d/characters/chr001/publish/characterFile_v001.ma
```

Assumptions

Various assumptions have been made about which attributes are attached to which SObjects. It is often the case that the context is composed of a number of parts that are of interest to a naming convention.

For example, it is conceivable to have a context named: "model/hi". However, you may wish to break this up in a specific way in your naming convention. This is accomplished using [] notation common to many programming languages.

The following notation could be used for a directory using this: which could be translated into

```
Dir Naming: {code}/{context[0]}/maya/{context[1]}
```

```
Result: chr001/model/maya/hi
```

Inserting Naming Conventions

To insert a naming convention expression, load a **Naming** view and click the Insert button to insert a new set of expressions.

A Naming Convention sObject has specific properties which are used to either define the convention or act as conditions to define if the convention should be used for the given checkin. When Inserting, fill in the following options:

Search Type	The search_type to associate the naming convention to.
Snapshot Type	The snapshot type of the checkin to use as a condition (default for most TACTIC check-ins is 'file'. Default for directory checkin using the General Checkin Widget is 'dir'. Since this is a more advanced attribute, it is hidden by default)
Context	The snapshot context of the checkin to use as a condition (default checkin when there is no pipeline is 'publish')
Dir Naming	The expression entry for the directory naming convention
File Naming	The expression entry for the file naming convention
Sandbox Dir Naming	The expression entry for the user sandbox directory naming convention
Latest versionless	If set to true(checked), every time a check-in is created, a latest version of the main file will be created as well. If you want to always have a file that refers to the latest version of a model you can use this feature by calling it {sobject.code}_{context}_latest.{ext}. The latest version exists as copy by default. To make it a symlink, set the project setting versionless_mode to 'symlink'. Note: If this is checked, you need to have an entry in the naming table just for this versionless case in addition to the usual one for regular check-ins.
Current versionless	If set to true(checked), every time a check-in is created, a current version of the main file will be created as well. If you want to always have a file that refers to the latest version of a model you can use this feature by calling it {sobject.code}_{context}_latest.{ext}. The latest version exists as copy by default. To make it a symlink, set the project setting versionless_mode to 'symlink'. Note: If this is checked, you need to have an entry in the naming table just for this versionless case in addition to the usual one for regular check-ins.
Manual version	If set to true(checked), the incoming file name can dictate what the version of the checked-in snapshot appears as. For intance, if the incoming file name is dessert_v005.jpg, the version will appear as version 5. Another example is sun_V0030.0010.jpg. The version will appear as version 30. It tries to recognize the number immediately after the v or V in the file name. Zero or negative numbers are ignored. If such a version already exists, the check-in will throw an error
Condition	It can be set up so that differnet naming is adopted based on a particular attribute of the sObject. For instance, for the sType prod/asset, one can assign 2 naming entries. The default naming where the condition is left blank is adopted in most circumstance. The second special naming is adopted when the category attribute equals 'vehicle' by using this expression @GET(.category) =='vehicle'.

Examples

Example A

In the following example, the file is being checked in withe general 'publish' context

File: *characterFile.ma*

Checkin Context: publish

Desired output: sample3d/characters/character001/character001_publish_v001.ma:

```
Dir Naming:  {project.code}/{parent.title}/{sobject.code}
File Naming: {sobject.code}_{snapshot.context}_v{snapshot.version}.{ext}
```

Example B

In the following example, the shot RC_001_001 is part of the parent sequence RC_001 and is checked in with an 'animation' context. This will also use the short hand expressions

File: shotFile.ma

Checkin context: animation

Desired output: sample3d/shot/RC_001/RC_001_001/scenes/RC_001_001_animation_v001.ma

```
Dir Naming:  {project.code}/shot/{parent.code}/{sobject.code}/scenes

File Naming: {sobject.code}_{snapshot.context}_v{snapshot.version}.{ext}
```

Example C

In the following example, the desired file location is at the project folder level to accommodate a cross-project library of files.

File: artFile.png

Checkin context: publish

Desired output: general/art001/art001_publish_v001.png

```
Dir Naming: general/{sobject.code}

File Naming: {sobject.code}_{snapshot.context}_v(snapshot.version}.{ext}
```

Example D

In the following example, a context and subcontext are used for checking in to a final process for an art asset

File: artFileFinal.psd

Checkin context/subcontext: final/colourA

Desired Output: finals/art001/final/photoshop/colourA/art001_final_colourA_v001.psd

```
Dir Naming: finals/{sobject.code}/{snapshot.context[0]}/photoshop/{snapshot.context[1]}

File Naming:
 {sobject.code}_{snapshot.context[0]}_{snapshot.context[1]}_v{snapshot.version}.{ext}
```

Example E

In the following example, the shot RC_001_001 is part of the parent sequence RC_001 and is checked in with an 'animation' context. Also when a user checks out the sandbox, files should be organized into a user folder.

File: shotFile.ma

Checkin context: animation

Desired Repo output: sample3d/shot/RC_001/RC_001_001/scenes/RC_001_001_animation_v001.ma

Desired Sandbox output: sample3d/albert/shot/RC_001/RC_001_001/scenes/RC_001_001_animation_v001.ma

```
Dir Naming: {project.code}/shot/{parent.code}/{sobject.code}/scenes
```

```
Sandbox Dir Naming: {project.code}/{login.login}/shot/{parent.code}/{sobject.code}/scenes
```

```
File Naming: {sobject.code}_{snapshot.context}_v{snapshot.version}.{ext}
```

Example F

In the following example, the shot RC_001_001 is part of the parent sequence RC_001 and is checked in with an 'animation' context. Also when a user checks out the sandbox, files should be organized into a user folder. Since we also want to define a latest versionless, we need a second entry with the same information, and with the latest_versionless check-box checked. In this example we are putting the versionless file in the same directory, but you can put it in a different one if desired.

File: shotFile.ma

Checkin context: animation

Desired Repo output: sample3d/shot/RC_001/RC_001_001/scenes/RC_001_001_animation_v001.ma

Desired Repo latest versionless output: sample3d/shot/RC_001/RC_001_001/scenes/RC_001_001_animation_latest.ma

Desired Sandbox output: sample3d/albert/shot/RC_001/RC_001_001/scenes/RC_001_001_animation_v001.ma

Entry 1

```
Dir Naming: {project.code}/shot/{parent.code}/{sobject.code}/scenes
```

```
Sandbox Dir Naming: {project.code}/{login.login}/shot/{parent.code}/{sobject.code}/scenes
```

```
File Naming: {sobject.code}_{snapshot.context}_v{snapshot.version}.{ext}
```

Entry 2

```
Dir Naming: {project.code}/shot/{parent.code}/{sobject.code}/scenes
```

```
Sandbox Dir Naming: {project.code}/{login.login}/shot/{parent.code}/{sobject.code}/scenes
```

```
File Naming: {sobject.code}_{snapshot.context}_latest.{ext}
```

```
Latest Versionless: true
```

Example G

In the following example, a texture file is checked in under shot RC_001_001. Also when a user checks out the sandbox, files should be organized into a user folder. Since we also want to define a current versionless, we need a second entry with the same information, and with the current_versionless check-box checked. In this example, we are retaining the original file name

File: shotFile.ma

Checkin context: animation

Desired Repo output: sample3d/shot/RC_001/RC_001_001/texture/my_tree_texture.jpg

Desired Repo latest versionless output: sample3d/shot/RC_001/RC_001_001/texture/my_tree_texture_CURRENT.jpg

Desired Sandbox output: sample3d/albert/shot/RC_001/RC_001_001/scenes/my_tree_texture.jpg

Entry 1

```
Dir Naming: {project.code}/shot/{parent.code}/{sobject.code}/textures

Sandbox Dir Naming: {project.code}/{login.login}/shot/{parent.code}/{sobject.code}/textures

File Naming: {basefile}.{ext}
```

Entry 2

```
Dir Naming: {project.code}/shot/{parent.code}/{sobject.code}/textures

Sandbox Dir Naming: {project.code}/{login.login}/shot/{parent.code}/{sobject.code}/textures

File Naming: {basefile}_CURRENT.{ext}

Current Versionless: true
```

Example H

In the following example, asset file name is made up of asset_code, context, and version by default. If the asset's category is '2D' , we will add this category as a suffix to the name

File: my_chr001.jpg

Checkin context: model

Desired Repo output: sample3d/asset/chr001/chr001_model_v001.jpg

Second Desired Repo output: sample3d/asset/chr003/chr003_model_v001_2D.jpg

Desired Sandbox output: sample3d/dan/asset/chr001/my_chr001.jpg

Entry 1

```
Dir Naming: {project.code}/asset/{sobject.code}
Sandbox Dir Naming: {project.code}/{login.login}/asset/{sobject.code}
File Naming: {sobject.code}_{context}_{version}.{ext}
```

Entry 2

```
Dir Naming: {project.code}/asset/{sobject.code}
Sandbox Dir Naming: {project.code}/{login.login}/asset/{sobject.code}
File Naming: {sobject.code}_{context}_{version}_{sobject.category}.{ext}
Condition: @GET(.category)=='2D'
```

Example I - keywords: snapshot and file

The following is an example of the proper way to use the special keywords **snapshot** and **file** in an expression to retrieve the snapshot and file object for a check-in:

```
{@GET(snapshot.context)}
{@GET(file.type)}
```

Notice that the syntax for these particular expressions deviates from the syntax of typical TACTIC expressions.

In the example below, {$PROJECT} is used to replace {project.code}.

Keep in mind that it not possible to filter down to the exact snapshot through the @GET(sthpw/snapshot['context','anim']) approach.

Below is an example using these expressions of a file being checked in with the general 'publish' context:

File: *source_art_v0001.jpg*

Checkin Context: publish

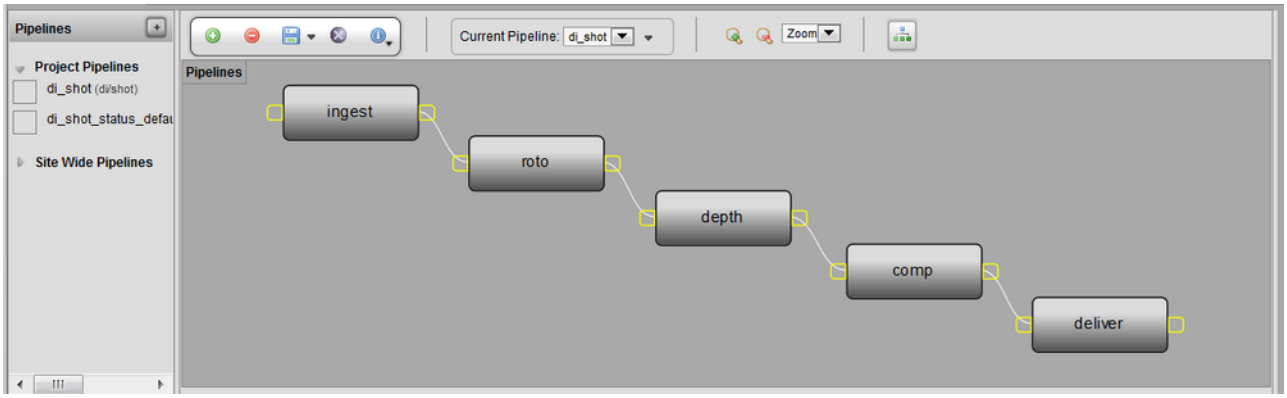
Desired output: sample3d/chr/chr001/publish

```
Dir Naming:  {$PROJECT}/chr/{@GET(.code)}/{@GET(snapshot.context)}
File Naming: source_art_v{@GET(snapshot.context).version,%04.d}.{@GET(file.type)}
```

Project Workflow Introduction

The **pipeline** defines all of the processes and deliverables required in the creation of an item, and is the central entity that ties the whole production together. In simple terms, a pipeline is simply a definition of workflow processes.

In TACTIC, the pipeline workflow is used to lay out the steps which a particular Searchable Type (sType) needs to follow as it flows through its processes. Searchable Objects (sObjects) in TACTIC are by nature like static containers or place holders that contain everything that relates to them. When this content needs to be organized, managed and produced as a part of a workflow, this is where a pipeline comes into play. A Pipeline allows for this item "container" to be placed on a digital conveyor belt where it will stop at each process and will be filled with Tasks, Notes, Snapshots (checked in files) and more. On top of this, the contents are tagged with this process allowing for a separate history representing each stop on the conveyor belt.



Workflow Concepts

At the very beginning, a clear diagram should be defined of the processes, their relationships to each other and the deliverables between each of the processes.

Each **sType** can have its own pipeline(s), so you create different pipelines for different sTypes.

The best approach to building a pipeline is to start simple, processes can always be added later. Overall, the general concept for defining the processes in a pipeline, is to break down each place where separate file versioning, tasks and notes will need to be generated and tracked

Simply put: you have a series of processes, named in any way you wish. Each process is often represented by a task assigned to a user which needs to be worked on. The completion of a process occurs when this task complete (often indicated by setting it to a final status ie approved, complete etc). While this task is in progress, files will be checked in and notes will be tracked as the process is worked on.

Status

Each process also contains a set of possible "statuses" which which typically a used by the tasks. For example the "model" process can have a possible status of (Waiting, Ready, In Progress, Revise, Review, Approved, Client approved). Each status helps track the current state of the process and are often the spawning point of automatically setting downstream and upstream process status, sending automated notifications and using the python triggers, etc.

Subcontext (advanced)

At times there may need to be a further breakdown within a process, this can be achieved through using a **subcontext**. Sub-contexts are used for departments to check-in and track work and progress internally without other departments

needing to interact withe the content. For example, in the case of a VFX process in a shot pipeline, someone checking in files may be able to add extra specification (subcontext) such as VFX/dynamics, VFX/water, or VFX/smoke. Another situation is where multiple variation of something need to be checked in. For example you may need a "red" and a "blue" design so the subcontexts for a design checkin would be design/red and desing/blue.

Settings

Modify Project Settings

Use the Project Settings tab to control the various options that exist within TACTIC. Most project settings are defined to work with the widgets that use them and when defined, the "Type" property specifies how the "Value" property is delivered to the widget. The different types of settings are outlined below.

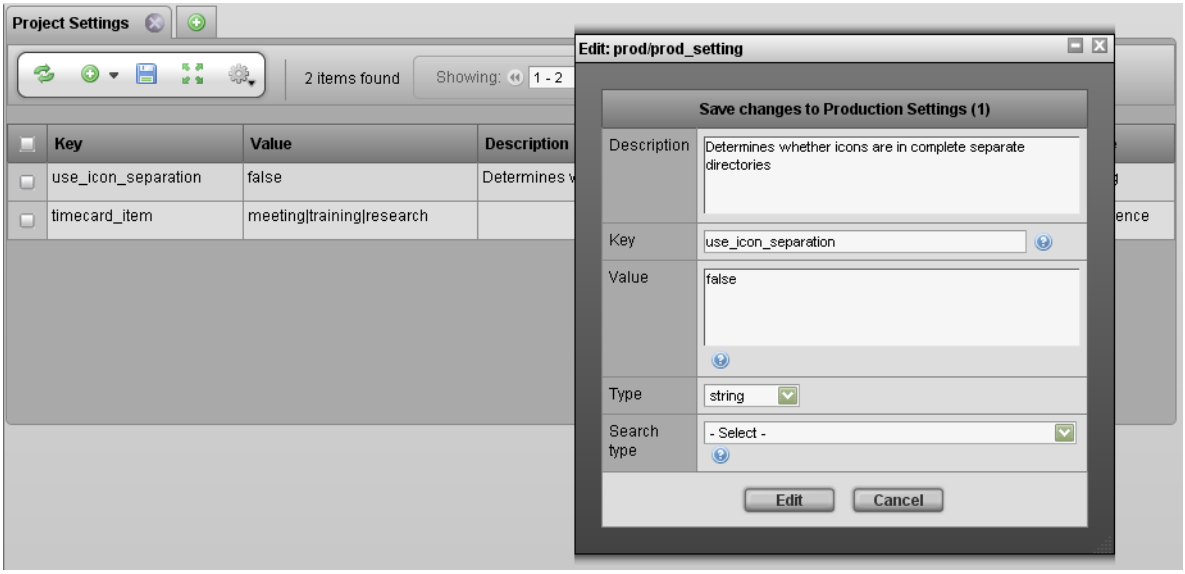
- String - A single string argument, this may be a true/false to define how a widget is displayed (i.e. hide a specific aspect)
- Sequence - A sequence of items to choose from for entry (i.e. review|revise|complete)
- Map - A map is a sequence in which each item has a label and name assignment. This accommodates a separation between what is shown in a drop-down [name] vs what is entered into the database [label] (i.e. rvw:Review|rev:Revise|com:Complete)

Note

The overall items in the sequence or map are separated with a pipe '|' character and the value:label are separated with a Colin ':' character

Most settings are types of "sequences" that appear in TACTIC as a drop-down. For example, the notes_dailies_context setting defines the different kinds of context you can use in entering notes for dailies.

To insert a project setting, click the insert button in the view.



The properties for the project setting search type are listed below:

Description	A description of the purpose of the project settings
Key	This property serves as the 'code' identifier of the setting
Value	The Values for the setting.
Type	The 'type' of data definition of the value data. This tells the widget begin delivered the value how the data should be displayed.

Search Type	A search type to associate the project setting to, this help further filter the settings.

Any widgets that make use of a new project setting not yet defined in TACTIC will prompt the user to insert data for a new project setting.

Commonly Project Setting Examples

This table lists the some commonly used project settings in TACTIC.

key	Description	Default Value	Type
flash_output_format	Output format for a Flash project, swf OR mov	swf	string
fps	Frames per second	24	string
handle_texture_dependency	Handle texture dependencies when performing a checkin in a 3D application. Accepted values are 'true', 'false', 'optional'.	true	string
notes_dailies_context	Notes context used in the Dailies tab	anim|effects|model	sequence
shot_hierarchy	Shot hierarchy structure. Accepted values are 'episode_sequence' or 'sequence'.	sequence	string
bin_label	Label for a Bin	n/a	string
bin_type	Type of Bin	n/a	string
web_file_size	dimension of the web type file size, e.g. 640x480	640x480	string
thumbnail_protocol	The protocol through which the link of a thumbnail is opened. Accepted values are 'file', 'http'.	http	string
versionless_mode	The global setting for copy or symlink for versionless check-ins	copy	string

Advanced Configuration

Advanced Schema Configuration

When creating a search type, the "Search Type" property defines the project schema (project_namespace) and name for the search type. For example, if your current project is called **media** then adding a new search type named "artwork" into the interface will automatically generate "media/artwork" and it will be added to the media project's schema

Schema XML Structure

```
<?xml version='1.0' encoding='UTF-8'?>
<schema>
  <search_type name='media/training_videos'/>
  <search_type name='media/script'/>
  <connect to='media/script' type='hierarchy' from='media/training_videos'/>
  <search_type name='media/fonts'/>
  <search_type name='media/artwork'/>
</schema>
```

To add a new search for a different schema, all that is required is an explicit definition of the full Search Type "<project_namespace>/<name>".

For example to add an "artwork" search type in the "media" namespace, you would define the search type as "media/artwork". The specific schema information will be added to your current project only.

Advanced Access Rule Configuration

XML Access Rules

Security access rules are XML documents attached to user groups. Each user's security clearance is based in a union of all of the rules coming from the groups they are planned to. Admin users have no rules because, by default, everything is allowed in TACTIC.

In the Groups table, the Access Rules column shows the XML rules which are automatically generated by either the TACTIC Manage Security tool or by manual editing for very specific and custom control. The default security version for TACTIC 3.7 is security version 1 and for TACTIC 3.8 is security version 2. In general, for security version 1, the access level is ranked like this from bottom up: deny < view < edit < allow. For security version 2: the access level is: view < edit < allow (where "allow" provides the most permissions).

The security version is specified in the TACTIC config file as follows:

```
<security>
    <version>2</version>
</security>
```

Note

If no security version is specified for TACTIC 3.7, the default is security version 1. For a fresh install of TACTIC 3.8 (i.e. not an upgrade), the default is security version 2.

If upgrading from TACTIC 3.7 to 3.8, the security version will remain set at version 1 (which is the default for 3.7, since the security version is not specified).

Security Version 1

The following section applies to Security Version 1.

Access rules for the 'Client' group: In this sample, any users in the Client group can see only a project named "game" and cannot access the side_bar items (which have been denied).

```
<?xml version='1.0' encoding='UTF-8'?>
<rules>
  <rule key='admin' access='deny' group='side_bar'/>
  <rule key='site_admin' access='deny' group='side_bar'/>
  <rule key='Level_Manage' access='deny' group='side_bar'/>
  <rule key='levels_folder' access='deny' group='side_bar'/>
  <rule key='characters_folder' access='deny' group='side_bar'/>
  <rule key='myTactic_folder' access='deny' group='side_bar'/>
  <rule group='project' access='deny'/>
  <rule group='project" key="game" access='allow'/>
  </rules>
```

Global Rules

The global rules can be configured in the Groups page or the Groups List tab in the Manage Security page. Here is a list of the existing rules:

```
  Interface View Permissions
    'view_side_bar', 'title': 'View Side Bar', 'default': 'allow'
    'view_site_admin', 'title': 'View Site Admin'
    'view_script_editor', 'title': 'View Script Editor'
    'side_bar_schema', 'title': 'View Side Bar Schema'
    'view_save_my_view', 'title': 'View and Save My Views', 'default': 'allow'
    'view_private_notes', 'title': 'View Private Notes'
    'view_column_manager', 'title': 'View Column Manager'
    'view_template_projects', 'title': 'View Template Projects', 'default': 'deny'
```

```
Data Manipuation Permissions
  'create_projects', 'title': 'Create Projects'
  'export_all_csv', 'title': 'Export All CSV'
  'import_csv', 'title': 'Import CSV'
  'retire_delete', 'title': 'Retire and Delete'
```

Project level Examples

XML Examples

The following are examples of different access rules which can be used to customize group access rules. Make sure the <rule/> tag is a child of the <rules/> tag.

Project level Examples

1. This rule denies access to all projects except for the "sample3d" project. In the following example, the "default" project is a home page the user needs to use to select projects. Because it is part of the group, you must explicitly allow viewing access to this default project when you deny access to all projects. It is also needed for XML-RPC communication to the client computer.

```
<rules>
  <rule group='project' default='deny'/>
  <rule group='project' key='sample3d' access='allow'/>
  <rule group='project' key='default' access='view'/>
</rules>
```

2. All projects can be viewed by default.

```
<rule group='project' default='view'/>
```

Search Type level Examples

1. The layer search type is not viewable in all projects

```
<rule group='sobject' search_type='prod/layer' project='*' access='deny'/>
or
<rule group='sobject' search_type='prod/layer' access='deny'/>
```

2. The task search type is not viewable in project 'sample3d'. Note that this is not the same as tasks assigned in project 'sample3d' is not viewable. It merely restricts the user's ability to view tasks when he is in a particular project.

```
<rule group='sobject' search_type='sthpw/task' project='sample3d' access='deny'/>
```

3. The note search type is not viewable in project 'sample3d'.

```
<rule group='sobject' search_type='sthpw/note' project='sample3d' access='deny'/>
```

4. The note search type is not editable in project 'sample3d'. This currently only applies to the main TableLayoutWdg used in most places. NoteSheetWdg and DiscussionWdg which also handle note entry are not bound by this rule.

```
<rule group='sobject' search_type='sthpw/note' project='sample3d' access='view'/>
```

5. The shot search type is editable in project 'sample3d'

```
<rule group='sobject' search_type='prod/shot' project='sample3d' access='edit'/>
```

6. The 3d Asset search type from project 'sample3d' is not viewable. This is also applicable when you are in a different project looking at a task in 'sample3d' and the parent of which happens to be a 3d Asset in project 'sample3d'.

```
<rule group='sobject' search_type='prod/asset' project='sample3d' access='deny'/>
```

User Interface Column level Examples

These examples affect the display of the columns in different views

1. The 3d Asset search type's code and description are not editable in all projects

```
<rule group='element' search_type='prod/asset' key='code' access='view'/>
<rule group='element' search_type='prod/asset' key='description' access='view'/>
```

2. The Shot search type's status is not editable in the 'sample3d' project

```
<rule group='element' search_type='prod/shot' key='status' access='view' project='sample3d/>
```

3. The Shot search type's description is not visible in the 'sample3d' project

```
<rule group='element' search_type='prod/shot' key='description' access='deny'
 project='sample3d/>
```

Database level Examples

While Search Type and Search Type Column level examples affect the display of the main TableLayoutWdg and EditWdg, the following database level examples are applied when attempts are made to edit or insert data into the database. It can block even server or client API script access to the databases.

1. This rule prevents the display and writing of the "is_current" field for snapshots found in the Checkin History.

   DEPRECATED and UNSUPPORTED format:

```
  <rule group='sobject|column' key='sthpw/snapshot|is_current' access='deny'/>
```

   New format:

```
  <rule group='sobject_column' search_type='sthpw/snapshot' column='is_current'
 access='deny'/>
```

2. The description column for Shot cannot be edited in any widget or any script. It is view only.

```
 <rule group='sobject_column' column='description'  search_type='prod/shot' access='view'/>
```

3. The status column for Task cannot be edited in any widget or any script. It is view only.

```
<rule group='sobject_column' column='status'  search_type='sthpw/task' access='view'/>
```

4. The custom sType project/asset is view-only and not editable by a particular group.

```
<rule group='sobject' search_type='project/asset' access='view'/>
```

5. The custom sType project/asset is not viewable by a particular group. The search result will always come up empty.

```
<rule group='sobject' search_type='project/asset' access='deny'/>
```

Search Filter Examples

To enforce what can be searched or filtered out in any situation like script query or UI view, search_filter rules can be applied. The 'access' attribute is not required here.

1. This rule filters out tasks belonging to project "pacman" and "sample3d". Notice you don't need "access" here.

```
 <rule group='search_filter' column='project_code' value='pacman' op='!=' search_type='sthpw/
task' />
 <rule group='search_filter' column='project_code' value='sample3d' op='!='
 search_type='sthpw/task' />
```

2. This rule retrieves task that is assigned to the current login user, applicable when navigating in project 'sample3d'. Notice the 'value' attribute can accept an expression. $LOGIN and $PROJECT are also supported.

```
 <rule column='assigned' value='@GET(login.login)' search_type='sthpw/task' op='='
 group='search_filter' project='sample3d'/>
    or
 <rule column='assigned' value='$LOGIN' search_type='sthpw/task' op='=' group='search_filter'
 project='sample3d'/>
```

Miscellaneous Examples

1. This rule blocks a user from seeing the options "Approved" and "Complete" in the task status drop-down

```
  <rule access='deny' key='Complete' category='process_select'/>
  <rule access='deny' key='Approved' category='process_select'/>
```

Security Version 2

The following are examples of how to fine tune control access to TACTIC in security version 2. (Some of these example may be repeated in security version 1 above.)

Project Access:

This allows the group to see the project with the code "toy_factory".

```
<rules>
  <rule group="project" code="toy_factory" access="allow"/>
</rules>
```

Link Access:

This allows the group to see the link named "block_set_list" in the project named "toy_factory".

```
<rules>
  <rule group="project" code="toy_factory" access="allow"/>
  <rule group="link" element="block_set_list" project="toy_factory" access="allow"/>
</rules>
```

sType (Search Type) Access:

This allows the group

to see the sType "toy_factory/design" in the project named "toy_factory".

to hide the sType "sthpw/task" in the project named "toy_factory".

```
<rules>
  <rule group="project" code="toy_factory" access="allow"/>
  <rule group="link" element="block_set_list" project="toy_factory" access="allow"/>
 <rule group="search_type" code="toy_factory/design" project="toy_factory" access="allow"/>
  <rule group="search_type" code="sthpw/task" project="toy_factory" access="deny"/>
</rules>
```

Process Access:

This allows the group to see the process named "packaging" in the project named "toy_factory".

```
<rules>
  <rule group="project" code="toy_factory" access="allow"/>
  <rule group="link" element="block_set_list" project="toy_factory" access="allow"/>
  <rule group="search_type" code="toy_factory/design" project="toy_factory" access="allow"/>
  <rule group="search_type" code="sthpw/task" project="toy_factory" access="deny"/>
  <rule group="process" process="packaging" project="toy_factory" access="allow"/>
</rules>
```

User Interface Column level Access:

This allows the group to:

-view the element 'description'

-edit the element 'name'

```
<rules>
  <rule group="project" code="toy_factory" access="allow"/>
  <rule group="link" element="block_set_list" project="toy_factory" access="allow"/>
  <rule group="search_type" code="toy_factory/design" project="toy_factory" access="allow"/>
  <rule group="search_type" code="sthpw/task" project="toy_factory" access="deny"/>
  <rule group="process" process="packaging" project="toy_factory" access="allow"/>
 <rule group="element" key="description" search_type="toy_factory/block_set" access="view"/>
  <rule group="element" key="name" search_type="toy_factory/block_set" access="edit"/>
</rules>
```

Remove Projects

There is no user interface in TACTIC to remove a project. This is because the complete removal of a project has some pretty significant consequences. When a project is created, a number of elements are created. These are listed below.

Note

This task may need to be carried out by the Tactic System Admin as it involves manually accessing both the Tactic File system and the Tactic Database

In all of the following examples, <project_code> represents the code of the project when the project was created.

- A database called <project_code>
- An assets directory in <tactic_asset_dir>
- Entry in the project table

A complete removal of a project should be handled with care. This is most often desirably when a project has been created in properly. It is one of the few operations that is not undo-able in TACTIC, so it is recommended to be careful when proceeding with the following steps. It is also recommended that a complete backup of TACTIC is performed before carrying out this process.

Remove the project directory

```
cd <project_install_dir>/sites
rm -rf <project_code>
```

Remove the database

```
psql -U postgres sthpw
drop database "<project_code>";
```

Remove the assets directory

```
cd <project_asset_dir>
rm -rf <project_code>
```

Remove the entry in the projects table in the database

```
psql -U postgres sthpw
delete from project where code='<project_code>';
```

Remove connected entities in the sthpw database;

In this process, Tactic may not allow removing a particular project due to there being child tasks, notes, snapshots, files, wdg_settings etc. If Tactic denies revoval because, for example there is a connection in the file table, you will need to do the following

```
delete from file where project_code='<project_code>';
delete from snapshot where project_code='<project_code>';
delete from task where project_code='<project_code>';
delete from note where project_code='<project_code>';
delete from wdg_settings where project_code='<project_code>';
delete from pref_setting where project_code='<project_code>';
```

Advanced Automation

TACTIC Event System Introduction

The TACTIC Event System is built into the base transactional system in Tactic's core. Every transaction which occurs in Tactic can fire an event which in turn, can be used to execute a trigger or notification.

These events can be incorporated to automate specific processes that are often repetitive. At the simplest level, there are interfaces that help prepare and configure these aspects but, it is good to understand how they work. Overall, there are 2 levels that these events can be configured. The first is using the predefined event options provided in the Project Workflow or Project Schema interfaces and the second in the low level database events.

Predefined Events

The following list of events are the events provided in the Project Workflow interface. For more information in setting up Notifications and Triggers with this interface, please refer to **Project Automation - Triggers** and **Project Automation - Notifications**

A task Status is Changed	When the status of a task is changed. Further options are provided allowing for selection.
A new note is added	When a new note (sthpw/note) is added to the project.
A task is assigned	When a task is assigned to a user.
Files are checked in	When files are checked in to an SObject.
Files are checked out	When files are checked out from an SObject.
Custom event	Allows for calling of an event using the raw Database Events.

Raw Database Events

Below is the list of the database level events. These events are run regardless of how they are called (interface, api, external integration etc)

done	Executed each time a transaction completes
insert	Executed each time a Search Object has been inserted.
update	Executed each time a Search Object has been updated.
change	Executed each time a Search Object has changed. This combines the events insert, update and delete.
retire	Executed each time a Search Object has been retired.
delete	Executed each time a Search Object has been deleted.
checkin	Executed each time a checkin occurs for a Search Object
checkout	Executed each time a checkout occurs for a Search Object
timed	Executed on a timed interval. This is only supported for triggers.

For example, in a transaction where the status of a task is being changed, an association to this event can be made with the following notation:

```
update|sthpw/task|assigned
```

The notation can consist of 3 sections although only the event is required.

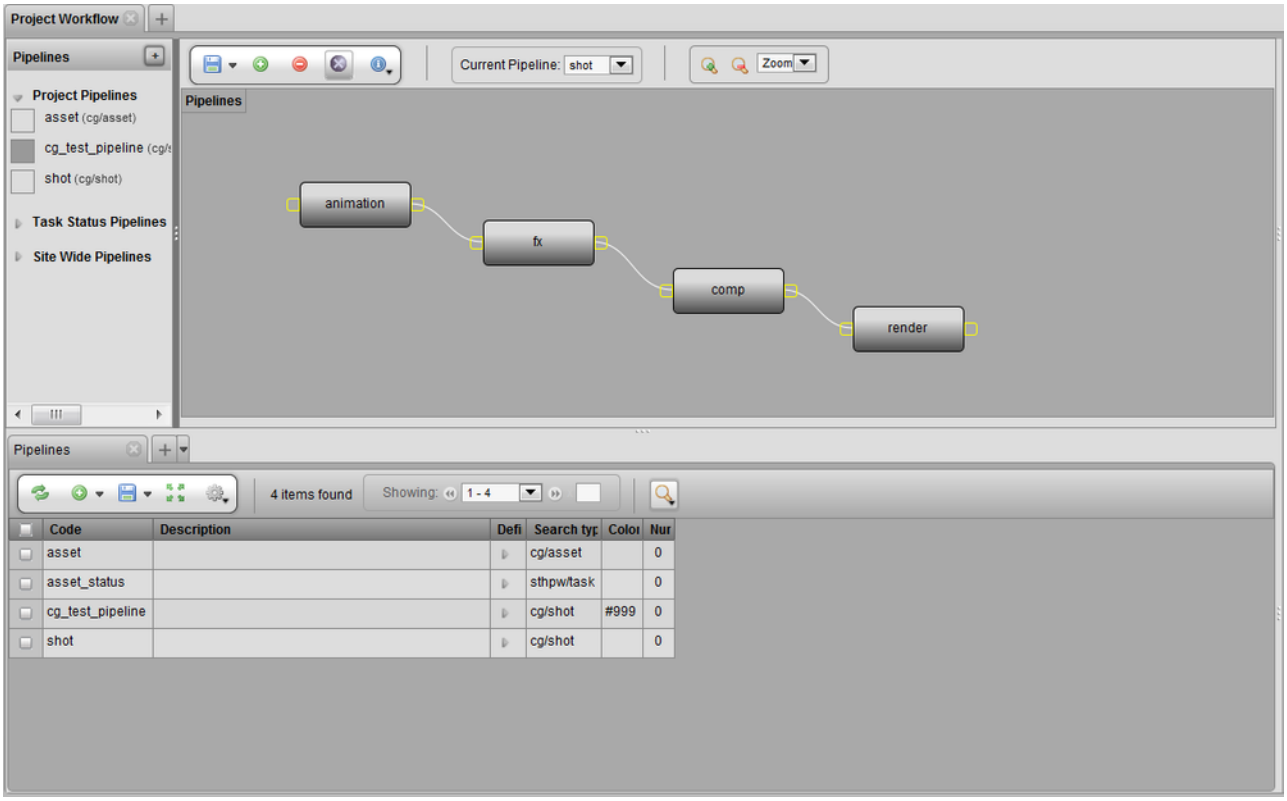
```
<Event>|<SType>|<Column>
```

Event	The raw database event.
SType	The Searchable Type (SType) the event is occurring for.
Column	The Column that was changed in the SType.

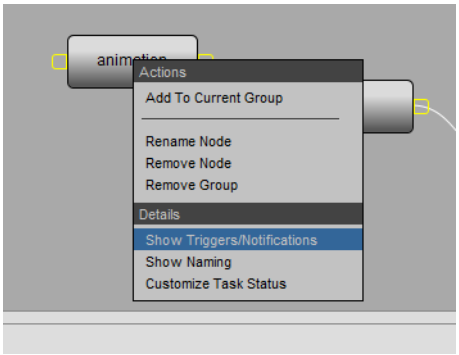
Project Automation - Triggers

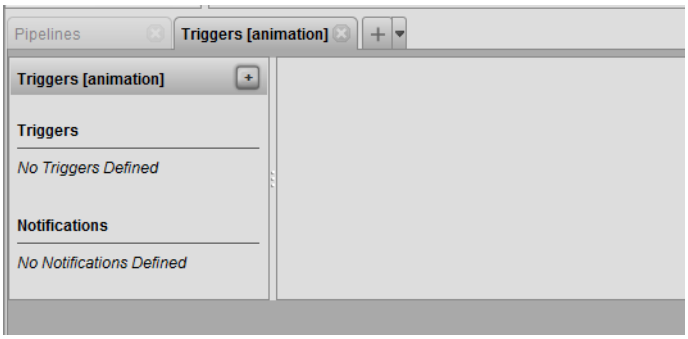
Triggers are events that are called upon a transaction to automate workflow. These triggers can be accessed within the Project Workflow view.

Admin Viwes -> Project Admin -> Project Workflow

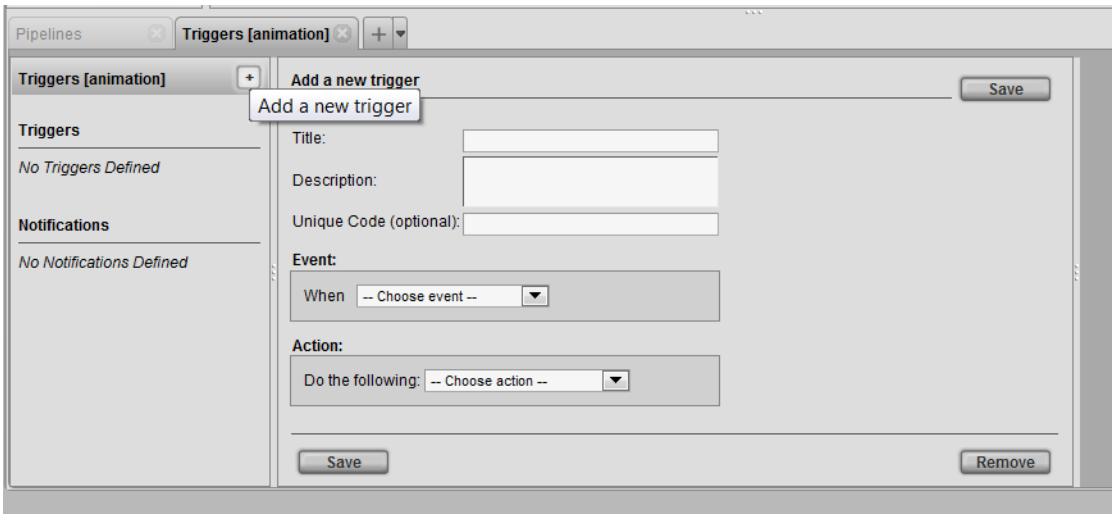


Each process in the pipeline can have their own triggers. Right clicking on a process and choosing **show notification/ trigger** option will open a tab to define a trigger for that specific process.





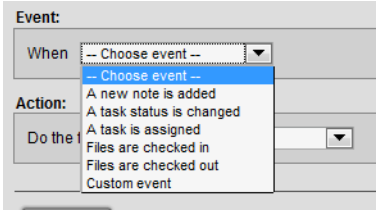
The trigger tab will also display the assigned process. Clicking the insert button will open the trigger UI.



Title	Title of the trigger.
Description	Description of the trigger.
Unique Code	
Event	Drop down list of trigger events. This event is where the trigger is called.
Action	The action is what the event will

EVENT

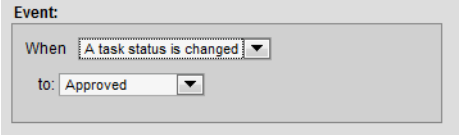
The Events drop down list provides a wide range of different triggers.



Depending on the trigger the Event box may show additional options.

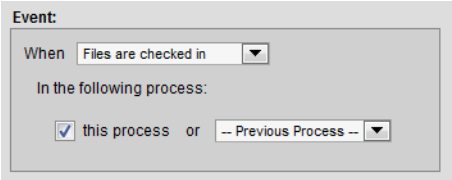
A new note is added - This Event will be called when a new note is inserted into the process.

A task status is changed - This event will be called when a status is changed. The event box also gives a additional option to choose specific status.



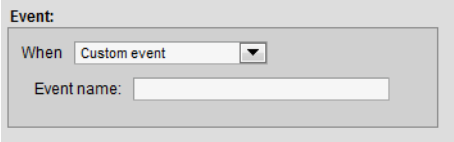
A task is assigned - This event will be called when any task in the specified process is assigned.

Files are checked in - This event will be called when there is a checkin to the specified trigger. This event also gives a additional option to choose what process the action will effect.



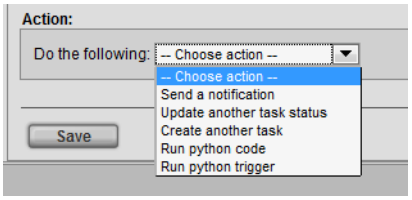
Files are checked out - This event will be called when there is a checkout to the specified trigger.

Cusom Event -



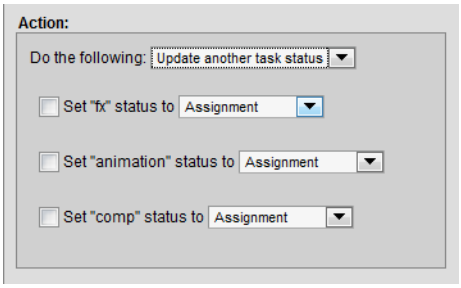
ACTION

The Action drop down list provides a series of predifined actions that work with the above events.

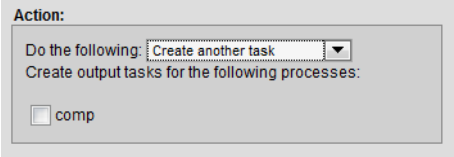


Send a notification - See project automation notification docs.

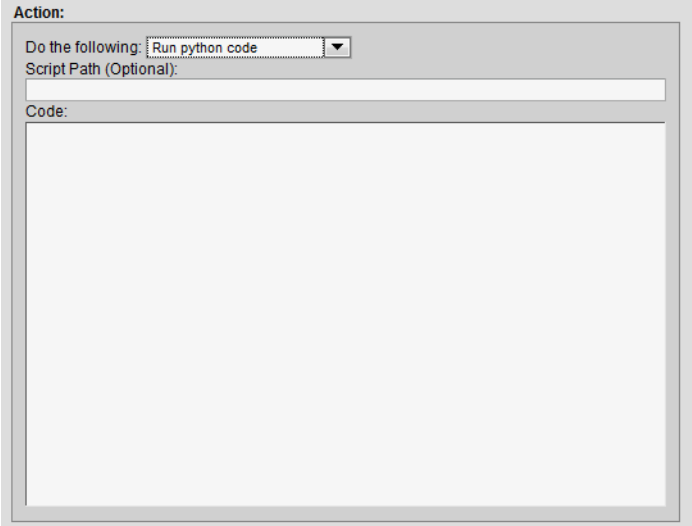
Update another task status - This action will update a task status. This action also opens additional options to update status of current and other process of the pipeline as well as the option of status.



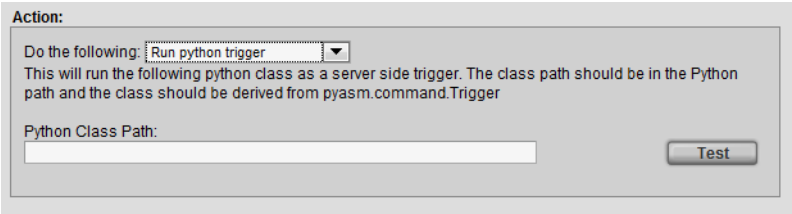
Create another task - This Action will create a task upon event. This action also opens additional options to choose from creating a task in current or next process.



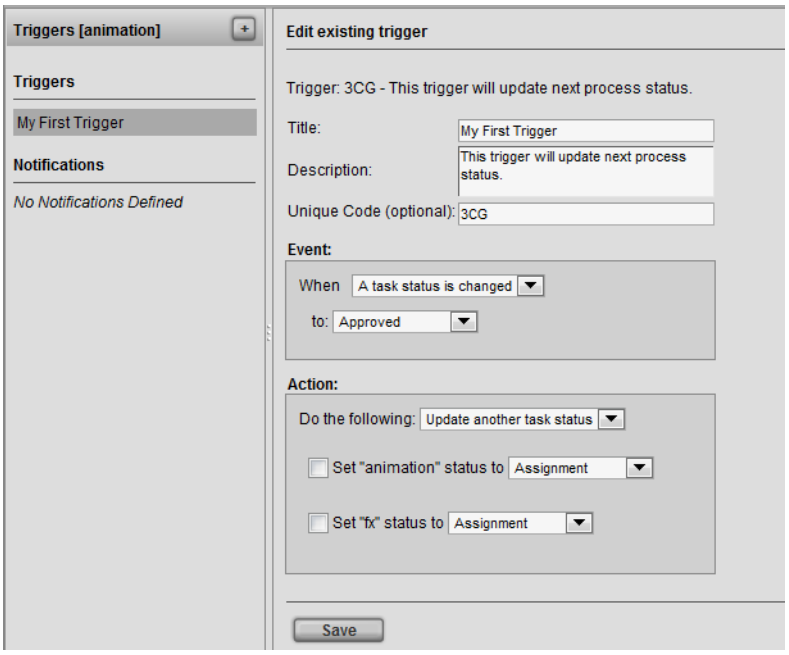
Run python code - This Action will run python code upon event. The action box opens additional options to name and insert a python code.



Run python trigger - This Action will run python trigger upon event. The action box opens additional option to insert the name of the trigger. These can be custom written scripts that can be called from Tactic's API.



When satisfied with the options set to run a trigger, the trigger must be saved in order to be applied. When the trigger is saved the title of the trigger will appear benieth the triggers panel.



There are no limitations of how many triggers you can have. Each process can have multiple triggers applied.

Project Automation - Notifications

Description

Notifications are sent to inform the user that a particular transaction or event has occurred.

They are stored in a notification_log which can be found under **Admin Views -> Site Admin -> Notifications**.

Notifications present information reported by transactions. They usually include what items are created or updated in addition to a description of the command. Below is an example of a notification:

	Project code	Login	Command cls	Subject	Message	Timestamp
	support	admin		TACTIC Ticket 49 Has been updated.	southpaw TACTIC Ticket 49 has been updated. Subject: I want to know how to plant trees Summary: Do I need a shovel or a rake? Status: open Please do not reply to this e-mail. To reply or to make further comments, please login to the Ticketing system @ http://tickets.southpawtech.com/tactic	Sep 21, 2009
	support	admin		TACTIC Ticket 68	admin TACTIC Ticket 68 has been updated.	Sep 21, 2009

With the mail server setting set up properly (set in the TACTIC Config file), TACTIC can send out email notifications to users.

Subject: TACTIC Ticket 49 Has been updated.
From: Southpaw Support
Reply-To: Southpaw Support
Date: 4:36 PM
To: Southpaw Support , Support Moderator , Boris Lai

```
southpaw TACTIC Ticket 49 has been updated.

Subject: I want to know how to plant trees

Summary: Do I need a shovel or a rake?

Status: open

Please do not reply to this e-mail.  To reply or to make further comments, please login to the
Ticketing system @ http://tickets.southpawtech.com/tactic
```

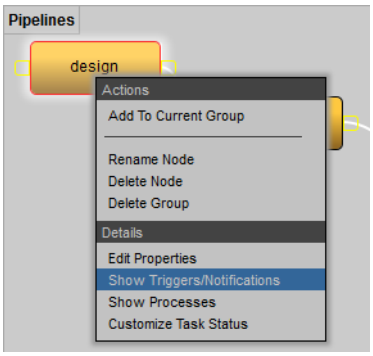
Implementation

There are 2 perspectives to work from when configuring notifications in TACTIC.

- **Project Workflow** - Notifications can be set up per process in a pipeline which are used to automate the pipeline/workflow
- **Project Schema** - Notifications can be set up at a simpler level where any of the Raw Database events can be used to trigger a notification regardless of process.

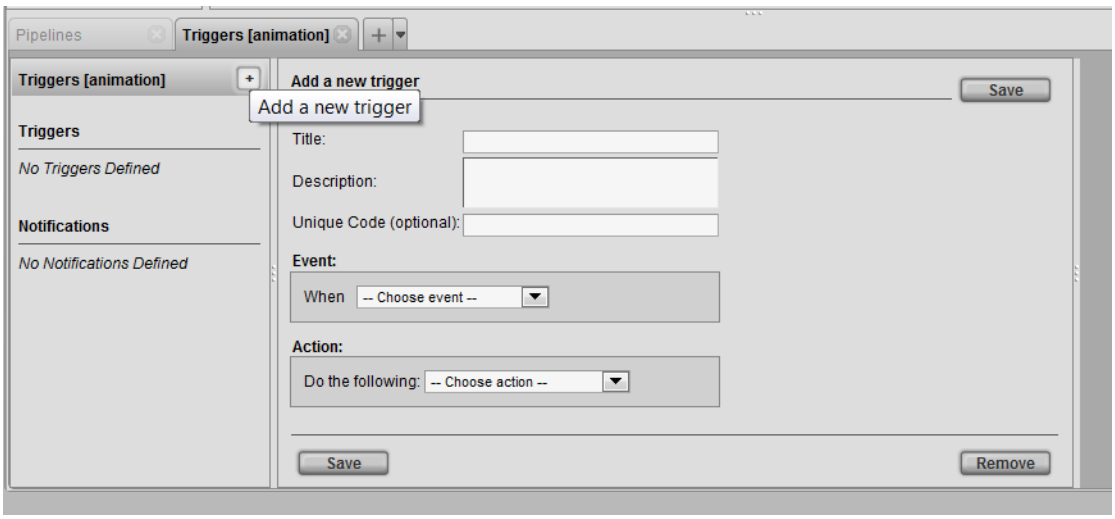
Project Workflow

In the Workflow Editor, right click on a process and choose **show notification/trigger** to open a tab to define a trigger for that particular process.



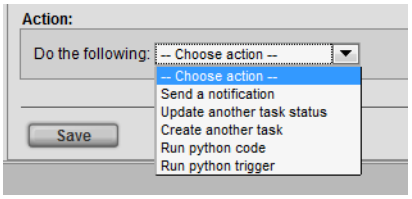
This will open a new Triggers tab in the panel at the bottom for the assigned process.

Click the [+] button to insert a trigger. This will open the trigger/notification UI.



Notifications and Triggers work together in many ways. A notification is defined as an Action. To send a notification, an event must occur.

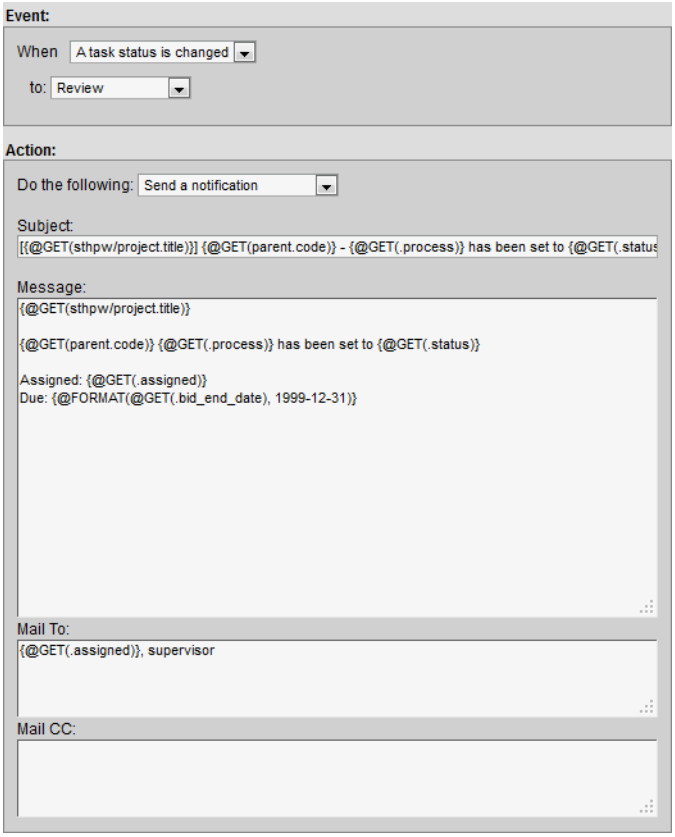
In the Action drop down list **Send a Notification** must be selected.



Send a Notification - This action will send a notification. The action box will open additional options to insert a subject and message.

Example 1

Below is an example of a notification being sent on the event when a task status is changed to review:



The **Mail To:** and **Mail CC:** input fields accepts the following types of input:

Email - Capability to add regular emails allows to send personal email addresses e.g. joe@my_email.com

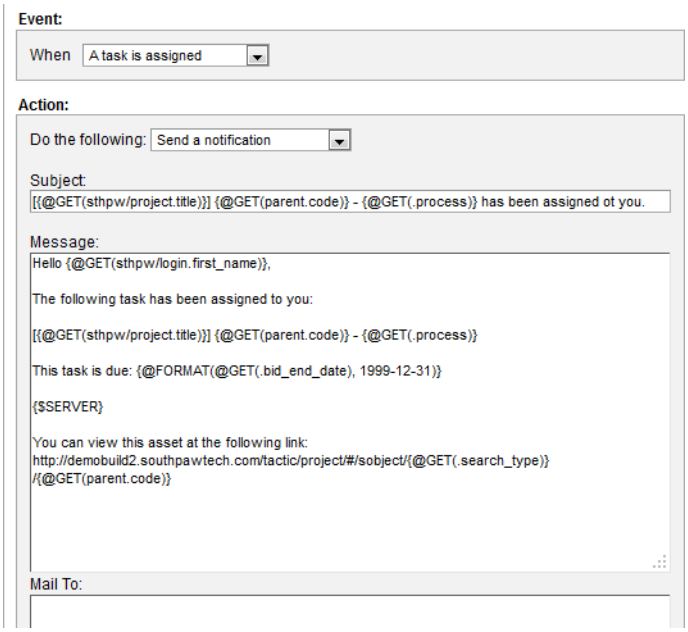
Group - Capabilty to send to a group of users in TACTIC e.g. Supervisor

Expression - Capabilty to insert expressions that specifies a user in TACTIC. All expressions are identified by curly brackets "{}". e.g. {@SOBJECT(sthpw/login)}

Send a Notification - This action will send a notification. The action box will open additional options to insert a subject and message.

Example 2

Below is an example which uses more expressions for a notification being sent whenever a task is assigned.



Project Schema

All notification configurations can be accessed through **Admin Views -> Site Admin-> Notifications**

	Email test	Event	Subject	Message	Process
	Email Test	update|sthpw/task|status	TACTIC: {@GET(parent.code)} [{@GET(.context)}] Updated to {@GET(.status)}	{@GET(parent.code)} has been updated. ---------- Task:{@GET(.context)} Assigned: {@GET(.assigned)} Status: {@GET(.status)}	

If there is no process specified, then the notification will be triggered regardless of process. e.g. during a snapshot or a checkin

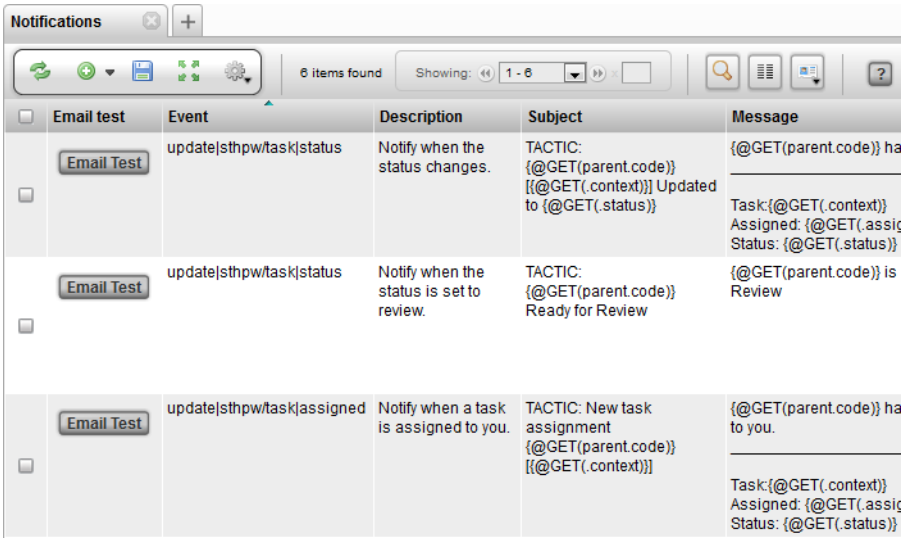
Advanced Notification Setup

The notification view is located in the TACTIC Sidebar under:

Site Admin -> Notifications

This can also be accessed through the **Workflow Editor**, by right clicking on a node and selecting from the context menu **Show Triggers/Notifications**.

This view provides all the functionality required to set up the various types of notifications used to establish better production communication and instant status updates.



Insert Notifications

To insert a new notification, select from the sidebar:

Site Admin -> Notifications

The following table explains the basic usage of each property.

Event	The TACTIC event to execute the notification for
Process	Events relating to note, task, snapshot can make use of process to differentiate
Description	The description of the purpose of the notification
Subject	The subject of the notification. This uses the TACTIC Expression Language
Message	The message body for the notification. This uses the TACTIC Expression Language
Rules	The XML access rules used to filter the notification further
Email Handler Class	The email handler class override for the notification. This allows for overriding of the notification with a python email handler class. This only needs to be used in specific situations.
Project Code	The project code for the notification. This allows for filtering of notifications for a specific project
Type	The type of notification being sent. By default for notifications, this must be set to "email"
Search Type	The search type attribute identifies the parent sType if the event is for a task, note, or snapshot. It used to be achived by adding a rule as in Example 2.
Mail_to	An expression of the users to mail to in the email (supports multiple lines of expressions and / or email addresses and names of groups of users made in TACTIC)
Mail_cc	An expression of the users to mail to in the email. It will appear in the cc category. (supports multiple lines of expressions and / or email addresses and groups)
Mail_bcc	An expression of the users to mail to in the email. It will appear in the bcc category. (supports multiple lines of expressions and / or email addresses and groups)

Below are examples of what can be used in *mail_to*, *mail_cc*, or *mail_bcc*:

For example, email the user 'admin' only:

```
@SOBJECT(sthpw/login['login', 'admin'])
```

For example, send to the user related to this sObject. If this is an event for task update, the email will be addressed to the assigned user:

```
@SOBJECT(sobject.sthpw/login)
```

For example, send to the user related to this sObject as well as the user 'john'. If the event is insert|sthpw/note, it will be the person who enters the note. If the event is 'update|sthpw/task', the person is the assignee of the task:

```
@UNION(@SOBJECT(sthpw/login['login', 'john']), @SOBJECT(sobject.sthpw/login))
```

To make these mail_to expressions more readable, put more than 1 expression or email addresses on multiple lines. There is no need for @UNION. @GET can even be used to just get to the list of login names.

For example, to send to everyone in the supervisor group, the assignee of a task, to all the users in the **mangers** group and the email address support@southpawtech.com, enter 3 lines under mail_to:

```
@SOBJECT(sobject.sthpw/login)
@GET(sthpw/login_in_group['login_group','supervisor'].login)
managers
```

```
support@southpawtech.com
```

More on Expressions in Notifications

The word "sobject" often appears in the *Mail to:* column but not in Message or Subject. This is because the implementation allows sending notifications to users related to the current sObject or just about anyone not necessarily related to the current sObject. As illustrated above, @SOBJECT(sobject.sthpw/login) is the task assignee but the users under the group supervisor is not related to this task and so the keyword "sobject" is not used. In the Message area, to refer to the current sObject status (task status if the event is update|sthpw/task), just use an @GET(.status), as the sobject is always assumed to be in this context.

Task related notification

To establish the relationship between the login search type and task search type, the following built-in schema line is used. It is not necessary to add it to the schema. It can be used as an example to create a custom search_type.

```
<connect to='sthpw/task' relationship='code' from_col='login' from='sthpw/login'
 to_col='assigned'/>
```

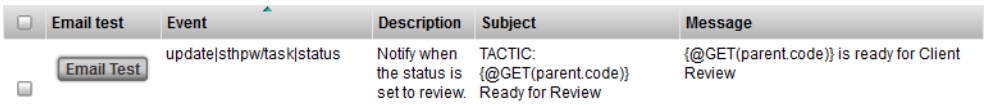
Note related notification

To establish the relationship between the login search type and note search type, the following built-in schema line is used. It is not necessary to add it to the schema. It can be used as an example to create a custom search_type and to edit the schema.

```
<connect to='sthpw/note' relationship='code' from_col='login' from='sthpw/login' to_col='login'/
>
```

Sending a notification to the person who just entered the note is not often used. Instead, an email handler can be used in this situation to send to the supervisor and assignee of the task under the same context. A built-in email handler is called "pyasm.command.NoteEmailHandler". Instead of entering it into an expression for *mail_to*, enter it into the *email_handler_class* field.

Email Test



Email test	Event	Description	Subject	Message
Email Test	update|sthpw/task|status	Notify when the status is set to review.	TACTIC: {@GET(parent.code)} Ready for Review	{@GET(parent.code)} is ready for Client Review

Once the fields *event*, *mail_to*, and *message* are properly filled in, to test the email, click on the **Email Test** button. It catches syntax errors or typos in expression in these fields as well as reporting any email server error if the service section of the TACTIC config file has not been properly filled in. Settings like firewall and TLS settings may also block an email from being sent out.

Example 1:

In this example, the notification will be sent out each time a ticket is updated. It will also only send to users in the 'admin' and 'moderator' groups.

Event	update|support/ticket
Description	Sent when tickets are updated
Subject	`TACTIC Ticket {@GET(.id)} Has been updated.`
Message	`{@GET(.company_code)} TACTIC Ticket {@GET(.id)} has been updated.`

	`Subject: {@GET(.subject)}`
	
	`Summary: {@GET(.summary)}`
	
	`Status:  {@GET(.status)}`
	
	`From status: {@GET(sthpw/status_log['@LIMIT','1'].from_status)}`
	
	`Please do not reply to this e-mail.  To reply or to make further comments, please login to the Ticketing system @ http://tickets.southpawtech.com/tactic`

mail_to	admin moderators
Rules	
Email Handler Class	
Project Code	support
Type	email

Example 2:

In this example, the notification will be sent out each time a shot-based note is updated. It will send to manager's group and everyone assigned to the tasks of the shot. Since project_code is left empty, this works across all the projects in the system.

Event	insert|sthpw/note
Description	Sent when shot-based notes are added
Subject	`{$PROJECT} {@GET(parent.sequence_code)} - {@GET(parent.code)} {@GET(.process)}`

Message	`Project: {$PROJECT}`
	`Code: {@GET(parent.sequence_code)}, {@GET(parent.code)}`
	`Process: {@GET(.process)}`
	`Note: {@GET(.note)}`
	
	`To reply or make further comments: please go to http://<some IP>/tactic/ {$PROJECT}/#/link/my_notes`

Rules	`<rules>`
	`  <rule>'prod/shot' in @GET(.search_type)</rule>`
	`</rules>`

Email Handler Class	
Project Code	
Type	email
mail_to	`@GET(sobject.parent.sthpw/task.assigned)` `@GET(sthpw/login_in_group['login_group','manager'].login)`

The following sections explain each configuration aspect of Notifications in greater detail

Notification Expressions

TACTIC uses the TACTIC Expression Language to build dynamic Notification Subject and Message contents. This allows for each notification to be sent based on properties from the Search Objects it is being sent for.

In the simple example Subject below, the "id" property is used from the "ticket" search object.

```
TACTIC Ticket {$GET(.id)} has been updated
```

The expected results of this would be similar to the following:

"TACTIC Ticket 14 has been updated"

Example 1

In essence, anything between the curly brackets "{}" is evaluated as an expression by TACTIC.

Note

For more information regarding TACTIC Expression Language please refer to the **TACTIC Expression Language** docs

Filtering Notifications

TACTIC's notification architecture is a rules-based system built using the trigger architecture. Every time a command is executed, TACTIC looks through the list of defined triggers (including notifications) for a match. Under the **Triggers** view will be an entry for the EmailTrigger class that is registered under the "email" event. It is possible to create custom Email Trigger handlers in that view.

There are 3 main criteria used to filter out notifications:

- **group**: Filters out notifications to be sent only to users in the included groups.
- **project**: Filters out notifications so that only a certain project can fire the email trigger.
- **rules**: Rules are an XML snippet which can finely control the conditions when an email trigger may be fired.

Groups

By planning groups to send notifications to, it allows for simple connections for deciphering which groups of users will receive notifications when the conditions of a particular notification rule are met. Once a notification has been created, it can be associated with any number of groups of users. All users in this group will then be sent a notification when the rule is triggered.

The Groups view can be found under:

Admin->Site Admin ->Groups

To specify a group to send a notification to, specify the group in the **mail_to** column.

Project

By setting the project in the project column of a Notification, TACTIC will only use the notification trigger for the chosen project.

Access Rules

When a notification rule has passed all of the criteria, a message is constructed. Most email events occur after a command has been completed. The email handler then takes the information from the command and creates a default message to be sent to the appropriate people.

All rules are contained in groups. For notifications, there are a few predefined groups:

Example 1

This rule group only allows tasks for prod/asset for the project sample3d to send out notification. Otherwise, it would send out notifications for tasks of all search types

```
<rules>
   <rule>@GET(.search_type)=='prod/asset?project=sample3d'</rule>
</rules>
```

Example 2

This rule group makes use of a key/value pair of attributes: that is, when the attribute with the value of "key" is equal to "value", the rule is passed. In the example below, all SObjects containing the attribute "context" with the value "client" are triggered.

```
 (deprecated)

<rules>
    <rule group="SObject" key="context" value="client"/>
</rules>
```

```
<rules>
    <rule>@GET(.context)=='client'</rule>
</rules>
```

Example 3

For certain SObjects in TACTIC (like tasks), parent attributes can be used for constructing rules. The concept behind this is the same as group="sObject", but now we are referring to the parent of a task (for example, a 3D asset). This notification will only be sent if the task's parent, a 3D asset, is categorized under the "prp" asset library.

```
<!-- DEPRICATED -->
<rules>
    <rule group='parent' key='asset_library' value='prp'/>
</rules>
```

```
<rules>
    <rule>@GET(prod/asset.asset_library)=='prp'<rule>
</rules>
```

Example 4

For notes in TACTIC, we may have 2 processes for notes (e.g. anim, anim_2) We can check if the process partially contains the word **anim** by the following:

```
<rules>
    <rule>'anim' in @GET(.process)<rule>
</rules>
```

Note: list comparisons like @GET(.process) in ['anim','anim_2'] are not supported

Example 5

For a check-in notification in TACTIC, we can choose to send only if the is_current attribute is True for the event insert|sthpw/snapshot by the following:

```
<rules>
    <rule>@GET(.is_current)==True<rule>
</rules>
```

Email Handler Class

Each time a notification is executed, TACITC uses either the default email handler or it uses and email handler override defined by the Email Handler Class property for the notification.

The Email Handler Class digs deeply into the structure of the notifications using Python and the TACTIC client API. It is only needed for very specific rules which determine when a notification is sent.

An example override is shown below:

Email Hander Cls: sites.support.email.TicketEmailHandler

```
__all__ = ['TicketEmailHandler']

from pyasm.common import Environment, Xml, Date
from pyasm.security import Login
from pyasm.search import Search
from pyasm.biz import GroupNotification, Pipeline, Task, Snapshot, File, Note


class TicketEmailHandler(object):
    '''Email sent when a ticket is updated'''

    def __init__(my, notification, SObject, parent, command):
        my.notification = notification
        my.sobject = SObject
        my.command = command
        my.parent = parent

    def check_rule(my):
        '''determine whether an email should be sent'''
        return True

    def get_to(my):

        ticket = my.sobject
        user = ticket.get_value("login")
        login = Login.get_by_login(user)
        recipients = []
        recipients.append(login)

        return recipients
```

```
def get_cc(my):

    admin = Login.get_by_login("admin")
    recipients = []
    recipients.append(admin)

    return recipients


def get_subject(my):

    ticket = my.sobject
    title = "Ticket Number: "
    id = ticket.get_value("id")

    return "%s%s"  % (title, id)


def get_message(my):

    ticket = my.sobject
    id = ticket.get_value("id")
    subject = ticket.get_value("subject")
    summary = ticket.get_value("summary")
    status = ticket.get_value("status")

    msg = []
    msg.append("Ticket: %s" % id)
    msg.append("")
    msg.append("Status: %s" % status)
    msg.append("")
    msg.append("subject: %s" % subject)
    msg.append("Summary: %s" % summary)
    msg.append("")

    return "\n".join(msg)
```

Expression Language

TACTIC Expression Language Introduction

Introduction

This document describes the construct of the **TEL** TACTIC Expression Language. This language is a shorthand form to quickly retrieve information about related Search Objects. The expression either starts with a list of Search Objects and the operations of the expression language operate on these lists (this is quite similar to LISP in concept) or it can be used as an absolute search.

The expression language also borrows from spreadsheet syntax which is familiar to many people. The reason behind using an expression language is that it is much simpler and compact that using code or direct SQL. The TACTIC expression language is designed to be able to easily retrieve data in a single command that would otherwise take many lines of code.

Simple Example

The expression often starts with a list of Search Objects and then operates on these Search Objects.

If you have a list of "prod/shot" Search Objects, then the following:

```
@GET(prod/shot.code)
```

will return a list of codes of these Search Objects. The notation for the method GET is of the form <search_type>.<column>. As will be shown below, multiple search_types can be strung together to navigate across related search_types. The @GET function operate on a list and returned a list.

If no starting Search Object is given, then this expression will return a list of codes for every shot in the project.

Searching

The expression language can be used as a shorthand for search for Search Objects. This is often convenient because the expression language is a pure string and can be stored a number of formats, including XML.

The @SOBJECT method will retrieve entire Search Objects.

Search for all assets

```
@SOBJECT(prod/asset)
```

Search only for characters by applying a filter

```
@SOBJECT(prod/asset['asset_library','chr']
```

You can also apply multiple filters. And operation is implied

```
@SOBJECT(prod/asset['asset_library','chr']['timestamp','>','2009-01-01'])
```

You can also apply multiple filters. To use OR operation with more than 2 filters. For example, with code containing the word prop1, OR asset_library is chr, OR timestamp after 2009-01-01. Note: EQ stands for case-sensitive match.

```
@SOBJECT(prod/asset['begin']['asset_library','chr']['timestamp','>','2009-01-01']
['code','EQ','prop1']['or'])
```

To use OR operation with 2 filters followed by an AND operation. For example, with asset_library is chr OR timestamp after 2009-01-01 AND code containing the word prop1. If there are only 2 filters, there is no need to sandwich it with begin.

```
@SOBJECT(prod/asset['asset_library','chr']['timestamp','>','2009-01-01']['or']
['code','EQ','prop1'])
```

Note that full filter operations from the Client API are supported.

Navigating Search Types

One of the true powers of the expression language is the simplicity in which it can navigate between various related Search Types using a navigational syntax. The expression language makes use of the project schema to navigate dependencies between the search_types. For example a sequence is related to a shot.

The navigational syntax is used as arguments for many aggregate methods. When detected, the expression language will perform a search through the hierarchy to retrieve the desired search results.

A simple example of the navigation syntax in the expression language is as follows:

```
@GET(prod/sequence.code)
```

This expression will get all of the codes of the sequences of related to each Search Object.

The expression can also navigate multiple levels of search types to dig deeply into the hierarchy. For example, this will get all of the descriptions of all of the episodes that belong to the sequences of the original shots.

```
@GET(prod/sequence.prod/episode.description)
```

Another useful illustration is to get all of the tasks of all of the shots:

```
@SOBJECT(prod/shot.sthpw/task)
```

Aggregate functions

The expression language defines a number of aggregate functions which will operate on the list.

This will give the addition of all the duration attributes of the provided shots.

```
@SUM(prod/shot.duration)
```

This will give the average duration attribute of all of the shots.

```
@AVG(prod/shot.duration)
```

This will give a count of all of the Search Objects

```
@COUNT(prod/shot)
```

All of these aggregates return a single value which can be used to operate on other lists.

Operations

The expression language operates on lists. The operator will operate on each element of the list independently and return a list For example when doing a subtraction operation on items:

```
@GET(prod/shot.end_frame) - @GET(prod/shot.start_frame)
```

The first @GET will return a list of start frames and the second @GET will return a list end frames. When two lists are operated on the results are calculated based on items at the same position in each list. So if we had two lists:

```
[300, 155, 100] - [100, 100, 100] = [200, 55, 0]
```

Similarly, lists will be multiplied as follows

```
[5, 4, 3] * [5, 4, 3] = [25, 16, 9]
```

The expression language supports most operation support by the python language itself.

```
>>> Search.eval("5 * 25")
125.0

>>> Search.eval("5 + 25")
30.0

>>> Search.eval("(25 - 5) * 5")
100.0

>>> Search.eval("5 / 25") 0.20000000000000001

>>> Search.eval("@COUNT(sthpw/task) * 5")
2310.0

>>> Search.eval("@COUNT(sthpw/task) > 0")
True

>>> Search.eval("@COUNT(sthpw/task) == 462")
True

>>> Search.eval("@COUNT(sthpw/task) != 462")
False
```

The expression language also supports the regular expression syntax

The following tests whether the name_first column starts with "John"

```
@GET(.name_first) ~ '^John'
```

More complex operations

You can do more complex operations by combining the above. The following will return a cost list of all of the shots (assigned user wage * number of hours worked).

```
@GET(prod/shot.sthpw/task.sthpw/login.wage) * @GET(prod/shot.num_hours)
```

You could add them all together using @SUM this to get the total

```
@SUM(
  @GET(prod/shot.sthpw/task.sthpw/login.wage) * @GET(prod/shot.num_hours)
)
```

There are times the sObjects returned are not unique. The @UNIQUE operator can be used to return a unique list of result. The following returns the unique list of login sObjects related to the task list provided. The @COUNT operator computes the total number of login sObjects.

```
# my.tasks is a list of tasks
expression = "@COUNT(@UNIQUE(@SOBJECT(sthpw/login)))"
result = my.parser.eval(expression, my.tasks)
```

Manipulating Strings

Most of the operations in the expression language operate on lists and either return lists or return single values. However, it is often required that expressions be used in string concatenation. A simplified notation is to use curly brackets {} to represent an operation that converts the result of an expression into a string.

For a file to be named chr001_model.png, we could use:

```
{@GET(prod/asset.code)}_{@GET(sthpw/snapshot.context)}.png
```

** The file naming conventions do not current use the expression language. The presently use a simplified expression language. The plan is to merge the two at some point.

String Formatting

For string values, the string operator them can use standard print formatting:

```
v{@GET(sthpw/snapshot.version),%0.3d}
```

will return "v012", for example.

The expression language also supports formatting through regular expressions

```
{ @GET(prod/asset.description),|^(\w{5})| }
```

This will get the first 5 word characters for the description. Since the full expression language is supported, it is possible to extract a wide variety of parts. Anything matched with () will be returned as the value.

**If there are multiple groupings, the expression language will concatenate the values together.

The following will return the first 3 and last 3 characters of the description.

```
{ @GET(prod/asset.description),|^(\w{3}).*(\w{3})$| }
```

The following will return the last 5 characters of the description of the current SObject even if it is written in French or Chinese.

```
{ @GET(.description),|^(.{5})$| }
```

Time related formatting

The following formats a timestamp by extracting just the month and date (old way):

```
{ @GET(.timestamp), %b-%m}
```

The following formats a timestamp by extracting just the year

```
{ @GET(.timestamp), %Y}
```

The following removes the hours, minutes and seconds from the built-in $TODAY variable so only 2011-11-11 is displayed

```
{ $TODAY,|([^\s]+)| }
```

The following formats a timestamp by using the new @FORMAT function

```
@FORMAT( @GET(.timestamp), '31/12/1999')
```

```
@FORMAT( @GET(.timestamp), 'Dec 31, 1999')
```

Either of the following formats a frame count into timecode

```
@FORMAT( @GET(.frame_count), 'MM:SS.FF')
```

The following formats a frame count into hours, minutes and seconds in 30fps, leaving out the frames.

```
@FORMAT( @GET(.frame_count), 'HH:MM:SS', '30')
```

The following formats a cost column in currency format

```
@FORMAT(@GET(.cost), '-$1,234.00')
```

'31/12/99 13:37' can be used to show both date and time

Shorthand (mostly for backwards compatibility)

```
@GET(sobject.end_frame) - @GET(sobject.start_frame)

or

@GET(.end_frame) - @GET(.start_frame)
```

Or replicate file naming conventions

```
{sobject.code}_{snapshot.context}_v{version}.{ext}
```

In the file naming convention language, the are a number of short hand keywords:

sObject Keywords: sobject, snapshot, file, parent

Attribute Keywords: context, version, ext, basefile

Expression Method Reference

GET

@GET([search]:nav)

v2.5.0+

The GET method will retrieve attributes or columns from a list of SObjects. This method returns a list of the values. The first argument supports the search type navigational syntax to travel through related search types.

Get the bid start date of all of the tasks:

```
@GET(sthpw/task.bid_start_date)
```

Get the assigned user of all of the modelling tasks

```
@GET(sthpw/task['context','model'].assigned)
```

The GET function also supports short hand to get all attributes from the current SObjects. This will get the assigned column for all current SObjects

```
@GET(.assigned)
```

SOBJECT

v2.5.0+

The SOBJECT method is similar to the GET SObject except that the entire search object is retrieved.

The following expression gets all of the completed modelling tasks.

```
@SOBJECT(sthpw/task['status','complete']['context','model'])
```

The SOBJECT method can also traverse thru related STypes if their relation has been set up in the Project Schema.

The following expression gets all the shots for sequence 'SE02' and 'SE03':

```
@SOBJECT(prod/sequence['code','in','SE02|SE03').prod/shot)
```

Certain relationships like those between anything to notes or tasks are already pre-established.

The following expression gets all the shots that have a note starting with the word 'Hello':

```
@SOBJECT(sthpw/note['note','EQ','^Hello').prod/shot)
```

COUNT

v2.5.0+

The COUNT method will return the count of the SObject returned by the search specifications.

To get a count of all the tasks:

```
@COUNT(sthpw/task)
```

To get a count of all the tasks of all of the shots:

```
@COUNT(prod/shot.sthpw/task)
```

To get a count of all the modelling tasks of all of the completed shots

```
@COUNT(prod/shot['status','complete'].sthpw/task['context','model'])
```

SUM

v2.5.0+

This method will calculate a sum of all of the values in the first argument. The first argument must conform to the navigational syntax.

AVG

v2.5.0+

Calculates the average of all of the values of the first argument, which must conform to the navigational syntax.

MIN

v2.5.0+

Returns the minimum value in a list

MAX

v2.5.0+

Returns the maximum value in a list

FLOOR

v2.5.0+

Returns the lowest integer value of a passed in value

UNIQUE

@UNIQUE([expr1]:expr)

v2.5.0+

The UNIQUE method goes through a list returned from an expression and ensures that only unique elements are present. Duplicates are discarded

UNION

@UNION([expr1]:expr, [expr2]:expr, ...)

v2.5.0+

The UNION method combines the union of all of the results from a number of expressions together into a single list.

Combine all the users from accounting and marketing together into one list:

```
@UNION(
  @SOBJECT(sthpw/login['dept','accounting'],
  @SOBJECT(sthpw/login['dept','marketing']
)
```

INTERSECT

@INTERSECT([expr1]:expr, [expr2]:expr)

v2.5.0+

The INTERSECT method takes the intersection of all the results of expressions in the arguments.

```
@INTERSECT(
  @GET(sthpw/login['dept','supervisor']),
  @GET(sthpw/login['dept','director'])
)
```

IF

@IF([condition]:expr, [if_true]:expr, [if_false]:expr)

v2.6.0+

The following example will return 'red' if the number of tasks is greater than 5 and 'green' if less than or equal to 5. These types of expressions are very useful to determine colors of various backgrounds or widgets within TACTIC.

```
@IF( @COUNT(sthpw/task) > 5, 'red', 'green') )
```

Not all of the arguments can be expressions, so the values for both is_true and is_false can be expressions that are evaluated:

```
@IF(
  @COUNT(sthpw/task) > 5, @GET(.color1), @GET(.color2) )
)
```

CASE

@CASE([condition1]:expr, [if_true]:expr, [condition2:expr], [if_true]:expr, ...)

v2.6.0+

The case statement is an extension of the IF method, but it allows any number of arguments. The odd arguments are conditional tests which must evaluate to True or False. The case method will go through each of the odd arguments until one of the evaluates to True at which point it will evaluate the corresponding even argument and return that value.

```
@CASE(
  @GET(.age) < 10, 'blue',
  @GET(.age) < 20, 'green',
  @GET(.age) < 30, 'yellow',
  @GET(.age) >= 30, 'red'
)
```

FOREACH

v2.6.0+

The following expression gets all the first name from the login table as a list. and then loop through and add <li> around each item. This is more suited in situation where you don't much control over the data returned like in a CustomLayoutWdg:

```
@FOREACH( @GET(sthpw/login.first_name), '<li>%s</li>' )
```

JOIN

@JOIN([expr]:expression, [delimiter]:literal

v2.6.0+

The join method take the result of an expression and joins all the elements together using a delimiter

UPDATE

@UPDATE([expr1]:expression, [column]:string, [value]:expression)

v2.6.0+

The UPDATE method provides the ability for an expression to update a value in the database

The following example updates all of the modelling task to approved

```
@UPDATE( @SOBJECT(sthpw/task['context','model']), 'status', 'Approved' )
```

You can display a model task status column in the Asset page and any other asset related pages and have them all pointing back to the task search type during an update. It would eliminate any redundant data. The following xml definition can be used to set this up in the asset page for instance:

```
<element edit='true' name='asset_task_status' title='Task Status'>
  <display widget='expression'>
    <expression>@GET(sthpw/task['context','model'].status)</expression>
  </display>
  <action class='DatabaseAction'>
    <expression>@UPDATE(@SOBJECT(sthpw/task['context','model']), 'status', $VALUE) </
expression>
  </action>
</element>
```

The edit view for the Widget Config of prod/asset needs to contain this snippet to display the selection list of different statuses

```
  <element name='asset_task_status'>
      <display class='tactic.ui.widget.TaskStatusSelectWdg'/>
  </element>
```

EVAL

@EVAL([expr1]:expression)

@([expr1]:expression)

v2.6.0+

PYTHON

v3.9.0+

It takes one argument, the script path of a script you have defined in the TACTIC Script Editor. For instance, to draw the bid_start_date and bid_end_date of some specific related tasks when the user changes an attribute of a shot, you can define a script called notification/dates and use this expression in the message field of notification.

```
@PYTHON(notification/dates)
```

```
# notification message displaying shoot schedule
from pyasm.search import Search

expr = "@SOBJECT(sthpw/task['context','minor'])"
tasks = Search.eval(expr, sobjects=[sobject])

dates = []
for task in tasks:
    # assuming they are on the same day
    day_expr = "@FORMAT(@GET(.bid_start_date),'1999-12-31')"
    time_expr1 = "@FORMAT(@GET(.bid_start_date),'01:37 PM')"
    time_expr2 = "@FORMAT(@GET(.bid_end_date),'01:37 PM')"

    day_val= Search.eval(day_expr, sobjects=[task], single=True)
    time_val1= Search.eval(time_expr1, sobjects=[task], single=True)
    time_val2= Search.eval(time_expr2, sobjects=[task], single=True)
    schedule = '%s %s - %s' %(day_val, time_val1, time_val2)

    dates.append(schedule)

return '''
'''.join(dates)
```

Expression Variable Reference

There are a number of predefined variables in the expression language. The following list all of the available variables:

- LOGIN - the login of the current user
- LOGINS_IN_GROUP - the group of logins belonging to the group the current user is in
- PROJECT - code of the current project

(v2.6.0+)

- TODAY - the current day at midnight (12:00am)
- NOW - the current day and time
- NEXT_DAY - the next day from today (tomorrow)
- NEXT_MONDAY - the next Monday from today
- NEXT_TUEDAY - the next Tuesday from today
- NEXT_WEDNESDAY - the next Wednesday from today
- NEXT_THURSDAY - the next Thursday from today
- NEXT_FRIDAY - the next Friday from today
- NEXT_SATURDAY - the next Saturday from today
- NEXT_SUNDAY - the next Sunday from today
- PREV_DAY - the previous day from today (yesterday)
- PREV_MONDAY - the previous Monday from today
- PREV_TUESDAY - the previous Tuesday from today
- PREV_WEDNESDAY - the previous Wednesday from today
- PREV_THURSDAY - the previous Thursday from today
- PREV_FRIDAY - the previous Friday from today
- PREV_SATURDAY - the previous Saturday from today
- PREV_SUNDAY - the previous Sunday from today
- THIS_YEAR - the first day of this year at midnight (12:00am)
- NEXT_YEAR - the first day of next year at midnight (12:00am)
- PREV_YEAR - the first day of the previous year at midnight (12:00am)
- THIS_MONTH - the first day of this month at midnight (12:00am)
- NEXT_MONTH - the first day of next month at midnight (12:00am)
- PREV_MONTH - the first day of the previous month at midnight (12:00am)

- THIS_HOUR - this hour at 0 minutes
- NEXT_HOUR - the next hour at 0 minutes
- PREV_HOUR - the previous hour at 0 minutes
- NEXT_HOUR - the next hour at 0 seconds
- PREV_HOUR - the previous hour at 0 seconds

These variables can be used for to refer to state information in searches. This expression will retrieve all the login information for the current user.

```
@GET(sthpw/login['login',$LOGIN])
```

They can also be used to find items between certain dates. This expression will retrieve all snapshots for this week starting at Sunday.

```
@GET(sthpw/snapshot['timestamp','>',$LAST_SUNDAY]['timestamp','<',$NEXT_SUNDAY])
```

The following are shorthands that do not require a starting point or environment sobject. They can be used in an absolute expression:

- login - the currently logged in user login attribute
- project - the current project
- date - a date object with today's date
- palette - a palette object used for accessing different attributes of the palette for the current project. e.g. @GET(palette.background) can be used in the css for a Custom Layout Widget

The following are shorthands that require a starting point or environment sobject:

- parent - the parent of the current related sobject @GET(parent.code)
- search_type - the sType sobject. e.g. @GET(.search_type.title)
- connect - the connected sobject registered in the connection sType. Refer to the API methods like connect_sobjects() and get_connected_sobjects()

The following variables are only used in Naming. Refer to the file naming section for details.

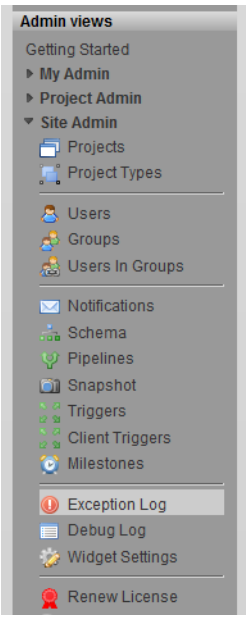
- EXT - file extension
- BASEFILE - the filename portion of the file without the extension

Debugging TACTIC

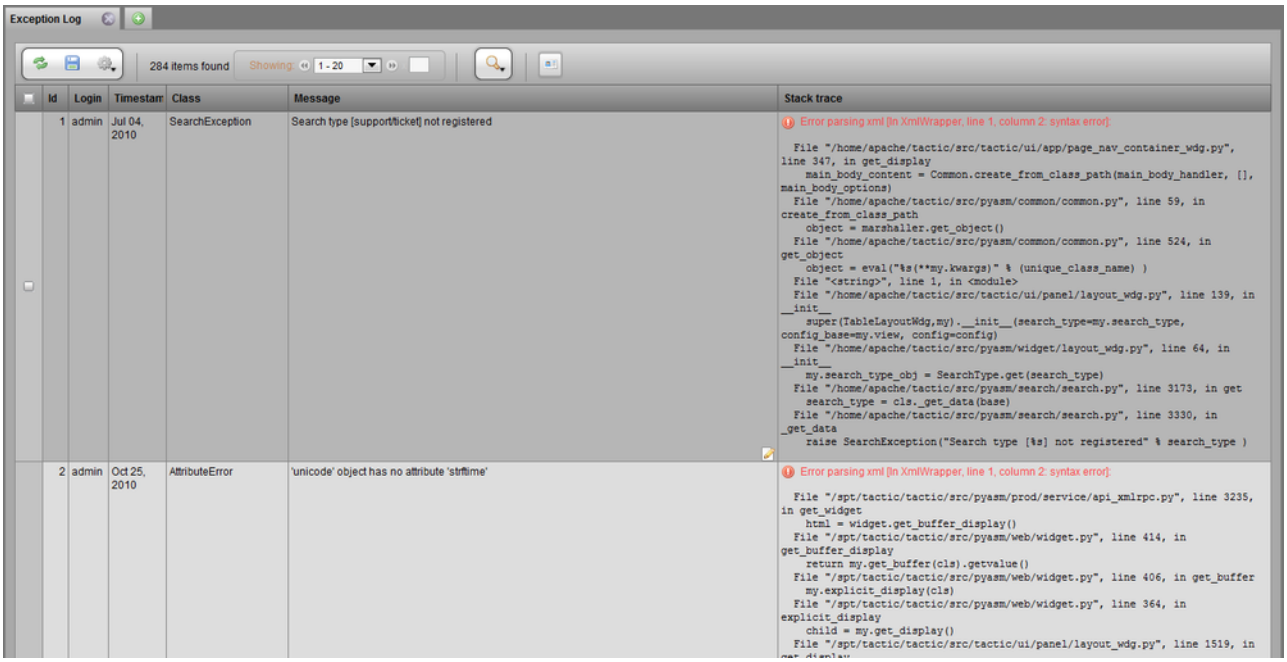
Exception Log

The exception log SObjects provides a very convenient way for TACTIC to store, view and diagnose problems or errors in TACTIC as they come up. This is a necessary requirement in order to properly diagnose a bug or error that will arise.

A default view of the exception log is available in the "Admin" section of the Schema Sidebar



Because TACTIC records every stack trace in the system, it is possible to simply find the last stack trace generated by a particular user. This eliminates the need to constantly reply to an error report asking for the stack trace of the error (which by then is often lost because the user has decided to work on another task). With the exception log, it becomes trivial to look up the error witnessed by the user and start diagnosing the problem.


Exception Log
284 items found
Showing: 1 - 20
Id
Login
Timestamp
Class
Message
Stack trace
1
admin
Jul 04, 2010
SearchException
Search type [support/ticket] not registered
Error parsing xml [In XmlWrapper, line 1, column 2: syntax error]:
File "/home/apache/tactic/src/tactic/ui/app/page_nav_container_wdg.py", line 347, in get_display
main_body_content = Common.create_from_class_path(main_body_handler, [], main_body_options)
File "/home/apache/tactic/src/pyasm/common/common.py", line 59, in create_from_class_path
object = marshaller.get_object()
File "/home/apache/tactic/src/pyasm/common/common.py", line 524, in get_object
object = eval("%s(**my.kwargs)" % (unique_class_name))
File "<string>", line 1, in <module>
File "/home/apache/tactic/src/tactic/ui/panel/layout_wdg.py", line 139, in __init__
super(TableLayoutWdg,my).__init__(search_type=my.search_type, config_base=my.view, config=config)
File "/home/apache/tactic/src/pyasm/widget/layout_wdg.py", line 64, in __init__
my.search_type_obj = SearchType.get(search_type)
File "/home/apache/tactic/src/pyasm/search/search.py", line 3173, in get
search_type = cls._get_data(base)
File "/home/apache/tactic/src/pyasm/search/search.py", line 3330, in _get_data
raise SearchException("Search type [%s] not registered" % search_type)
2
admin
Oct 25, 2010
AttributeError
'unicode' object has no attribute 'strftime'
Error parsing xml [In XmlWrapper, line 1, column 2: syntax error]:
File "/spt/tactic/tactic/src/pyasm/prod/service/api_xmlrpc.py", line 3235, in get_widget
html = widget.get_buffer_display()
File "/spt/tactic/tactic/src/pyasm/web/widget.py", line 414, in get_buffer_display
return my.get_buffer(cls).getvalue()
File "/spt/tactic/tactic/src/pyasm/web/widget.py", line 406, in get_buffer
my.explicit_display(cls)
File "/spt/tactic/tactic/src/pyasm/web/widget.py", line 364, in explicit_display
child = my.get_display()
File "/spt/tactic/tactic/src/tactic/ui/panel/layout_wdg.py", line 1519, in

Widgets

TACTIC Widgets

What is a Widget?

A TACTIC Widget is a mini web program which serves a specific purpose and can be reused. This is what the TACTIC interface is composed of. Each interface view is presented to a user or a group of users in a combination of widgets which can accomplish many things:

- Displaying data
- Modifying data
- Displaying images
- Executing processes
- Loading files
- Saving files
- ...and much more

Each of the widgets is a "snippet" of web code (HTML) which TACTIC builds dynamically on the server and delivers to the user as a web page; but the TACTIC interface is much more than a web page. TACTIC takes full advantage of the newest web technology to deliver a flexible and robust web application.

This widget architecture allows TACTIC to provide a toolbox of useful widgets which can be combined to build an interface which can adapt TACTIC to an work flow. Furthermore, due to the openness of TACTIC, it is easy for developers to create new widgets and share them.

Widget Documentation

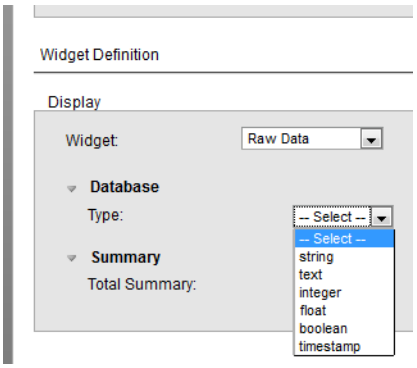
Within this documentation, the same philosophy will be followed. There is a section which explains the usage of each widget but the main core of the documentation explains how to use them in combination or with existing interfaces to work with TACTIC.

A few examples of the common TACTIC widgets are:

- ThumbWdg - A thumbnail viewing widget used in a table, usually with a title **preview**.
- TableLayoutWdg - Majority of the TACTIC interface is delivered through a Table widget. It enables the assembly of different type to save as a new view.
- GanttWdg - A calendar widget which allows viewing and manipulation of dates.

View Widgets

Simple Table Element



Description

This widget displays the value in the database "as is", in its raw unformatted form. This is the default display widget.

> **Note**
>
> The Simple Table Element widget is the same as the Raw Data widget.

Info

Name	Simple Table Element
Class	raw_data
TACTIC Version Support	3.0.0 +
Required database columns	none

Implementation

Use this widget to display the value in the database "as is", without any pre-formatting. This widget is the default display widget.

Options

type	The database type: string, text, int, float, boolean, timestamp

Example

For example, to display the keywords field, as is, from the Edit Column Definition->View Mode: Select **Widget -> Raw Data -> text**.

Advanced

Below is the XML for the above example.

```
<element name="keywords" title="test" edit="true" color="false">
  <display widget="raw_data">
    <type>text</type>
  </display>
</element>
```

Formatted Widget

Cost budget	Cost total	Variance	Timestamp
$0.00	$436.78	($436.78)	Jul 29, 2011 - 01:49
$0.00	$0.00	$0.00	Jul 29, 2011 - 00:21
$14,000.00	$2,170.00	$11,830.00	Jul 28, 2011 - 06:46
$7,000.00	$4,969.00	$2,031.00	Jul 28, 2011 - 06:28
$5,000.00		$5,000.00	Jul 26, 2011 - 20:01
$2,000.00		$2,000.00	Jul 26, 2011 - 20:01
$8,000.00	$14,750.00	($6,750.00)	Jul 26, 2011 - 20:01
$7,200.00		$7,200.00	Jul 26, 2011 - 20:01
$500.00	$700.56	($200.56)	Jul 26, 2011 - 20:01
$10,000.00	$5,600.00	$4,400.00	Jul 26, 2011 - 20:01

Description

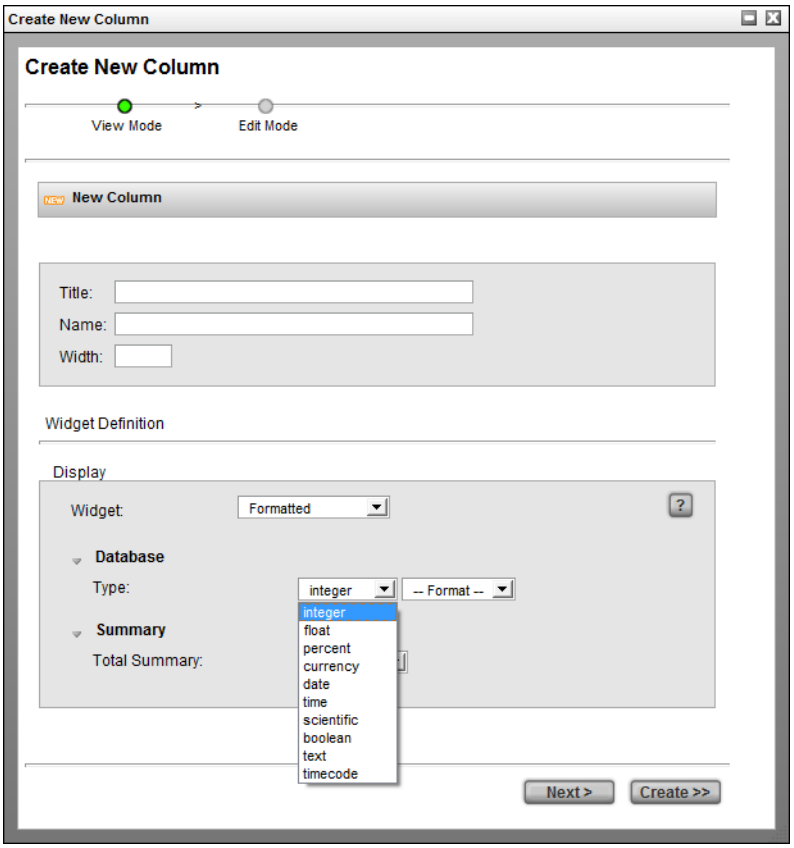
The Formatted Widget displays a raw data value as a formatted string so the user can recognize and interpret the value more easily.

For example, the Format Widget will display a number in the format $1,234.00 which the user quickly recognizes as a currency value in dollars and cents.

Info

Name	Formatted Widget
Class	FormatElementWdg
Category	Simple Table Element Widget
Supported Interfaces	
TACTIC Version Support	3.6.0+
Required database columns	none

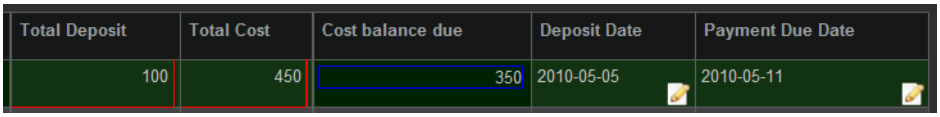
Options



integer	-1234 -1,234
float	-1234.12 -1,234.12
percent	-13% -12.95%
currency	-$1,234 -$1,234.00 -$1,234.-- -1,234.00
date	31/12/99 December 31, 1999 31/12/1999 Dec 31, 99

	Dec 31, 1999 31 Dec, 1999 31 December 1999 Fri, Dec 31,99 Fri 31/Dec 99 Fri, December 31, 1999 Friday, December 31,1999 12-31 99-12-31 1999-12-31 12/99 31/Dec December 52
time	13:37 13:37:46 01:37 PM 01:37:46 PM 31/12/99 13:37 31/12/99 13:37:46
scientific	-1.23E+03 -1.234E+03
boolean	true|false True|False Checkbox
timecode	MM:SS.FF MM:SS:FF HH:MM:SS.FF HH:MM:SS:FF

Expression



Description

The ExpressionElementWdg allows you to use the TACTIC expression language to determine the value displayed in the table cell. The expression is caclulated from a starting sobject which represents the sobject in the particular row in the table. The expression is evaluated for each sobject on every row. When an expression is evaluated, the value is added to a dynamic attribute of the sobject and can be used in future expressions in this widget. Please refer to the expression language reference for more information on the expression language.

Info

Name	ExpressionElementWdg
Class	tactic.ui.table.ExpressionElementWdg
Category	Common Columns
Supported Interfaces	TableLayoutWdg
TACTIC Version Support	2.5.0 +
Required database columns	depends on expression

Implementation

Display the total cost of an item by multiplying the total_number column with the unit_cost column When an expression is evaluated by the ExpressionElementWdg, a new attribute with the name of the element is dynamically added to the sobject (in this cost) which can be used in the "bottom" directive.

```
<element name='cost'>
  <display class='tactic.ui.table.ExpressionElementWdg'>
    <expression>@GET(.total_number) * @GET(.unit_cost)</expression>
    <bottom>@SUM(.cost)</bottom>
  </display>
</element>
```

Options

expression	Expression to evaluate the widget
alt_expression	Alternate expression to evaluate the widget for alternate use, like edit value
inline_styles	Styles to add to the DIV generated that contains the result of the expression
return	single|list - Determines what the expression return type should be
bottom	Expression to calculate the bottom row of the table
mode	value|boolean|check - Display mode for this widget
enable_eval_listener	Currently javascript expression evaluation is not fully baked, so only use the client side evaluation listener when needed and NOT by default

icon_expr	Expression to evaluate which icon to use when mode = 'icon'

Examples

Display the number of tasks for a given sobject and then display the total number at the bottom.

```
<element name='num_tasks'>
  <display class='tactic.ui.table.ExpressionElementWdg'>
    <expression>@COUNT(sthpw/task)</expression>
    <bottom>@SUM(.num_tasks)</bottom>
  </display>
</element>
```

Mode "boolean" displays a green dot for every sobject that has an expression that evalutes to True. In this case, a green dot is display on every row where the number of tasks is greater than zero.

```
<element name='has_tasks'>
  <display class='tactic.ui.table.ExpressionElementWdg'>
    <expression>@COUNT(sthpw/task) > 0</expression>
    <mode>boolean</mode>
  </display>
</element>
```

Another example of a mode which displays a checkbox instead of red/green dots. The checkbox appears for any result greater than zero

```
<element name='has_tasks'>
  <display class='tactic.ui.table.ExpressionElementWdg'>
    <expression>@COUNT(sthpw/task) > 0</expression>
    <mode>check</mode>
  </display>
</element>
```

The expression language has the ability to get values from other related tables. The following example illustrates an expression to find the description of the parent sequence of a shot.

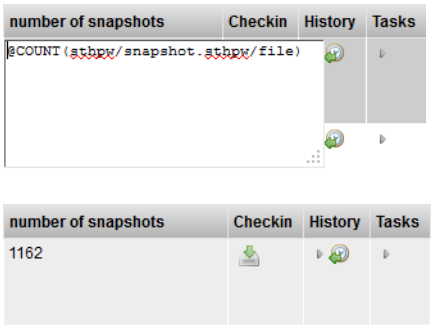
```
<element name='sequence_description'>
  <display class='tactic.ui.table.ExpressionElementWdg'>
    <expression>@GET(prod/sequence.description)</expression>
  </display>
</element>
```

Ultimately, the ExpressionElementWdg can make use of any expression in the TACTIC Expression Lanaguage.

When using mode = 'icon', it is possible to set up an expression using icon_expr to determine what that icon should be. A special variable $VALUE is used to determine the value of the expressions

```
<element name="is_synced" title='Synced' edit='false'>
  <display class='tactic.ui.table.ExpressionElementWdg'>
    <expression>@GET(.is_synced) == True</expression>
    <mode>icon</mode>
    <icon_expr>@IF( '$VALUE' == True, 'CHECK', 'CROSS' )</icon_expr>
  </display>
</element>
```

Expression Value Element



Description

The Expression Value Element widget accepts a TACTIC Expression as the input and displays the evaluated expression as the output.

Info

Name	Expression Value Element Widget
Class	expression_value
TACTIC Version Support	2.5.0 +
Required database columns	Yes, a database column by the same name.

Usage

For example, we can dynamically display the number of login names in the login table. This would be an example of an absolute expression because the expression does not take into input any data from the row the field is on. A relative expression has access to the row and table information that the row the expression is on.

Note

The difference between an **absolute expression** and a **relative expression**:

-an **absolute expression** does not take into input any data from the row or table that the field exists on

-a **relative expression** has access to the row and table information that the field exists on

Implementation

Go into edit mode for the Expression Value Element widget. Input an absolute TACTIC expression as the value.

In display mode, this widget will display the result of the evaluation of the expression.

Options

There are no options available for this widget.

Example 1

For example, enter the following absolute TACTIC Expression as the value for the Expression Value Element widget:

```
@COUNT(sthpw/snapshot.sthpw/file)
```

In display mode, this widget will evaluate the expression and display the count of the number snapshot files in the database.

Example 2

For example, enter the following absolute TACTIC Expression as the value for the Expression Value Element widget:

```
@COUNT(sthpw/login.sthpw/login)
```

In display mode, this widget will evaluate the expression and display the count of the number of logins in the login table.

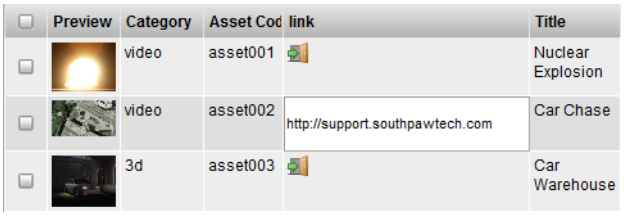
Example 3

For example, enter the following absolute TACTIC Expression as the value for the Expression Value Element widget:

```
@GET(sthpw/task["context = 'model'"].code)
```

In display mode, this widget will evaluate the expression and display the code for all the tasks where the context is 'model'.

Link Element



Description

The Link Element Widget facilitates creation of a hyperlink. Clicking on the link button opens the hyperlink in a new tab in the web browser.

Info

Name	Link Element
Common Title	Link
Class	Link
TACTIC Version Support	3.0.0 +
Required database columns	none

Usage

Go into edit mode for the Link column. Specify the full URL to a hyperlink, such as: http://support.southpawtech.com.

Save the data and refresh the view.

Click on the link icon and the link to the web page will be opened in a new tab.

Implementation

The Link Element Widget can be created using the Create New Column and specifying: Display -> Widget -> **Link**.

Options

The ability to specify a customize icon to appears in the row.

Advanced

```
<element name="link" title="link" edit="true" color="false">
  <display widget="link"/>
</element>
```

Gantt

Description

The Gantt widget has the capability of displaying all projects schedules along with sequences and tasks schedules. With the widget you can switch between weeks to months view. This widget can be utilized and edited in multiple different ways. It also displays the start and end date along with the amount of days.

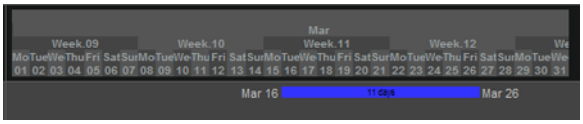
Info

Name	Calendar Gantt Widget
Class	GanttWdg
Category	Common Columns
Supported Interfaces	
TACTIC Version Support	2.6.0+
Required database columns	configurable.

Usage

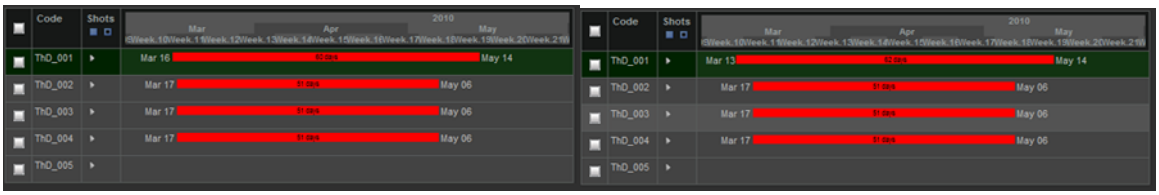
There are many ways to edit the Gantt Widget. You can also edit what part of the month, week or year of the schedule to view. Clicking on the header date of the Gantt Widget will toggle the different viewing options.

Above shows two different displays of viewing the range of the date. Clicking on the weeks will toggle to another viewing range.

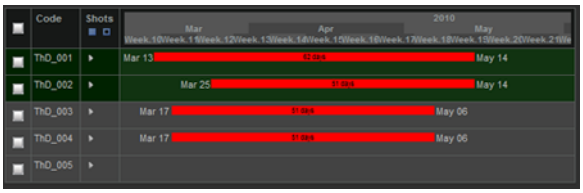


The bars that show the schedule can also be edited using the UI. Hovering the mouse over the bars will popup a a window that will display the dates of the schedule.

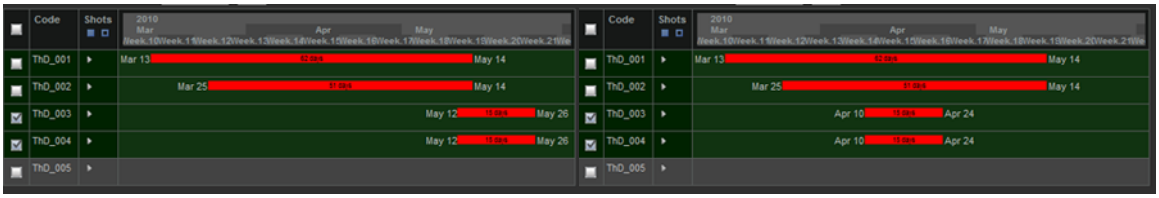
The bars can also be editied by selecting the start and end dates and sliding the either end from the right to left. The first image below shows the end of the date stretched to May 14 and the second image shows the start date streched back to March 13.



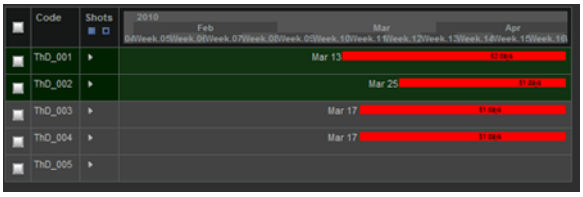
The schedule bar can also move sideways while keeping the number of days constant by selecting the bar and shifting it from left to right.



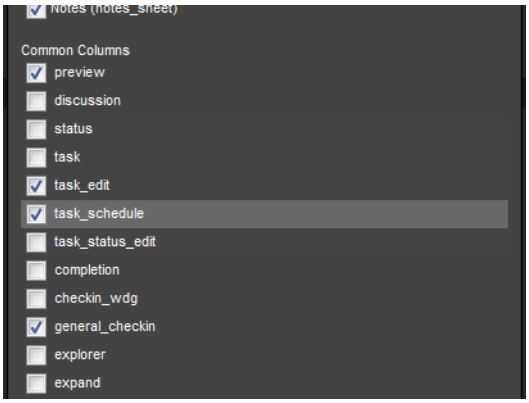
The Gantt Widget can also be edited using multi selection. Whether it is changing the end date, start date or sliding the bars forward and backward, the Gantt Widget can hande it. Below are images of a few examples of having the sequences muli-selected and edited.



The Gantt Widget also has the capability of sliding the full time line by selecting the empty area of the widget and dragging the mouse left or right.



The Gantt Widget can be found under the column manager as task schedule.

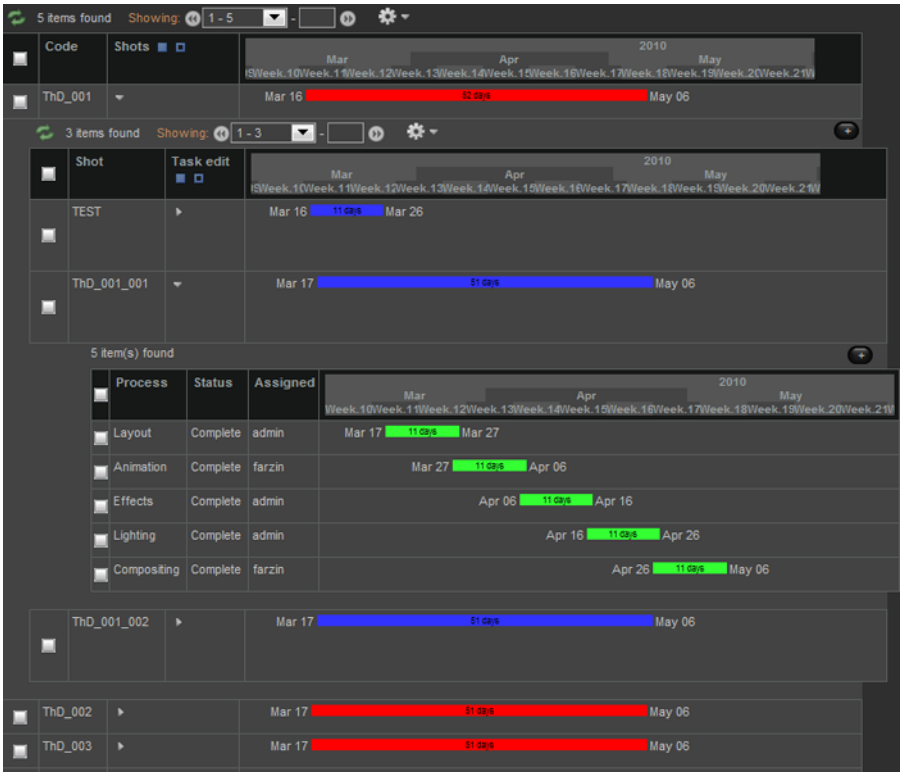


Advanced

The following example illustrates a Gantt Widget that shows all tasks for a project, the schedule for all asset tasks, and the schedule for all shot tasks.

```
<element name='task_schedule'>
  <display class='tactic.ui.table.GanttElementWdg'>
    <options>[
      {
        "start_date_expr":  "@MIN(sthpw/task.bid_start_date)",
        "end_date_expr":    "@MAX(sthpw/task.bid_end_date)",
        "color":            "white",
        "edit":               "true",
        "default":          "true"
      },
      {
        "start_date_expr":  "@MIN(sthpw/task['search_type', '~', 'asset'].bid_start_date)",
        "end_date_expr":    "@MAX(sthpw/task['search_type', '~', 'asset'].bid_end_date)",
        "color":            "red",
        "edit":               "true",
        "default":          "false"
      },
      {
        "start_date_expr":  "@MIN(sthpw/task['search_type', '~', 'shot'].bid_start_date)",
        "end_date_expr":    "@MAX(sthpw/task['search_type', '~', 'shot'].bid_end_date)",
        "color":            "blue",
        "edit":               "true",
        "default":          "false"
      }
    ]</options>
  </display>
  <action class='tactic.ui.table.GanttCbk'>
    <sobjects>@SOBJECT(prod/shot.sthpw/task)</sobjects>
    <options>[
      {
        "prefix":           "bid",
        "sobjects":         "@SOBJECT(sthpw/task)",
        "mode":             "cascade"
      },
      {
        "prefix":           "bid",
        "sobjects":         "@SOBJECT(sthpw/task['search_type', '~', 'asset'])",
        "mode":             "cascade"
      },
      {
        "prefix":           "bid",
        "sobjects":         "@SOBJECT(sthpw/task['search_type', '~', 'shot'])",
        "mode":             "cascade"
      }
```

```
    ]</options>
  </action>
</element>
```



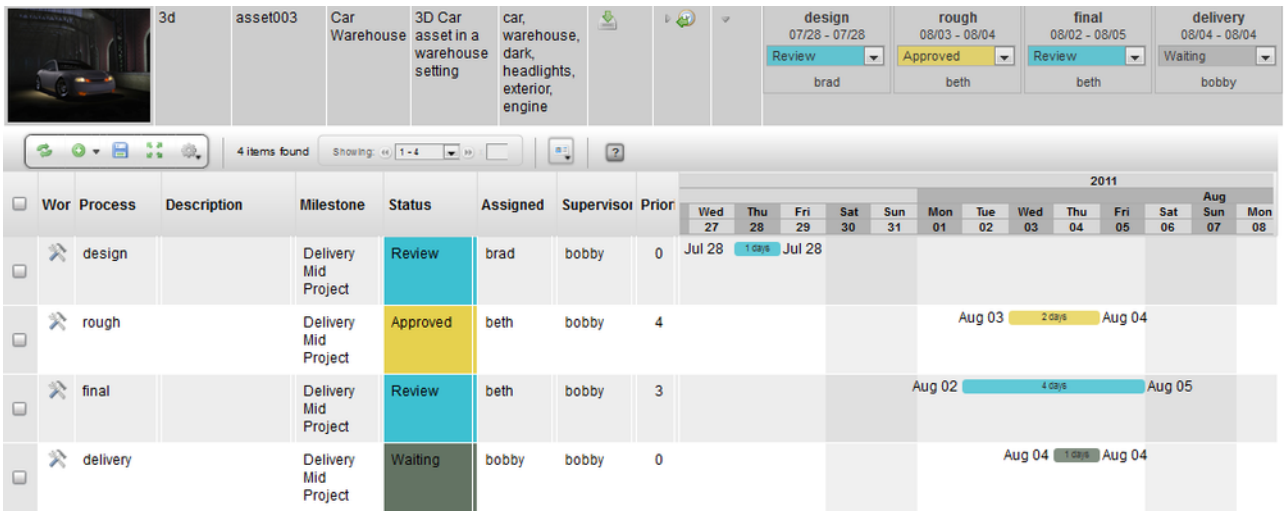
Note: There are 3 editable bars in the display options in the above example and therefore, there are 3 corresponding action options. The 'prefix' action option assumes that the column in the table is named like <prefix>_start_date and <prefix>_end_date. If your column names are different, you would want to use the action_option "start_date_col" and "end_date_col" with the full column name as the value.

Hidden Row

Description

The HiddenRowToggleWdg is used to add a cell to a table which when toggled, exposes a hidden view. This vew supports the embedding the following Widgets:

- TableLayoutWdg
- CustomLayoutWdg
- ViewPanelWdg



Info

Name	HiddenRowToggleWdg
Class	tactic.ui.table.HiddenRowToggleWdg
Category	Common Columns
Supported Interfaces	TableWdg
TACTIC Version Support	2.5.0 +
Required database columns	none

Usage

The HiddenRowToggleWdg is primarily a configuration tool which provides very simple usage for the user. By clicking the expand arrow, the hidden row will expand. Also, to batch expand the same HiddenRow for multiple rows in the table, select the desired rows (SObjects) and in the table header, do one of the following:

- Click the triangle to expand or collapse the HiddenRow for the selected SObjects.

Options

dynamic_class	The class to embed in the hidden row
new	Depricated

dynamic	Depricated
static	The view is loaded when the page loads
parent_key	The parent key of the parent SObject (Internal)

Advanced

The following HiddenRowToggleWdg is defined in the **definition** view for a prod/sequence. The embedded table shows a view of prod/shot SObjects in a view called **shot_hierarchy**

```
<element name='shots'>
  <display class='HiddenRowToggleWdg'>
    <dynamic_class>tactic.ui.panel.TableLayoutWdg</dynamic_class>
      <search_type>prod/shot</search_type>
      <view>shot_hierarchy</view>
      <mode>simple</mode>
      <do_search>true</do_search>
      <show_row_select>false</show_row_select>
  </display>
</element>
```

The following HiddenRowToggleWdg is used to show a view of prod/asset SObjects which have been planned (assiciated) to a prod/shot SObject. In this case, the available **<expression/>** option is used in the TableLayoutWdg to get the assets by traversing through the follwoing search types:

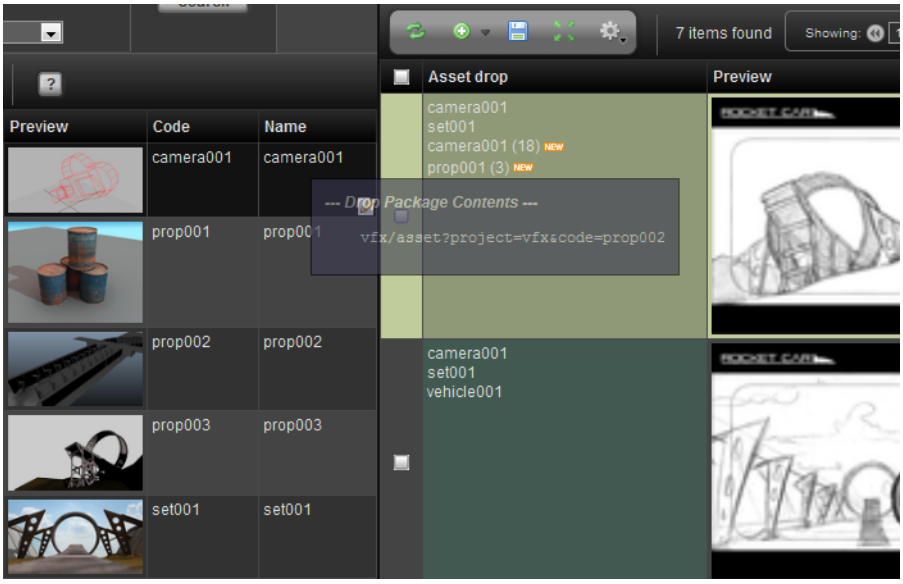
```
prod/shot -> prod/shot_instance -> prod/asset
```

```
<element name='assets'>
  <display class='HiddenRowToggleWdg'>
    <dynamic_class>tactic.ui.panel.TableLayoutWdg</dynamic_class>
      <search_type>prod/asset</search_type>
      <view>assets_hierarchy</view>
      <expression>@SOBJECT(prod/shot_instance.prod/asset)</expression>
      <mode>simple</mode>
      <do_search>true</do_search>
      <show_row_select>false</show_row_select>
  </display>
</element>
```

The following example shows how the dynamic_class is used to point to which widget to use in the hidden row.

```
<element name='tasks'>
  <display class='HiddenRowToggleWdg'>
    <dynamic_class>tactic.ui.panel.TableLayoutWdg</dynamic_class>
      <search_type>sthpw/task</search_type>
      <view>task_hierarchy</view>
      <mode/>
      <do_search>true</do_search>
      <show_row_select>true</show_row_select>
  </display>
</element>
```

Drop Item



Description

Facilitates drag-and-drop of an item between 2 views. For example, drag a user from one view and drop it into a user group.

Info

Name	Drop Element Widget
Common Title	Drop Element Widget
Class	tactic.ui.table.DropElementWdg
TACTIC Version Support	3.0.0 +
Required database columns	none

Usage

For example, in the Shot Planner view, individual assets can be added to a shot by simply dragging the asset from one view and dropping it onto the shot in another view. Once the asset is dropped onto the shot, the asset will appear in the column with a "NEW" flag. Hit the save button in the shot view to preserve the changes.

Options

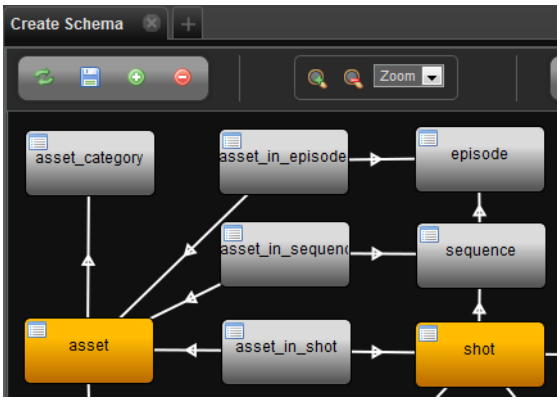
Accepted Drop Type	The acceptable sType that can be clicked on to be dragged and dropped onto another type. For example, sType is vfx/asset.
Instance Type	For the item that is being dragged, it is the sType that the item can be dropped onto. For example, sType is vfx/asset_in_shot"
Cbjs Drop Action	The call back JavaScript to run each time an item is dropped into the column.
Display Expr	The expression to run to display in view mode. For example "@"

Implementation

A many-to-many relationship between the 2 types needs to be created in the Schema Editor. By convention, the "join" node that need to be created to connect the 2 types should be named: "<sType1>_in_<sType2> ". For example, for

the join node named: "asset_in_shot". The "asset_in_shot" node stores the data representing the relationship between the asset and which shot it appears in.

The view where the item to be dropped onto the Drop Element column of, can exist in a custom layout table or a view opened in a new window within the TACTIC session.



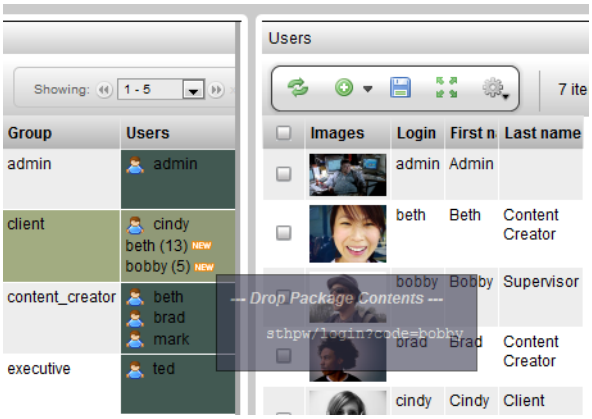

```
<element name="asset_drop" width="333px" edit="false">
  <display class="tactic.ui.table.DropElementWdg">
    <instance_type>vfx/asset_in_shot</instance_type>
    <accepted_drop_type>vfx/asset</accepted_drop_type>
    <css_background-color>#425952</css_background-color>
  </display>
  <action class="tactic.ui.table.DropElementAction">
    <instance_type>vfx/asset_in_shot</instance_type>
  </action>
</element>
```

Examples

Example 1: implementation of "asset_in_shot', where an asset can be drag and dropped onto a shot:

```
<element name="asset_drop" width="333px" edit="false">
  <display class="tactic.ui.table.DropElementWdg">
    <instance_type>vfx/asset_in_shot</instance_type>
    <accepted_drop_type>vfx/asset</accepted_drop_type>
    <css_background-color>#425952</css_background-color>
  </display>
  <action class="tactic.ui.table.DropElementAction">
    <instance_type>vfx/asset_in_shot</instance_type>
  </action>
</element>
```

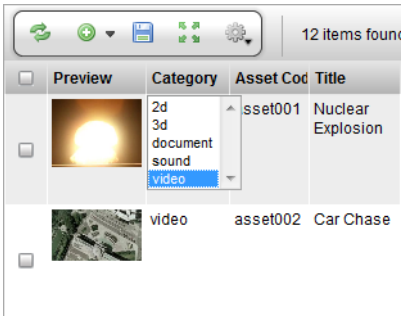
Example 2: implementation of "user_in_group', where a user can be drag and dropped onto a group:




```
<element name="users">
  <display class="tactic.ui.table.DropElementWdg">
    <css_background-color>#425952</css_background-color>
    <instance_type>sthpw/login_in_group</instance_type>
    <accepted_drop_type>sthpw/login</accepted_drop_type>
  </display>
</element>
```

Edit Widgets

Select



Description

The Select Widget is a simple widget version of an HTML drop down selection box. The widget is used for making a selection from a predefined list of items. Many built-in dropdown widgets in TACTIC extend from the Select Widget.

Info

Name	Select Widget
Class	SelectWdg
TACTIC Version Support	2.5.0 +
Required database columns	None, but typically this is attached to a data column

Usage

Usage of the Select Widget is straightforward. Simply click on the Select Widget button to open the drop down selection box. Then, select one of the menu items. Sometimes items are grouped and separated by a group label represented as << *label* >>. In that case, selecting the group label will trigger a warning pop-up. To unset a value, you can usually select the empty value with the label '-- Select --'.

Implementation

The select is often setup in the Edit Column definition -> Edit Tab. It is edited for the state for column data where the user should only be able to choose from a list of predefined values.

Options

values	A list of data values separated by the pipe character '|', e.g. model|anim|lighting
labels	A list of display labels separated by the pipe character '|', e.g. Model|Anim|LGT
empty	When set to true, the Select Widget will contain an empty option.
values_expr	This serves the same purpose as values but in the form of an expression. The input item of the expression has to exist for this to function properly.(ie @GET(vfx/sequence.code)). If it is used in the menu of an item in insert mode, you should set mode_expr to 'absolute'
labels_expr	This serves the same purpose as labels but in the form of an expression. The input item of the expression has to exist for this to function properly (ie @GET(vfx/sequence.name)). If it is used in the menu of an item in insert mode, you should set mode_expr to 'absolute'

mode_expr	If left unset, the default is to use the current item in the expression defined in values_expr and labels_expr. If set to 'absolute', the input item for the expression will be an empty list.
query	In the form of <search_type>|<value>|<label>, you can instruct the widget to retrieve the values and labels from the a particular sType. For example, to get all the asset codes from the sType 'vfx/asset', you can use 'vfx/asset|code|code'. To change the label to display asset's name instead, you can use 'vfx/asset|code|name'.

Advanced

The following example uses the query option to get the **code** of a parent shot item but, display the **name** value in the list. This query option is older. The values_expr and labels_expr option are preferred.

```
<element name="parent_code">
  <display class="SelectWdg">
    <query>prod/shot|code|name</query>
  </display>
</element>
```

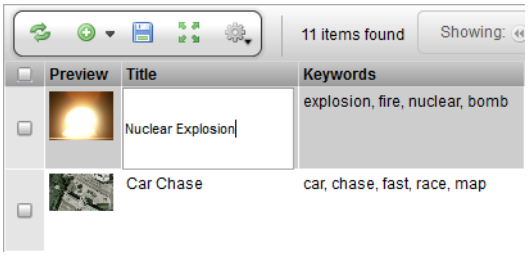
The following gets the same result but, uses expressions. This allows for more robust queries for values and labels.

```
<element name="parent_code">
  <display class="SelectWdg">
    <mode_expr>absolute</mode_expr>
    <values_expr>@GET(prod/shot.code)</values_expr>
    <labels_expr>@GET(prod/shot.name)</labels_expr>
  </display>
</element>
```

The following sets a hard coded list of values and labels for the SelectWdg.

```
<element name="status">
  <display class="SelectWdg">
    <values>waiting|in_progress|complete</values>
    <labels>Waiting|In Progress|Complete</labels>
  </display>
</element>
```

Text Input



Description

The TextWdg is a basic form element in which a single line of text can be entered. (To enter multiple lines, use the TextAreaWdg instead.) It maps directly to the HTML text input. It can be used independently or as an edit element in the TableLayoutWdg or EditWdg.

Info

Name	Text Input
Class	pyasm.widget.TextWdg
TACTIC Version Support	2.5.0 +
Required database columns	none

Implementation

Basic example of a typical usage of a TextWdg

Options

size	Determine the width of the text widget. Default is "50".
read_only	true|false - determines whether the widget can have its text contents altered.

Advanced

Simple example which displays text widget that is fully editable:

```
<element name='first_name'>
  <display class='pyasm.widget.TextWdg'/>
</element>
```

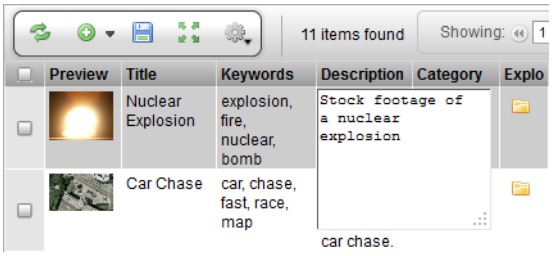
A text widget that only allows integer input. The size is reduced to 5.

```
<element name='age'>
  <display class='pyasm.widget.TextWdg'>
    <size>5</size>
  </display>
</element>
```

A simple example of the TextWdg in Python:

```
from pyasm.widget import TextWdg

div = DivWdg()
text_wdg = TextWdg("age")
text_wdg.set_option("size", "20")
div.add(text_wdg)
```

Text Area



Description

The TextAreaWdg is a simple text widget which is used for editing full-text. The widget supports using the ENTER key for adding new lines (the ENTER key is often not supported on text entry widgets where CTRL+ENTER is used.) This widget can also be configured to display a larger canvas to work on.

Info

Name	TextAreaWdg
Class	pyasm.widget.TextAreaWdg
TACTIC Version Support	2.5.0 +
Required database columns	requires a database column for storing the text data.

Implementation

The TextAreaWdg is used in Edit scenarios where full text input is required. There is control for the columns (characters across) and rows (characters down).

Options

cols	The number of character columns in the TextArea
rows	The number of character rows in the TextArea

Advanced

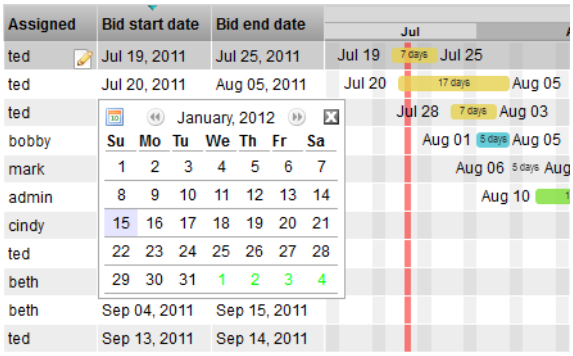
The following example is a default implementation. The default number of cols is **50** and the default number of rows is **3**.

```
<element name="subject">
  <display class="TextAreaWdg"/>
</element>
```

The following example creates a large text area which could be used for writing large amounts of full-text.

```
<element name="summary">
  <display class="TextAreaWdg">
    <cols>100</cols>
    <rows>30</rows>
  </display>
</element>
```

Calendar Input Widget



Description

The CalendarInputWdg displays a navigable calendar where dates can be selected. It is an input widget that conforms to the BaseInputWdg interface and is used for inline editing or as one of the items in the EditWdg layout.

Info

Name	Calendar Input
Class	tactic.ui.widget.CalendarInputWdg
Category	Input widget
Supported Interfaces	EditWdg, TableLayoutWdg (edit view)
TACTIC Version Support	2.5.0 +
Required database columns	none unless editing a specific date column

Implementation

The simple implementation does not require any options. It displays a non-editable text box with a value that represents a date. Clicking on the cell opens up the calendar widget.

Options

first_day_of_week	Integer representing first day of the week (0=Sunday, 6=Saturday)
read_only	Sets the widget to be read only. In read-only mode, clicking on the cell does not bring up the calendar for input. Only a text box with the date value is displayed.

Advanced

The simplest and most common usage is the default implementation.

```
<element name='start_date'>
  <display class='tactic.ui.widget.CalendarInputWdg'/>
```

```
</element>
```

To set the work week to start on a different day than Sunday, change the first_day_of_week . This option is an integer which represents the days of the week where 0=Sunday and 6=Saturday.

```
<element name='start_date'>
  <display class='tactic.ui.widget.CalendarInputWdg'>
    <first_day_of_week>6</first_day_of_week>
  </display>
</element>
```

Common Widgets

Completion

Process	Status	Completion	Assigned
ingest	approved	100.0%	brad
roto	in_progress	40.0%	beth
depth	revise	60.0%	brad
comp	ready	20.0%	mark
deliver	review	80.0%	mark
ingest	revise	60.0%	brad
roto	in_progress	40.0%	beth
depth	review	80.0%	beth
comp	revise	60.0%	brad
deliver	ready	20.0%	brad
		Total 24.0%	

Description

The Task Completion Widget provides a graphical bar chart to represent the progress of an item by the completion rate of its child tasks.

Info

Name	Task Completion Widget
Common Title	Task Completion Widget
Class	tactic.ui.table.TaskCompletionWdg
TACTIC Version Support	2.5.0 +
Required database columns	none

Usage

This is a display-only widget. If all the tasks are completed for a shot, the bar reading would be 100%. Otherwise, a partial completion would be calculated based on tallying all the child tasks. If there are no tasks for the item, "No tasks" is displayed.

Total Tasks	Tasks	Completion
		No tasks
24		58.0%
16		25.0%
		Total 41.5%

Implementation

It is a common column that can be added using the Column Manager. The item name is "completion".

Options

task_expr	An expression to get to the tasks relative to the current sObject. e.g. @SOBJECT(prod/shot.sthpw/task)

Advanced

```
<element name="completion" edit="false">
    <display class="tactic.ui.table.TaskCompletionWdg"/>
</element>
```

How The "Completion" is Calculated

Example 1:

Let's say that we have a task in a pipeline with the following processes:

4 processes: Design, Rough, Modeling, Delivery

Let's say that for each process, there are:

4 statuses: Unassigned, In Progress, Ready_for_Review, Approved.

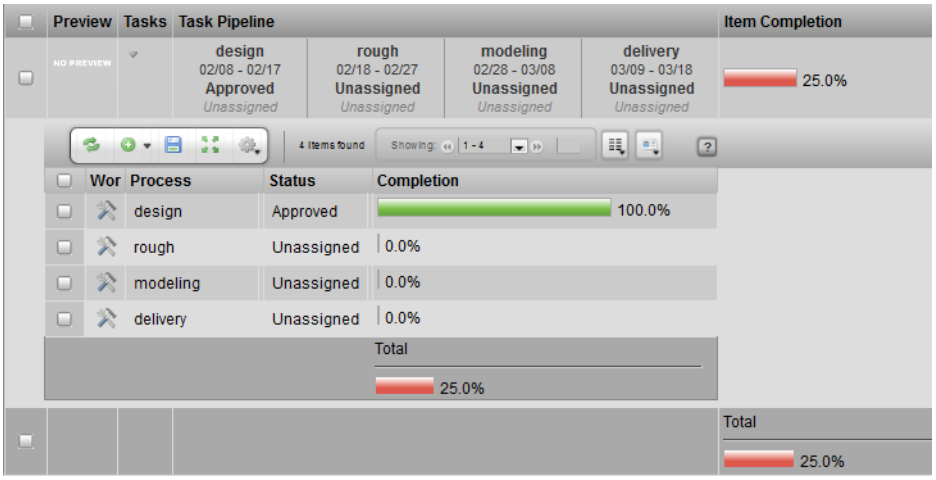
If the task is in the status: Unassigned, the task is 0% complete.

If the task is in the status: Started, the task is 33.3% complete.

If the task is in the status: Ready_for_Review , the task is 66.6% complete.

If the task is in the status: Approved, the task is 100% complete.

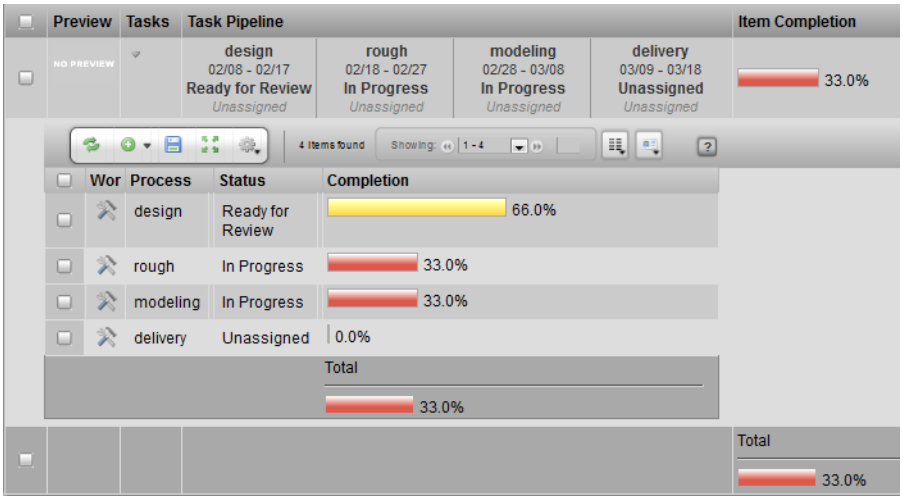
Let's say the task in the Rough process has the status 'Approved'. That means that is 100% complete for the Rough process. In the other 3 processes, it is at Unassigned, which is 0% complete.



Then, the TOTAL completion would be (1.0 + 0 + 0 + 0) / 4 = 25% complete.

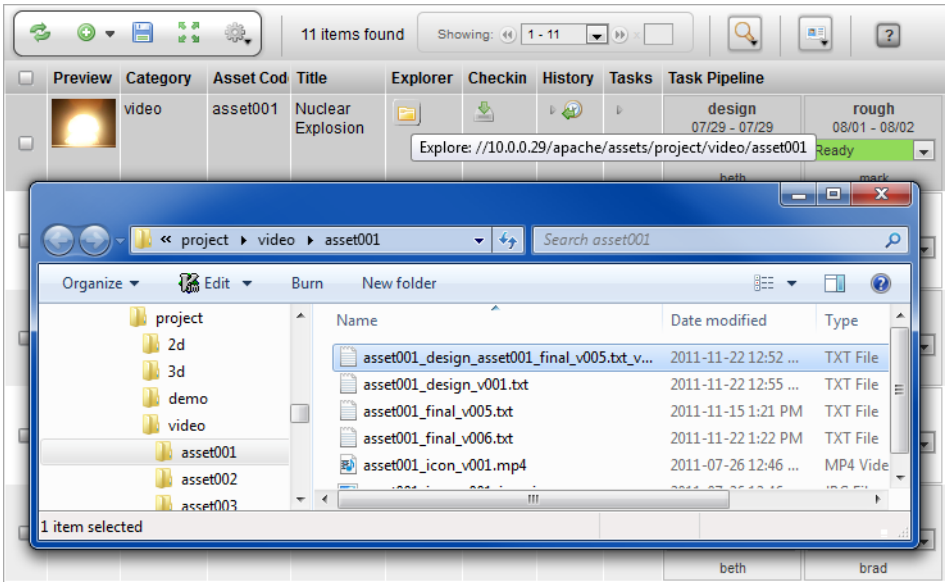
Example 2:

Using the same process and task statuses, let's say the task in the Rough process has the status 'Ready_for_Review'. That means that is 66% complete for the Rough process. In the other 2 processes, it is at Started, which is 33.3% complete. In the last processes, it is at Unassigned, which is 0% complete.



Then, the TOTAL completion would be (0.666 + .333 + .333 + 0) / 4 = 33.3% complete. .

Explorer Button



Description

The Explorer Widget can be configured to launch Windows Explorer for Windows (or Finder for OSX). It can be configured to open to a directory which is either the sandbox or to the repository of the corresponding item.

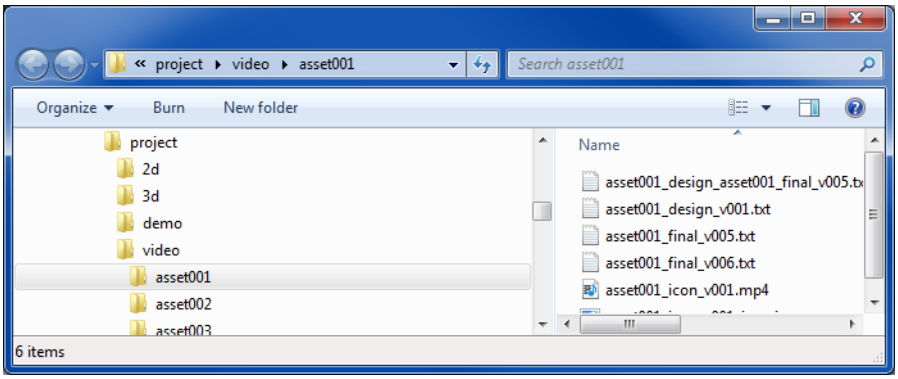
Info

Name	Explorer
Class	tactic.ui.table.ExplorerElementWdg
Category	Common Columns
TACTIC Version Support	3.0+
Required database columns	none

Implementation

When added to the view, the Explorer Widget button is represented as an icon of a folder. The button opens up Windows Explorer (or Finder on OSX). This gives the user a quick starting point for navigating to a directory that is relevant to the corresponding item. The convenience is greater when the repository contains a lot of items or the directory folder structure is very deep. Users save time by not having to navigate through endless directories to get to where they need to go to do work.

By default, the Explore Widget opens a window to the corresponding item if it exists in the user's sandbox.



Options

mode	sandbox|client_repo - determines what directory to go to when the explorer button is pressed.

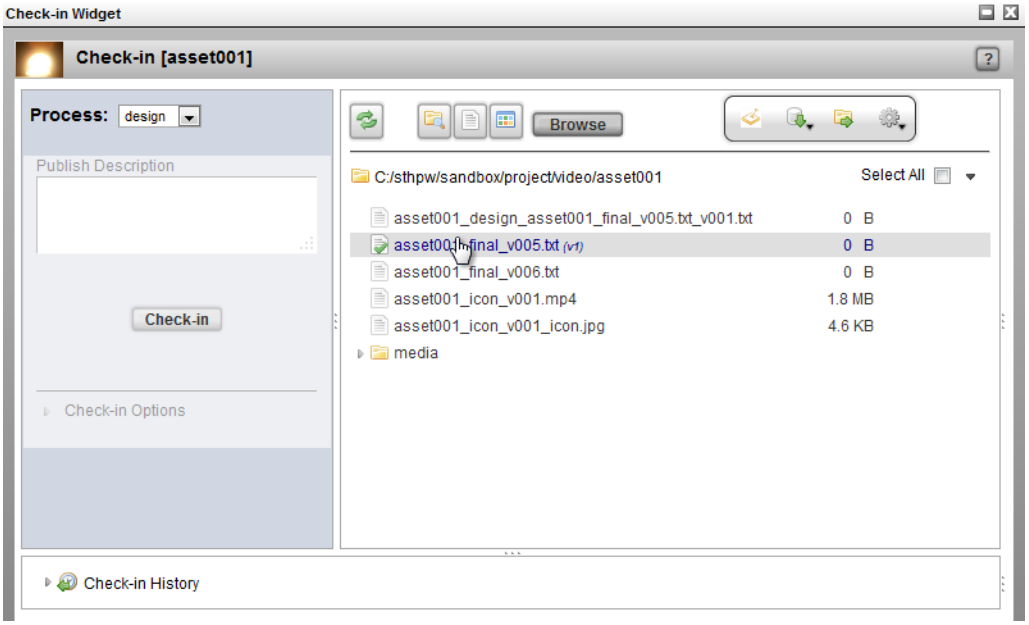
Advanced

The following example configures the Explorer Widget to browse to the assets directory as specified in the **Tactic Config File**

```
<element name='explorer'>
  <display class='tactic.ui.table.ExplorerElementWdg'>
    <mode>client_repo</mode>
  </display>
</element>
```

```
<element name='explorer'>
  <display class='tactic.ui.table.ExplorerElementWdg'/>
</element>
```

General Check-in Widget



Description

This is the new preferred Check-in Widget for 3.7+. It makes use of the Java Applet to accomplish various kinds of check-in functions like checking in a single file, sequences of files, or directories. The **copy** or **preallocate** transfer mode should be used when dealing with a large file transfer. **Upload** transfer mode only supports checking in single files and sequences of files. **Upload** is set to be the default in case new users do not have the handoff directory readily set up.

Info

Name	General Check-in Widget
Class	tactic.ui.widget.CheckinWdg
Category	Widget
Supported Interfaces	TableLayoutWdg
TACTIC Version Support	3.7.0 +
Required database columns	none

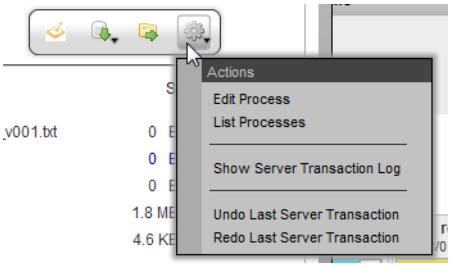
Options

transfer_mode	**upload**, **copy** and **move** are supported. **copy** is recommended for most situations when users are usually granted only read access to the TACTIC asset repo. *(default is copy)*
mode	**sequence**, **file**, **dir**, and **add** are supported. **sequence** is for file sequence checkin; **file** is for single file checkin; **dir** is for directory checkin; and **add** is for appending file or dir to an existing snapshot. If not specified, multiple selections will be available for the user to choose. Note: upload transfer mode only supports single file or file sequence checkin.
checkin_script_path	a custom checkin script path to specify an override on what functions get called during a checkin. Note: If trying to do some preprocessing with the file or directory

	before checking in, just make use of validate_script_path function using Client Trigger. Client Trigger works by setting up this check-in script as a Client Trigger callback that affects the search type rather than just a column definition.
validate_script_path	a script path pointing to a JavaScript file that is run before the actual checkin. If it throws an error using "throw(<error message>)", the checkin will not initiate. This path can also use it to run some client-side preprocessing of the file or directory. It is not set up as a display option but rather as a Client Trigger callback.
checkout_script_path	a custom check-out script path to specify to override what happens during a check-out.
process	If set, the process specified will be pre-selected when the General Check-in Widget is drawn,
lock_process	If set to true, the user will not be able to choose a different process during a checkin, in the General Check-in Widget
show_context	When set to true, the **context** will be displayed to the user. *(default is false)*

Gear Menu Options

The Gear Menu in the Check-in Widget provides the following administration options:



Edit Process	Load the process options pop-up. *The process and subcontext options are described further in the sections below*
List Processes	List all of the processes for the current pipeline. This provides the same access to the as the Edit Process option but for all processes.
Show Server Transaction Log	Show the standard server transaction log
Undo Last Server Transaction	Undo the last transaction. *When undoing a checkin, the files will also be removed in the file system.*
Redo Last Server Transaction	Redo the last transaction. *When redoing a checkin, the files will be restored in the file system.*

Implementation

The default settings will allow a user to check in files to an assets in the "publish" process. It provides a very general and loosely enforced workflow to check in and manage files. Often, it is required, that a particular process has very strict enforcement of naming conventions and check-in procedures.

The General Check-in widget is highly configured and can be tuned precisely for each part of the process. The various customizations can fall into the following categories:

Validation
Subcontext options
Custom interface
Custom check-in script

Naming conventions

Each of these can be customized for the particular widget or at the process level.

Validation

Validation is a custom script that will is run before the check-in process occurs. It provides the ability to check that all files in the checkin conform to some custom logic required for a successful checkin. If the validation script fails, then the entire checkin is aborted.

Client Side Triggers

A client trigger set up allows control over what check-in script or validate_checkin script to call during a checkin. Here is an example of how to set the checkin/validate_folder script to run before the check in of prod/asset. The event name is CheckinWdg|validate_script_path|<search_type>. If only a particular process is desired to be run on check in for, like "texture", the event name would become CheckinWdg|validate_script_path|prod/asset|texture. To override the checkin_script_path, use the event CheckinWdg|checkin_script_path|<search_type>. If this event-based set-up seems a bit too involving, override the checkin_script_path for just this instance of the widget by using the standard display option <checkin_script_path>.

Process Options

By default, the subcontext selection is set to **(auto)**. It is the simplest to use and allows TACTIC to auto generate the subcontext. Because the subcontext is auto generated, strict naming conventions for the file are often sacrificed for ease of use. By default, the checked in file will just have a version number attached to it.

It is possible to force a limited list of subcontext options on a particular checkin. This means that the files checked in will be named according to the subcontext selected and provides a limited set of approved containers in which files can be checked in.

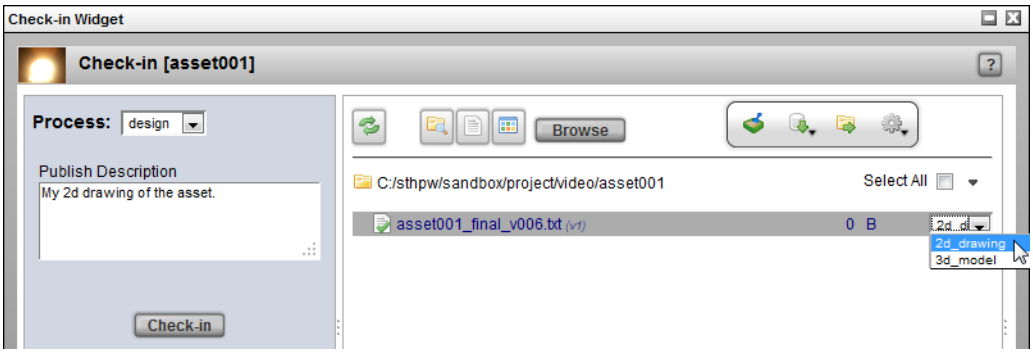
Process/Context/Subcontext

Checkin's are always categorized by process. If there is no pipeline defined, the default process "publish" will be used. Categorizing checkin's by the process in the pipeline of an asset organizes the work done for an asset according to its product life cycle.

Another important attribute of a checkin is the context. Assets are versioned according to their context which provide a namespace for versioning checkin's of an asset. All checkin's of an asset with the same context are versioned together. The context of an asset is a particular way to view an asset.

For example, a 2D drawing of a character and a 3D model of the same character represent the same abstract asset, so are two different contents of the asset. This can be implemented in TACTIC by specifying the following in the Check-in Widget's Context Options:

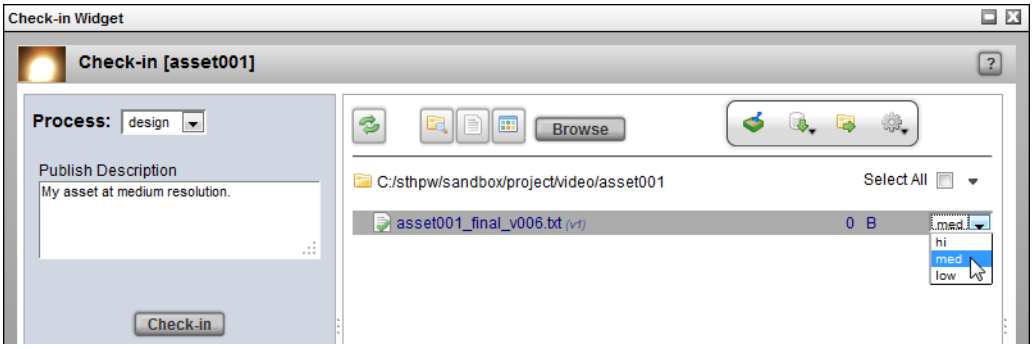
```
Context Options: 2D_drawing|3D_model
```



Although the context can be any string, most often, it is built up from other parameters. The convention usually used is "<process>/<subcontext>". All of TACTIC's built-in check-in tools assume this relationship. The subcontext provides a namespace for checking in multiple subcategories of files within a single context.

The following is an example of these subcontext options:

```
Subcontext Options: hi|med|low
```

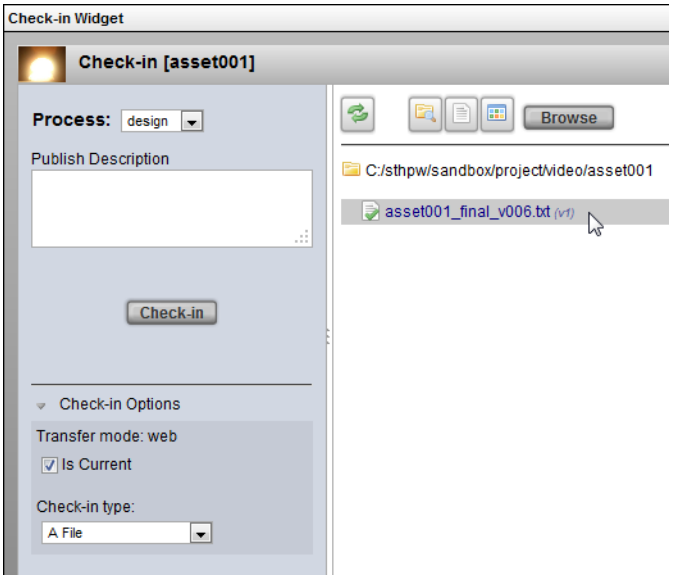


Naming conventions are often strictly enforced, meaning that the folder and the file name are automatically supplied on check in of a file to the central repository.

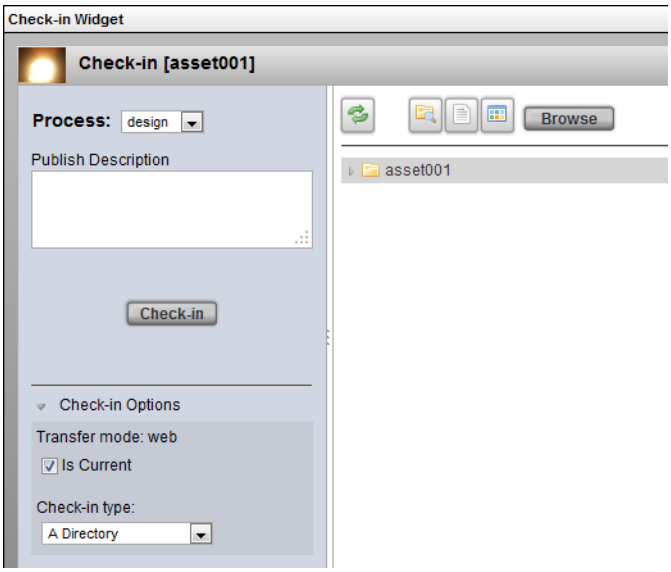
Default Check-in Widget Options

In the panel on the right, when something from the list is selected for check in, the corresponding Check-in type (e.g.. **file**, **directory**, **sequence**, **multiple individual files**) is automatically selected by the Check-in Widget.

For example, on the panel on the right, if a *file* is selected for check in, the Check-in type will automatically switch to **A File** under the Check-in Options on the bottom left:



For example, if a *folder* is selected to check in on the right panel, the Check-in type will automatically switch to **A Directory** under the Check-in Options on the bottom left:

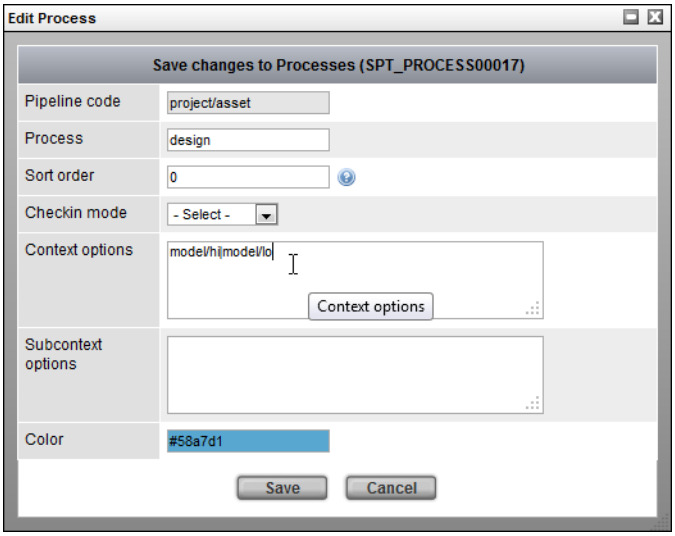


More Context and Subcontext Examples

Example 1)

To check in *high resolution* and *low resolution* files for a model process, first specify the **context_options** under:

Checkin Widget -> Gear Menu -> Edit Process:



Specify the following Context Options:

```
Context Options: model/hi|model/lo
```

OR specify the following Subcontext Options:

```
Subcontext Options: hi|lo
```

Both of the choices above give the *same* result.

Result:

```
process = model
```

```
context = model/hi   (or model/lo)
```

Only use either the context field or the subcontext field but not both fields.

Note

If values are specified for *both* the **context_options** and the **subcontext_options**, only the **context_options** will be used (the **subcontext_options** will be ignored).

Example 2)

To provide the same options (hi and lo) and avoid using subcontexts specify the following **context_options**:

```
context_options: model_hi|model_lo
```

Result:

```
process = model
context = model_hi    (or model_lo)
```

Notice that the forward slash '/' was not used, which avoids using subcontexts.

Example 3)

The following is another example of how to avoiding using subcontexts altogether.

To check in a *proxy* and a *staging* context for a model process, specify the following **context_options**:

```
context_options: model_proxy|model_staging
```

Result:

```
process = model
context = model_proxy    (or model_staging)
```

Again, notice that the forward slash '/' was not used, which avoids using subcontexts.

Subcontext Keywords: (auto), (main) and (text)

The following subcontext option keywords are supported:

(auto)	Uses the filename as the subcontext *(**auto** is the default if no values are specified for the context or subcontext options)*
(main)	Uses the process as the context
(text)	Allows the user to specify their own context for the file to check in

Example for **(auto)**:

process:	design
filename:	my_checkin_file.txt
subcontext option selected:	(auto)

Result:

```
context = design/my_checkin_file.txt
```

Example for **(main)**:

process:	design
subcontext option selected:	(main)

Result:

```
context = design (because design is the process)
```

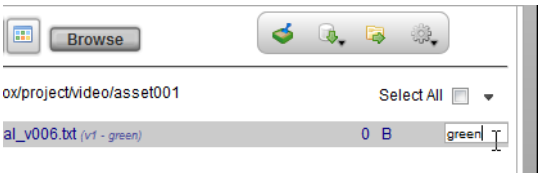
Example for **(text)**:

To check in different colors of a car for the design process eg. a green version of the car and a red version

process:	design
subcontext option selected:	(text)
custom context inputted	green

Result:

```
context = design/blue
```



Providing a Custom Layout View For the Check-in Options

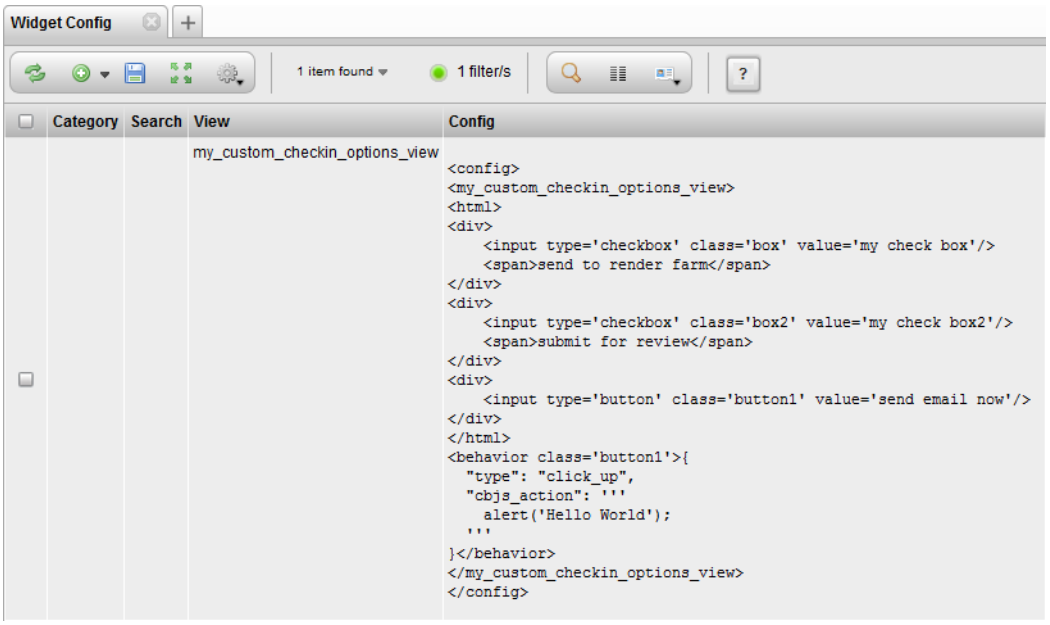
A custom layout view can be provided in the check-in panel as options.

For example, to provide check boxes during the check in to submit the job to the render farm or to submit the file for the review process, create a custom view and specify the view in the **Check Options View**.

To do this, first, create a custom view under:

Admin Views -> Project -> Widget Config

Below is an example of a custom layout view:



note:

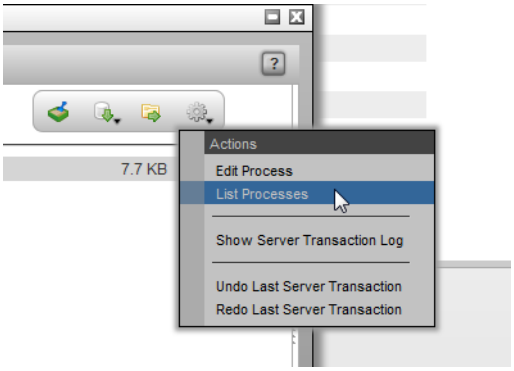
In the example custom view above, to make use of these custom UI check boxes, more work needs to be done to override the checkin_script or checkin_validate_script.

The checkin_script and the checkin_validate script can be found under: Checkin Widget -> Gear Menu -> List Processes

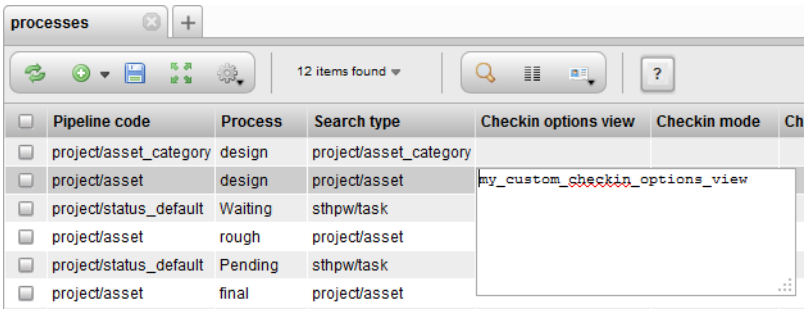
Example validate scripts can be found at the end of this Check-in Widget doc in the section labeled Example Scripts: Example 1 and 2.

Then, specify the name of the view under:

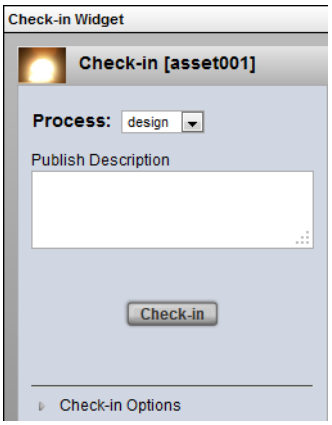
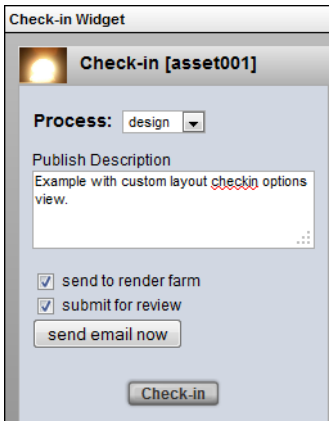
Checkin Widget -> Gear Menu -> List Processes



In the Check-in Options View, specify the name of the custom layout view for the check-in options:



Finally, select a file to check in, the custom view with the check-in options will appear on the panel on the left.

Without custom check-in options:	**With customer check-in options:**
	

Script Samples

This script can be saved in the Script Editor accessible through the Gear Menu.

Example 1: checkin/validate_folder

```
var values = bvr.values;
var file_path = values.file_paths[0];
var sk = values.search_key;
var applet = spt.Applet.get();

var file_list = applet.list_dir(file_path);

for (var i=0; i <file_list.length; i++){

    var base =spt.path.get_basename(file_list[i]);
    if ( base == 'DATA') {
         throw('it contains a DATA folder. Checkin aborted');

    }
}
```

Example 2: checkin/validate_file

```
var values = bvr.values;
var file_path = values.file_paths[0];
var sk = values.search_key;
var applet = spt.Applet.get();

var base =spt.path.get_basename(file_path);
if ( base.test(/\\.mov$/)) {
     throw('it does not have a mov extension. Validation failed.');
}
```

Example 3: Custom checkin_script using display option "checkin_script_path". The default snapshot_type is file, if the file extension is .mov, the snapshot_type is set to 'mov'.

```
var file_paths = bvr.values.file_paths;
var description = bvr.values.description;
var search_key = bvr.values.search_key;
var context = bvr.values.context;
var transfer_mode = bvr.values.transfer_mode
var is_current = bvr.values.is_current;
var path = file_paths[0]
spt.app_busy.show("File Checkin", path);

var snapshot_type = 'file';
if (path.test(/\\.mov$/)){
    snapshot_type = 'mov';
}
var server = TacticServerStub.get();
snapshot = server.simple_checkin(search_key, context, path,
{description: description, mode: transfer_mode, is_current: is_current,
 snapshot_type:'mov'});
```

Advanced

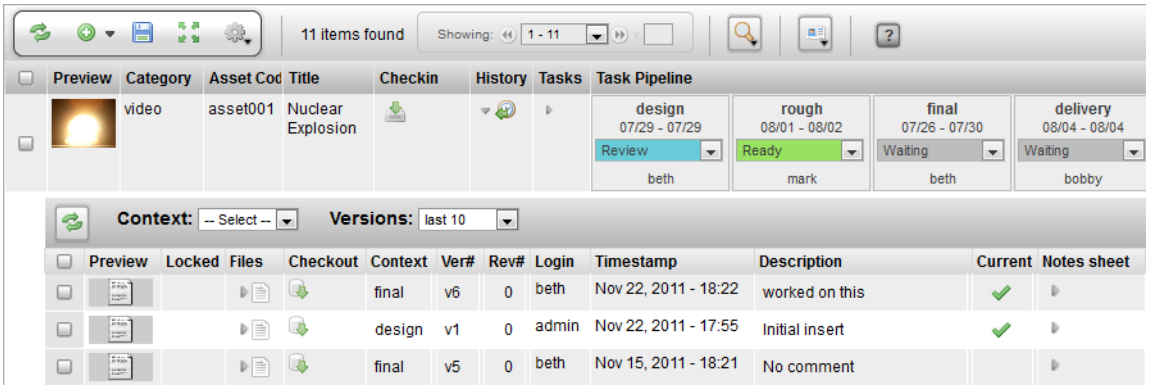
The General Check-in Widget is usually invoked with a CheckinButtonElementWdg with a transfer mode specified. In this implementation, the process will be preselected as "texture", providing the pipeline for this sObject does contain a process named 'texture'.

```
<element name='general_checkin' title=' '>
  <display class='tactic.ui.widget.CheckinButtonElementWdg'>
    <transfer_mode>copy</transfer_mode>
    <process>texture</process>
  </display>
  </element>
```

In this implementation, the process will be preselected as "model", providing the pipeline for this sObject does contain a process named 'model'. The user cannot switch to other processes in the pipeline, and only "New Directory" mode can be selected.

```
<element name='general_checkin' title=' '>
  <display class='tactic.ui.widget.CheckinButtonElementWdg'>
    <transfer_mode>copy</transfer_mode>
    <process>model</process>
     <lock_process>true</lock_process>
    <mode>dir</mode>
  </display>
</element>
```

Checkin History



Description

The Checkin History Widget is a toggle that opens a hidden row that displays all the snapshots (snapshots are checkins at a particular moment in time for a context) for an item.

Info

Name	Checkin History Widget
Common Title	History
Class	tactic.ui.widget.SObjectCheckinHistoryWdg
Category	Common
TACTIC Version Support	3.0.0 +
Required database columns	none

Usage

The following details are displayed by the Checkin History Widget for a task:

- **preview** of the snapshot
- whether checkout of the snapshot is **locked**
- toggle to open a hidden row to list the **files** in the snapshot
- link to **checkout** this particular snapshot
- **context** of the snapshot
- **version** of the snapshot
- **revision** of the snapshot
- **login** who checked in the snapshot
- **timestamp** of the checkin
- **description** written by the user at the time of the snapshot
- indicator whether the snapshot is the **current** version for that context

- toggle to open the notes using the **Note Sheet** Widget

Implementation

The Checkin History Widget can be found as a common column that can be added using the Column Manager.

Options

There are no options provided for the Checkin History Widget.

Advanced

```
<element name="history" edit="false">
    <display class="HiddenRowToggleWdg">
        <icon>HISTORY</icon>
        <dynamic_class>tactic.ui.widget.SObjectCheckinHistoryWdg</dynamic_class>
    </display>
</element>
```

Note (discussion)

Description

The Notes Widget allows users to write notes for a particular item (sObject). This widget allows team members to exchange comments for a process by writing them in the Notes Widget. The notes are displayed chronologically with latest one appearing at the top. The complete history is displayed by default. It's one of the common columns which can be added in any view for an sType. A similar note entry widget called the Note Sheet Widget, focuses more on the speed of entry rather than the display of the conversation.

Info

Name	Notes
Class	tactic.ui.widget.DiscussionWdg
Category	Table Element Widget
Supported Interfaces	TableLayoutWdg
TACTIC Version Support	2.5 +
Required database columns	This widget interacts with the built in sthpw/note table

Usage

To create a new note, select the New Note button.

This will switch the DiscussionWdg into insert mode where notes and context of the notes can be entered.

In most cases, the grouping for the notes is derived through selecting a 'context'. This context is often chosen in relation to the context of a given 'task' or 'snapshot' (Checkin) for the same parent sObject. This then associates all tasks, notes and snapshots under a specific Search Object. This allows users to retrieve historical data for a Search Object through a context. This answers the question "What's the history of this Asset from the design department?"

To navigate the history of the notes, click on a particular note and it will expand and display the full note.

Note

Depending on the configuration, the grouping (context) items will be grouped and separated by a group label represented as << *label* >>. In that case, selecting the group label will trigger a warning pop-up.

To unset a value, you can usually select the empty value with the label '-- Select --'.

Implementation

The Notes widget is a common column which can be added using the Column Manager. The item name is "notes". A "default" context is used in this simple implementation.

Options

context	a global context can be specified
append_context	a context can be appended to the current list (deprecated)
setting	A project setting can be used to drive the contexts. This provides the key of the project setting.
append_setting	This serves the same purpose as setting but would append the contexts at the end

include_submission	If set to true, it would include the notes for the submission (a child) of the current sObject.

Advanced

```
<element name="discussion" edit="false">
        <display class="pyasm.widget.DiscussionWdg">
            <context>default</context>
        </display>
</element>
```

Note Sheet Widget

Description

The Note Sheet Widget allows entering of many notes in different contexts and different parents at the same time. It can be used for entering notes for any search types. By default, it uses the parent's pipeline processes as the contexts for note entry. Notes can be saved either individually or altogether. There is an option to make a note private as well.

Info

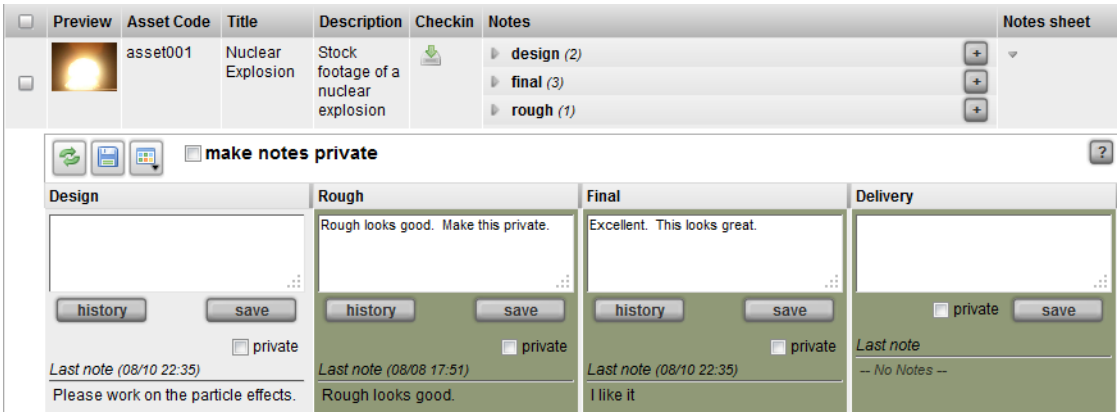
Name	Note Sheet Widget
Common Title	Note Sheet
Class	tactic.ui.app.NoteSheetWdg
Category	Table Element Widget
Supported Interfaces	TableLayoutWdg
TACTIC Version Support	2.5.0 +
Required database columns	none

Usage

When used with regular sTypes with its pipeline_code set, the Note Sheet Widget automatically displays the pipeline processes as note context options. Each enabled context is marked with a check in the check box, which goes along with a text box for note entry. Indicate which contexts display for input by selecting the appropriate check boxes. When used with a child search_type like a task, the Note Sheet Widget assumes its context attribute as the note context.

Clicking on "**save**" icon will save all of the notes together for this parent. To save one note at a time, click on the individual **save** button under the corresponding note.

The private check box turns a note access as private if checked. The history button is used to display all the note entries for a context.



Implementation

The Note Sheet Widget is a common column that can be added using the Column Manager.

Options

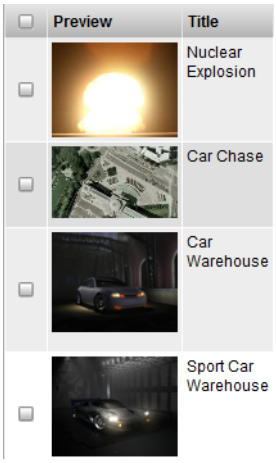
dynamic_class	Set the class name of the widget to be displayed

pipeline_code	Specifies a particular pipeline_code to use or if the parent of this note sheet widget does not have the 'pipeline_code' attribute e.g. 'model'. If unspecified, it will be based on the pipeline_code value of its parent.
element_class	To override the default element class NoteTableElementWdg, modify the look or add extra buttons to the UI to enter notes. One method is just to override the method get_action_wdg()
use_parent	When a note sheet is added to a sType like task or snapshot but it is set up so that the note is targeted at its parent, which could be an asset or shot. If so, set this display option to true.
append_context	Used to add contexts that are not defined in the pipeline. Separate the contexts with a pipe character if there are more than one, e.g. producer|director.

Advanced

```
<element name="notes_sheet" edit="false">
    <display class="HiddenRowToggleWdg">
        <dynamic_class>tactic.ui.app.NoteSheetWdg</dynamic_class>
    </display>
</element>
```

Preview



Description

The Thumbnail Widget is available for most types by default as the preview tool for images which have been uploaded for preview and thumbnail purposes. An icon for the corresponding file type is displayed for non-image files.

Info

Name	Thumbnail Widget
Common Title	Preview, Snapshot, Files
TACTIC Version Support	2.5.0 +
Required database columns	none

Implementation

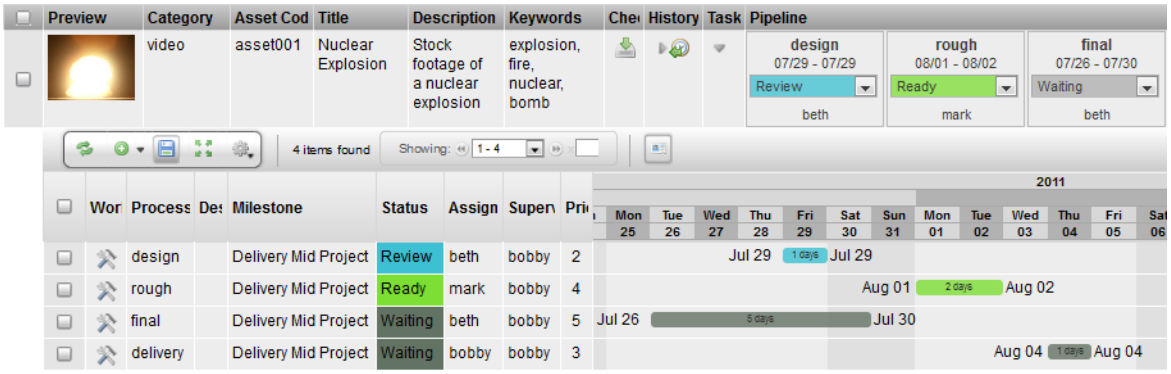
The Thumbnail widget is available in the common columns.

Options

script_path	Specify a script to control what UI it draws or what happens when the user click on the preview icon. Refer to it by this script path.
detail_class_name	Specify the default behavior to open up a pop-up window but just with a different widget written in Python.
icon_context	The context that the widget displays
icon_size	Control the icon size by percentage (up to 100%) e.g. 30%
min_icon_size	Minimum icon size (in pixels).
latest_icon	If set to 'true', the icon displayed corresponds to the latest checkin in the checkin history. It will disregard the icon context designated for this search type.
filename	If set to 'true', the file name of the linked file is displayed under the icon.
original	If set to 'true', the link will point to the original file with the 'main' file type checked in. Otherwise the scaled down 'web' version of the file will be linked. This is only applicable to image-type files where an icon has been generated during a check-in.
file_type	Whether to display the file type for download or not.

detail	If set to 'false', clicking of the thumbnail will link the underlying picture instead of displaying the single asset view in a pop-up
protocol	'http'(default) or 'file'. The protocol under which the thumbnail link will open when being clicked on. When 'file' is set, the default application is usually Windows explorer or at times Internet Explorer. 'file' mode can alleviate the bandwidth usage on the web server when viewing large media files like Quick Time.
redirect_expr	Works similarly as the redirect but in the form of expression. e.g. @SOBJECT(prod/sequence). If this display option is set for the ThumbWdg for prod/shot, it will display the icon of its sequence instead.

Task Edit



Description

The Task Edit Widget is a toggle that opens a hidden row that displays all the tasks for an item. If there are multiple processes for an item, the tasks for those processes will be displayed.

Info

Name	Task Edit
Common Title	Tasks
Class	tactic.ui.panel.TableLayoutWdg
Category	Table Layout Widget
Supported Interfaces	TableLayoutWdg
TACTIC Version Support	3.0.0 +
Required database columns	none

Usage

The following details are displayed by the Task Edit Widget for a task:

- a link to the task's Work Area (where the Checkin and Checkout tools can be found)
- the task's description
- status for that process
- the user assigned to the process
- the supervisor of that process
- the priority
- start and end date for the process in the form of a Gantt chart

Implementation

The Task Edit Widget is a common column that can be added using the Column Manager.

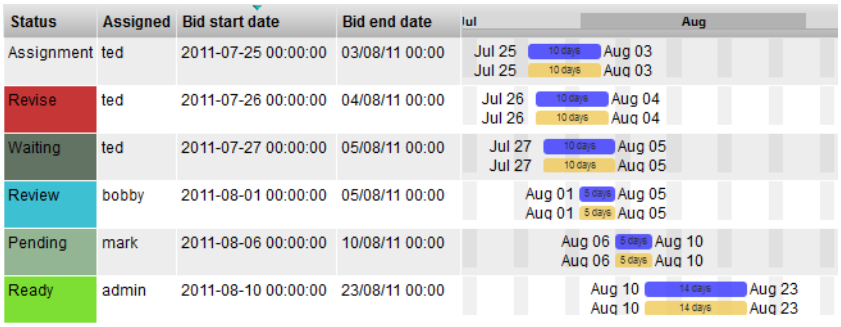
Options

There are no options provided for the Task Edit Widget.

Advanced

```
<element name="task_edit" title="Tasks" edit="false">
    <display class="HiddenRowToggleWdg">
        <dynamic_class>tactic.ui.panel.TableLayoutWdg</dynamic_class>
    </display>
</element>
```

Task Schedule



Description

The Task Schedule displays a horizontal bar graph representing the schedule of start/end date and duration for all tasks assigned to an item. This widget is a simple pre-configuration of the Gantt Chart widget.

Info

Name	Task Schedule
Class	tactic.ui.table.GanttElementWdg
Category	Common Columns
TACTIC Version Support	3.0+
Required database columns	none

Implementation

The Task Schedule Widget is a common column that can be added using the Column Manager.

Options

The following is the configuration option which the makes this widget distinct from its derivative, the Gantt Chart widget.

```
[
        {
          "start_date_expr":  "@MIN(sthpw/task.bid_start_date)",
          "end_date_expr":    "@MAX(sthpw/task.bid_end_date)",
          "color":            "#33F",
          "edit":             "true",
          "default":          "false"
        },
        {
          "start_date_expr":  "@MIN(sthpw/task['context','model'].bid_start_date)",
          "end_date_expr":    "@MAX(sthpw/task['context','model'].bid_end_date)",
          "color":            "#F0C956",
          "edit":             "true",
          "default":          "false"
        }
        ]
```

Show Title	**True** or **False** Display the title in the column header.
Date Mode	**visible**, **hover** Always display the start/end date next to the horizontal bar or display the dates only on cursor hover.

Range Start Date	Select the start date range for the tasks to display.
Range End Date	Select the end date range for the tasks to display.
Show Milestones	**task**, **project** Display a red vertical bar representing the milestone for the task or the project
Year Display	**none**, **default** Display the year in the column header.
Week Display	**none**, **default** Display the week in the column header.

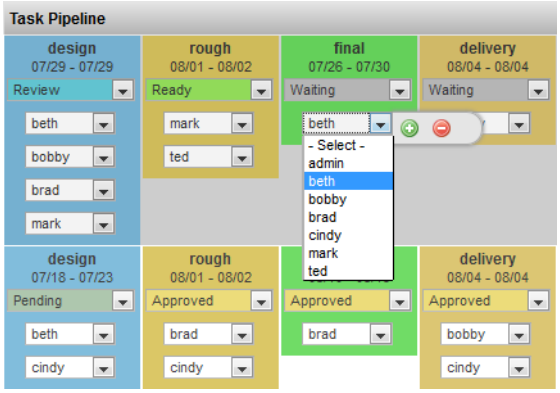
Advanced

```
<element name="task_schedule">
  <display class="tactic.ui.table.GanttElementWdg">
    <options>[
        {
          "start_date_expr":  "@MIN(sthpw/task.bid_start_date)",
          "end_date_expr":    "@MAX(sthpw/task.bid_end_date)",
          "color":            "#33F",
          "edit":             "true",
          "default":          "false"
        },
        {
          "start_date_expr":  "@MIN(sthpw/task['context','model'].bid_start_date)",
          "end_date_expr":    "@MAX(sthpw/task['context','model'].bid_end_date)",
          "color":            "#F0C956",
          "edit":             "true",
          "default":          "false"
        }
        ]</options>
  </display>
  <action class="tactic.ui.table.GanttCbk">
    <sObjects>@SOBJECT(sthpw/task)</sObjects>
    <options>[
        {
          "prefix":           "bid",
          "sObjects":         "@SOBJECT(sthpw/task)",
          "mode":             "cascade"
        },
        {
          "prefix":           "bid",
          "sObjects":         "@SOBJECT(sthpw/task['context','model'])",
          "mode":             "cascade"
        }

        ]</options>
  </action>
</element>
```

Task Status Edit

Description

The Task Status Edit column is used to display the status of all tasks for the item. It also provides conveniences such as changing the status of the task and the assigned user.



Info

Name	Task Element Widget
Common Title	Task Status Edit
Class	tactic.ui.table.TaskElementWdg
Category	Common Columns
TACTIC Version Support	3.0.0 +
Required database columns	none

Usage

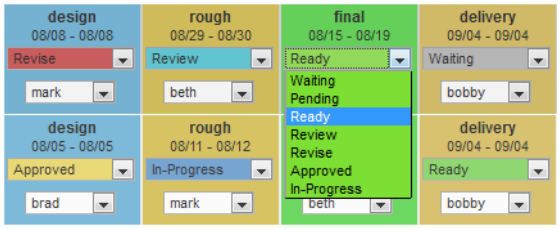
Once this column is added into the view, the drop down list can be used to change the status. In addition, this column also displays the process, schedule and the assigned user.

Implementation

This widget can be added using the Column Manager and can be found under the common columns as **Task Status Edit**.

Color

TACTIC provides the ability to assign each status its own color. Setting colors is handles from the Project Workflow (Pipeline) editor. Each process in a regular pipeline or a status pipeline can be assigned a color which will be used in this widget.



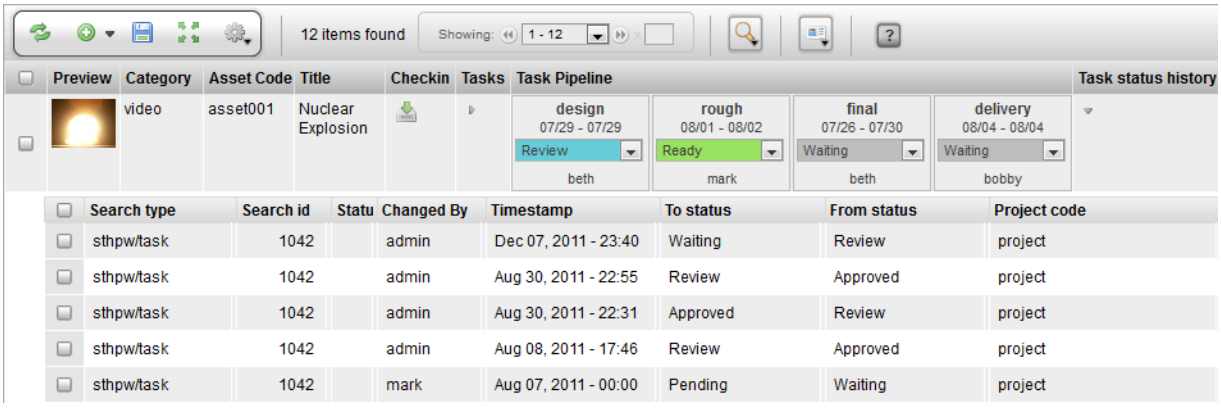
Options

Bg Color	**status** and **process**. Set what controls the background color of the task. **Status** sets the task color to be the same as the status color. **Process** mode sets the task color to be the same color of the process as set in the Workflow Editor.
Status Color	**status** and **process**. Set what controls the background color of the status drop down. **Status** sets the status drop down color to be the same as the status color. **Process** mode sets the status drop down color to be the same color of the process as set in the Workflow Editor.
Context Color	**status** and **process**. Set what controls the background color of the context grid. **Status** sets the context grid color to be the same as the status color. **Process** mode sets the context grid color to be the same color of the process as set in the Workflow Editor.
Text Color	Specifies the color of the task text using a color swatch.
Show Process	**True** or **false**. Displays the process of the task within the column.
Show Context	**True** or **false**. Displays the context of the task within the column.
Show Dates	**True** or **false**. Displays the time frame for the task. The schedule will display the start and end date.
Show Assigned	**True** or **false**. Displays the assigned user to the task.
Show Track	**True** or **false**.. Displays a button on each task which displays the last status and the user who changed it.
Show Labels	**True** or **false**. Displays the label of the pipeline's process.
Show Border	**all**, **one-sided**, **none**. **All** displays a border around each task. **One-sided** displays a border around one one side of the task. **None** hides the border.
Show Current Pipeline Only	**True** or **false**. Displays tasks for the current pipeline only.
Show Task Edit	**True** or **false**. Displays a button which pops-up a window to edit the task info.
Task Edit view	Specify the Task view by which to edit the task information.
Task Filter	**panel**, **vertical**, **horizontal**: Layout orientation to display the list of tasks.
Layout	**context only** or **process only**: Displays only tasks for either the context or the process.
Edit Status	**True** or **false**. Allows the user to open the status drop down selection box for the status to change it.
Edit Assigned	**True** or **false**. Allows the user to open the status drop down selection box for the assigned user to change it.

Advanced

```
<element name='task_status_edit'>
  <display class='tactic.ui.table.TaskElementWdg'>
    <show_context>true</show_context>
    <show_assigned>true</show_assigned>
    <show_dates>true</show_dates>
    <edit>true</edit>
  </display>
  <action class='tactic.ui.table.TaskElementCbk'/>
</element>
```

Task Status History



Description

The Task Status History is a toggle that opens a hidden row that displays all the status changes for an item. If there are multiple processes for an item, the status updates for those processes will be displayed.

Info

Name	Task Status History
Class	tactic.ui.panel.TableLayoutWdg
Category	Common Columns
TACTIC Version Support	3.0+
Required database columns	none

Implementation

The Task Edit Widget is a common column that can be added using the Column Manager.

Options

There are no options provided for the Task Edit Widget.

Advanced

```
<element name="task_status_history">
  <display class="HiddenRowToggleWdg">
    <dynamic_class>tactic.ui.panel.TableLayoutWdg</dynamic_class>
    <search_type>sthpw/status_log</search_type>
    <view>table</view>
    <expression>@SOBJECT(sthpw/task.sthpw/status_log)</expression>
    <mode>simple</mode>
  </display>
</element>
```

Work Button

Description

The Work Element Widget is used for accessing the checkin and checkout tool needed to handle a task assigned. After a task is assigned, an artist can go to the "My Tasks" or any other task page where there is a "Work" column which will expand to this widget. You can carry out serveral typical functions related to check-in and check-out in the sub tabs that open. You can even customize what tabs are opened when the work button is clicked on.

Info

Name	Work
Class	tactic.ui.table.WorkElementWdg
Category	Table Element Widget
Supported Interfaces	TableLayoutWdg
TACTIC Version Support	3.5.0 +
Required database columns	none

Usage

When clicked on, it opens up a new Work area tab with 3 sub tabs underneath which comprise all the functions an artitst would need when assigned a task. He can enter notes, change task status, review check-in history, check in, and check out files.

The General Check-in Widget appears in the Check-in sub tab. You can click "Browse" here to select the file to be checked in. The is_current checkbox in Options can be used to make a snapshot current on checking in. The link checkbox, when checked, links the sandbox directory to the process tied to the task. It makes it easy for an artist to jump to a different process and checks out their snapshots into the current sandbox associated with the task. Otherwise, if you check out a file from the model process, it will be copied to the model sandbox folder.

Options

checkout_panel_script_path	Deprecated in 3.5. Use the tab_config_<> method to set up custom checkout tab
checkout_script_path	A custom check-out script path you can specify to override the default check-out script. The default check-out script checks out everything under the selected snapshot. Refer to Example 4.
validate_script_path	A script path pointing to a JS script that is run before the actual check-in. If it throws an error using "throw(<error message>)", the check-in will not initiate. You can also use it to run some client-side preprocessing of the file or directory.
transfer_mode	Upload, copy, move, preallocate are supported. 'preallocate' can only be used if the client machine has direct disk write access to the TACTIC asset repo. It skips the need to hand off the files in the handoff directory. 'copy' is recommended for most situation when users are usually granted only read access to the TACTIC asset repo.
mode	Sequence, file, dir, and add are supported. 'sequence' is for file sequence checkin; 'file' is for single file checkin, 'dir' is for directory checkin and 'add' if for appending file or dir to an existing snapshot. If not specified, multiple selections will be available for the user to choose. Note: upload transfer mode only supports single file or file sequence check-in.
checkin_panel_script_path	Deprecated in 3.5. Use the tab_config_<> method to set up custom checkin tab

checkin_script_path	A custom checkin script path you can specify to override the default check-in script. This can be used in conjunction with the validate_script_path.
process	If set, the process specified will be pre-selected when the General Checkin Widget is drawn,
lock_process	If set to true, the user will not be able to choose a different process during check-in on the General Checkin-in Widget
checkin_relative_dir	If specified, e.g. WIP, it is appended to the current sandbox directory and preselcted as the directory to be checked in. It's applicable to Direcotry-type checkin
checkin_ui_options	It applies to the check-in options of the CheckinWdg. Supported attribute at the moment is "is_current" e.g. {"is_current":"false"} would make all check-ins non-current. {"is_current":"optional"} would make the checkbox unchecked by default. Not specifiying it would render the option available to the user to choose at the check-in time.
show_versionless_folder	If set to true, it displays the latest and current versionless folders.

Implementation

The following defines the default "Work" element. It looks a bit complicated but in most cases, you would just need to simply change the different options available through "Edit Column Definition":

```
<element name="work" title="Work on Task">
       <display class="tactic.ui.table.WorkElementWdg">
       <transfer_mode>upload</transfer_mode>
       <cbjs_action>
     var tbody = bvr.src_el.getParent(".spt_table_tbody");
     var element_name = tbody.getAttribute("spt_element_name");
     var search_key = tbody.getAttribute("spt_search_key");
     var checkin_script_path = bvr.checkin_script_path;
     var checkin_ui_options = bvr.checkin_ui_options;
     var validate_script_path = bvr.validate_script_path;
     var checkout_script_path = bvr.checkout_script_path;
     var checkin_mode = bvr.mode;
     var transfer_mode = bvr.transfer_mode;
     var sandbox_dir = bvr.sandbox_dir;
     var lock_process = bvr.lock_process;

     var server = TacticServerStub.get();
     var code = server.eval( "@GET(parent.code)", {search_keys: search_key} );

     spt.tab.set_main_body_tab();
     spt.tab.add_new();
     var kwargs = {
       'search_key': search_key,
       'checkin_script_path': checkin_script_path ,
       'checkin_ui_options': checkin_ui_options ,
       'validate_script_path': validate_script_path ,
       'checkout_script_path': checkout_script_path,
       'mode': checkin_mode ,
       'transfer_mode': transfer_mode,
       'sandbox_dir': sandbox_dir,
       'lock_process': lock_process

       }
     var title = "Task: " + code;
     var class_name = "tactic.ui.tools.sobject_wdg.TaskDetailWdg";
     spt.tab.load_selected(search_key, title, class_name, kwargs);
     </cbjs_action>
     <icon>WORK</icon>
     </display>
```

```
</element>
```

The following defines a different usage of it using copy trasnfer mode, a custom checkout script and a custom validating checkin script. The value of the two script paths are the script_path you have saved in the Script Editor. lock_process is set to false. To enable these options, you can do it in the context menu "Edit Column Definition" and set the following:

```
checkout_script_path: checkout/all_processes
validate_script_path: checkin/validate_frames
transfer_mode: copy
lock_process: false
```

The following shows a way to customize what the small check-out button does in the checkout_tool view. In widget config, we will set the column definition for the element checkout for the "sthpw/snapshot" search type. It can be accessed through "Edit Column Definition".

```
checkout_script_path: checkout/checkout_tool_script
```

Script Samples

Example 1: checkin/validate_frames

```
var values = bvr.values;
var file_path = values.file_paths[0];
var sk = values.search_key;
var applet = spt.Applet.get();

var file_list = applet.list_dir(file_path);
var server = TacticServerStub.get();
var st = 'prod/shot';
var shot = server.get_by_search_key(sk);
var frame_count = parseInt(shot.frame_count, 10);
for (var i=0; i <file_list.length; i++){

    var base =spt.path.get_basename(file_list[i]);
    if ( base == 'FRAMES') {
        var frames = applet.list_dir(file_list[i]);

        if (frames.length != frame_count) {
             throw('Frames length in FRAMES [' + frames.length
                + '] folder does not match shot\'s frame count');
        }

    }
}
```

Example 2: checkout/all_processes. It illustrates how to implement a custom check-out that only checks out a portion of what has been checked in.

```
//back up the Work-in-progress folder
function backup_WIP(bvr) {
     var sandbox_dir = bvr.sandbox_dir;
     var applet = spt.Applet.get();
     var found_WIP = false;
     var dirs = applet.list_dir(sandbox_dir, 0);

     for (var k=0; k < dirs.length; k++){
         if (/WIP$/.test(dirs[k])){
            found_WIP = true;
            break;
         }
     }
     if (!found_WIP) {
           alert('WIP folder not found. Backing up of WIP folder aborted')
     }
     else {

     var server = TacticServerStub.get();
     var folder = spt.path.get_basename(sandbox_dir);

     var date_obj = new Date();
     var suffix = date_obj.getFullYear().toString()
             + spt.zero_pad((date_obj.getMonth() + 1).toString(), 2)
             + spt.zero_pad(date_obj.getDate().toString(), 2) + '_'  +
               spt.zero_pad(date_obj.getHours().toString(), 2)
                + spt.zero_pad(date_obj.getMinutes().toString(),2);

     var parts = sandbox_dir.split(/[\/\\]/);


     sandbox_dir = sandbox_dir + '/WIP';
     var backup_dir = parts.join('/')  + '/WIP' + '_' + suffix;


     applet.copytree(sandbox_dir, backup_dir);

     //remove the contents of WIP
     applet.rmtree(sandbox_dir);
     applet.makedirs(sandbox_dir);

     }
}

// just checkout a subfolder named REF. if it's not found, just check out the
// first subfolder
function checkout_snapshot_table(bvr){

    var top = bvr.src_el.getParent(".spt_checkin_top");
    var table = top.getElement(".spt_table");
    var search_keys = spt.dg_table.get_selected_search_keys(table);
    if (search_keys.length == 0) {
         alert('Please check the checkbox(es) to check out a version.');
    }
    else if (search_keys.length > 1) {
        alert('Please check only 1 checkbox at a time. Multi-selection is' +
' only supported for Full Check-out Selected in the Gear menu.');
        return;
    }

    spt.app_busy.show("Custom Check-out snapshots", "Copying to Sandbox...");
    var server = TacticServerStub.get();

    var top = bvr.src_el.getParent('.spt_checkin_top');
```

```
    var sandbox_input = top.getElement('.spt_sandbox_dir');
    if (sandbox_input)
        bvr.sandbox_dir = sandbox_input.value;
    for (var i =0; i < search_keys.length; i++) {

        checkout_snapshot(bvr, search_keys[i]);
    }
    spt.app_busy.hide();
}

function checkout_snapshot(bvr, snapshot_key, downlevel) {
        var server = TacticServerStub.get();


        try {
        var paths = server.get_all_paths_from_snapshot(snapshot_key);


        //var sandbox_dir =
server.get_client_dir(snapshot_key,{mode:'sandbox'});
        var sandbox_dir = bvr.sandbox_dir;
        var applet = spt.Applet.get();

        for (var i = 0; i < paths.length; i++ ) {
            var path = paths[i];
            var parts = path.split(/[\/\\]/);
            var dirs = applet.list_dir(path);


            var tar_dir = '';
            for (var j=0; j < dirs.length; j++) {
                 if ((/REF/i).test(dirs[j]))
                     tar_dir = dirs[j];
            }
            //just take the first one if REF is not found
            if (!tar_dir) {
                 alert('REF not found. First subfolder is checked out');
                 tar_dir = dirs[0];
            }

            var folder = spt.path.get_basename(tar_dir);
            var new_path = path + '/' + folder;

            var sand_paths = applet.list_dir(sandbox_dir, 0);
            for (var j=0; j< sand_paths.length; j++) {
                 var dst_folder = spt.path.get_basename(sand_paths[j]);
                 if (dst_folder == 'REF') {
                      alert('REF folder already exists in ['
                       + sandbox_dir + '] Please rename or remove it first.');
                      return;
                 }
            }

            // the applet can decide between copy_file or copytree

            applet.copytree(new_path, sandbox_dir + "/" + folder);

        }
        }
        catch(e){
          alert(spt.exception.handler(e));
        }
    }


backup_WIP(bvr);
var down_level = 1;
```

```
checkout_snapshot_table(bvr, down_level);
```

Example 3: Custom Checkout button callback passing a specific script for the Check-out Widget popup using display option "checkout_panel_script_path"

```
    var class_name = 'tactic.ui.widget.CheckoutWdg';

    var values = bvr.values;

    var search_key = values.search_key;
    var sandbox_dir = values.sandbox_dir;
    var process = values.process;

 var options = { 'show_publish': 'false',
     'process': process,
     'search_key': search_key,
     'checkout_script_path': 'checkout/custom_checkout',
        'sandbox_dir': sandbox_dir
         };
   var popup_id ='Check-out Widget';
   spt.panel.load_popup(popup_id, class_name, options);
```

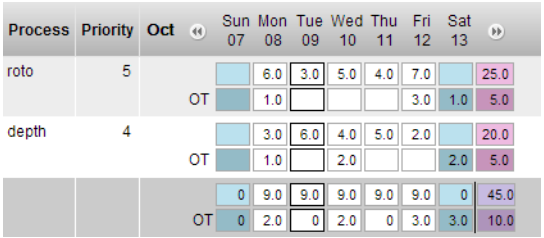
Example 4: Custom check-out script for the small check-out button in the checkout_tool view. This can be used to customize a quick-checkout for the latest or current snapshot without opening the Check-out popup widget, using display option "checkout_script_path"

```
function checkout_snapshot(bvr) {
    var values = bvr.values;

    var snapshot_key = values.search_key;
    var context = values.context;


        var server = TacticServerStub.get();
        // get the files for this snapshot, always get the latest
        // instead of relying on the last snapshot when the UI was drawn

        try {
        var paths = server.get_all_paths_from_snapshot(snapshot_key);

        //var sandbox_dir = server.get_client_dir(snapshot_key,{mode:'sandbox'});
        // This one comes from values as the sandbox_dir is determined by
        // the snapshot only
        var sandbox_dir = values.sandbox_dir;

        var applet = spt.Applet.get();

        for (var i = 0; i < paths.length; i++ ) {
            var path = paths[i];
            var parts = path.split(/[\/\\]/);
            var dirs = applet.list_dir(path);


            var tar_dir = '';
            for (var j=0; j < dirs.length; j++) {
                 if ((/REF/i).test(dirs[j]))
                     tar_dir = dirs[j];
            }
            //just take the first one if REF is not found
            if (!tar_dir) {
                 alert('REF not found. First subfolder is checked out');
                 tar_dir = dirs[0];
            }
            var folder = spt.path.get_basename(tar_dir)
            var new_path = path + '/' + folder;

            var sand_paths = applet.list_dir(sandbox_dir, 0);
            for (var j=0; j< sand_paths.length; j++) {
                 var dst_folder = spt.path.get_basename(sand_paths[j]);
                 if (dst_folder == 'REF') {
                      alert('REF folder already exists in [' + sandbox_dir + '] Please rename or
 remove it first to avoid mixing files.');
                      return;
                 }
            }

            // the applet can decide between copy_file or copytree
            applet.copytree(new_path, sandbox_dir + "/" + folder);
        }
        }
        catch(e){
          alert(spt.exception.handler(e));
        }
    }
checkout_snapshot(bvr);
```

Example 5: Custom checkin_script using display option "checkin_script_path". The default snapshot_type is file, if the file extension is .mov, the snapshot_type is set to 'mov'.

```
var file_paths = bvr.values.file_paths;
var description = bvr.values.description;
var search_key = bvr.values.search_key;
var context = bvr.values.context;
var transfer_mode = bvr.values.transfer_mode
var is_current = bvr.values.is_current;
var path = file_paths[0]
spt.app_busy.show("File Checkin", path);

var snapshot_type = 'file';
if (path.test(/\\.mov$/)){
    snapshot_type = 'mov';
}
var server = TacticServerStub.get();
snapshot = server.simple_checkin(search_key, context, path,
{description: description, mode: transfer_mode, is_current: is_current,
 snapshot_type:'mov'});
```

Work Hours Element Widget



Process	Priority	Oct	Sun 07	Mon 08	Tue 09	Wed 10	Thu 11	Fri 12	Sat 13	
roto	5			6.0	3.0	5.0	4.0	7.0		25.0
		OT		1.0				3.0	1.0	5.0
depth	4			3.0	6.0	4.0	5.0	2.0		20.0
		OT		1.0		2.0			2.0	5.0
			0	9.0	9.0	9.0	9.0	9.0	0	45.0
		OT	0	2.0	0	2.0	0	3.0	3.0	10.0

Description

The Work Hours Widget provides an interface to record the number of work hours spent for each task. The break down of the work hours by task allows the analysis to be broken down at the lowest level of detail. An option allows for the input of overtime hours.

Info

Name	Work Hours Element Widget
Class	tactic.ui.table.WorkHoursElementWdg
TACTIC Version Support	2.5.0 +
Required database columns	none

Implementation

The Work Hours Element Widget is a common column that can be added to any task view using the Column Manager.

Options

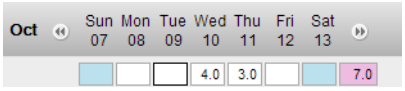
Show Over Time	**true** or **false**(default). Toggles the on the display of a second row for inputting hours marked as over time.
Totals Summary	**total**. Toggles the on the display of a second row for inputting hours marked as over time. note: only **total** is supported, not average nor count.

Note

When toggling on the Totals Summary, turn off **Grouping** by column in the view, otherwise, displaying 2 totals summary rows may be confusing to the user.

Example 1

We can record 4 hours of work on Wednesday and 3 hours on Thursday for a task. The total for that week will be displayed as a convenience.



Oct	Sun 07	Mon 08	Tue 09	Wed 10	Thu 11	Fri 12	Sat 13	
				4.0	3.0			7.0

Example 2

If we set the **Total Summary** option to *total* in the Edit Column Definition, we can see the total straight time hours for each day and the total straight time hours for each week displayed as a convenience.

Oct	Sun 07	Mon 08	Tue 09	Wed 10	Thu 11	Fri 12	Sat 13	
		1.0	1.0	1.0	1.0	1.0		5.0
		2.0	2.0	2.0	2.0	2.0		10.0
	0	3.0	3.0	3.0	3.0	3.0	0	15.0

Example 3

If we toggle on the **Show Overtime** option in the Edit Column Definition, an additional row with the prefix 'OT' appears which allows us to input overtime hours.. In that new row, we can record an additional 2 hours of over time work on Friday and 1 hour of over time work on Saturday for a task. The total over time hours for that week will be displayed as a convenience.

Oct	Sun 07	Mon 08	Tue 09	Wed 10	Thu 11	Fri 12	Sat 13	
				4.0	3.0			7.0
OT					2.0	1.0		3.0

Example 4

If we toggle on *both* the **Show Over Time** option and set the **Total Summary** to *total* in the Edit Column Definition, we can see all the totals displayed as a convenience for each day of straight time and over time hours as well as the totals for the straight time and the over time hours for the week.

Oct	Sun 07	Mon 08	Tue 09	Wed 10	Thu 11	Fri 12	Sat 13	
		1.0	1.0	1.0	1.0	1.0		5.0
OT						3.0	1.0	4.0
		2.0	2.0	2.0	2.0	2.0		10.0
OT				2.0		4.0	2.0	8.0
	0	3.0	3.0	3.0	3.0	3.0	0	15.0
OT	0	0	0	2.0	0	7.0	3.0	12.0

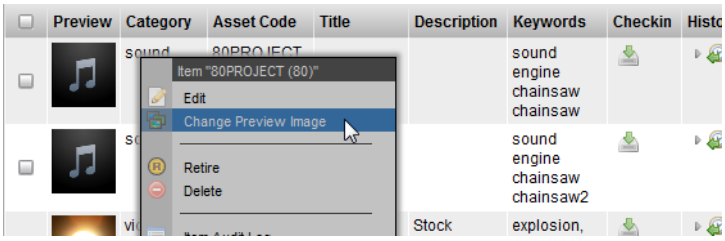
Advanced

The values input for the hours are stored in work_hours table under the straight_time column, regardless if it is straight time or overtime. The column named **category** is used to indicate if the value in the straight_time column is for overtime or straight time. With further low level modifications, this widget can be extended to support further categories, for example, if a new "double time" category is needed.

Note

The colors for the background of the input fields for this widget are calculated based on an offset to the TACTIC theme for the project for the background2 color.

SimpleUploadWdg



Description

The Simple Upload Widget is used for uploading files in-line in tables and also in edit windows. It is the simplest form of Tactic checkin as is allows for uploading of a single file and uses only a single hard coded (configured) checkin context.

Info

Name	Simple Upload Widget
Class	tactic.ui.widget.SimpleUploadWdg
Category	Edit Widgets
Supported Interfaces	TableWdg, EditWdg
TACTIC Version Support	2.5.0 +
Required database columns	none

Implementation

This widget is available as part of the "preview" common column. It is also used when right-clicking on an item and choosing "Change preview" or "Checkin File"

Options

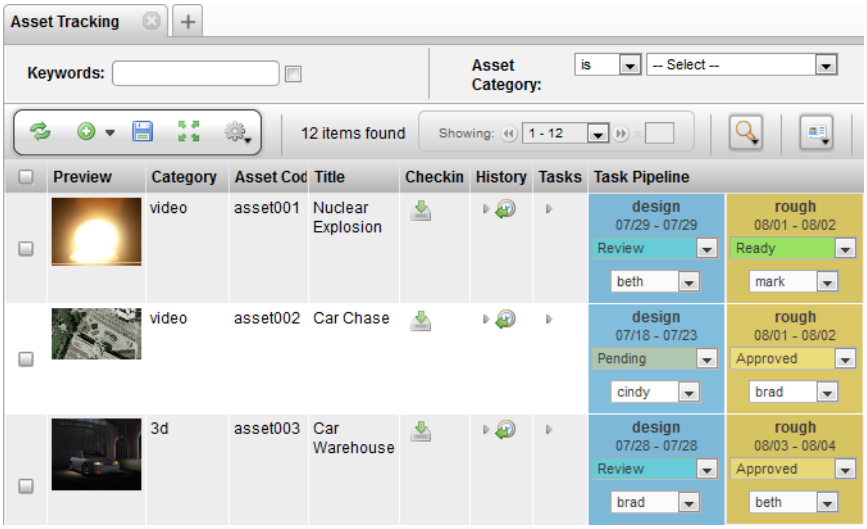
Common Name(s)/Title	Preview, Snapshot, Files
Context	TableWdg, EditWdg
Show Preview?	2.5.0 +

Advanced

```
<element name='preview'>
  <display class='tactic.ui.widget.SimpleUploadWdg'>
    <context>icon</context>
  </display>
</element>
```

Layout Widgets

View Panel



Description

The View Panel is a composite widget which binds together a Table Layout Widget and a Search Widget. The Search Widget is a searching mechanism that retrieves items and transfers them to a Table Layout Widget to draw. The View Panel Widget is used in most of TACTIC's predefined views.

Info

Name	View Panel
Class	ViewPanelWdg
TACTIC Version Support	2.5.0 +
Required database columns	none

Implementation

The View Panel widget makes use of the TableLayoutWdg capabilities. The views available to the View Panel are identical to that of the Table Layout Widget.

Options

show_gear	Flag to show the gear menu.
show_search	Flag to show the search box.
show_search_limit	Flag to show the search limit.
show_insert	Flag to show the insert button.
insert_view	Specify the path to a custom insert view.
edit_view	Specify the path to a custom edit view.
show_commit_all	Flag to show the commit all button.
show_refresh	Display the refresh button on the shelf.

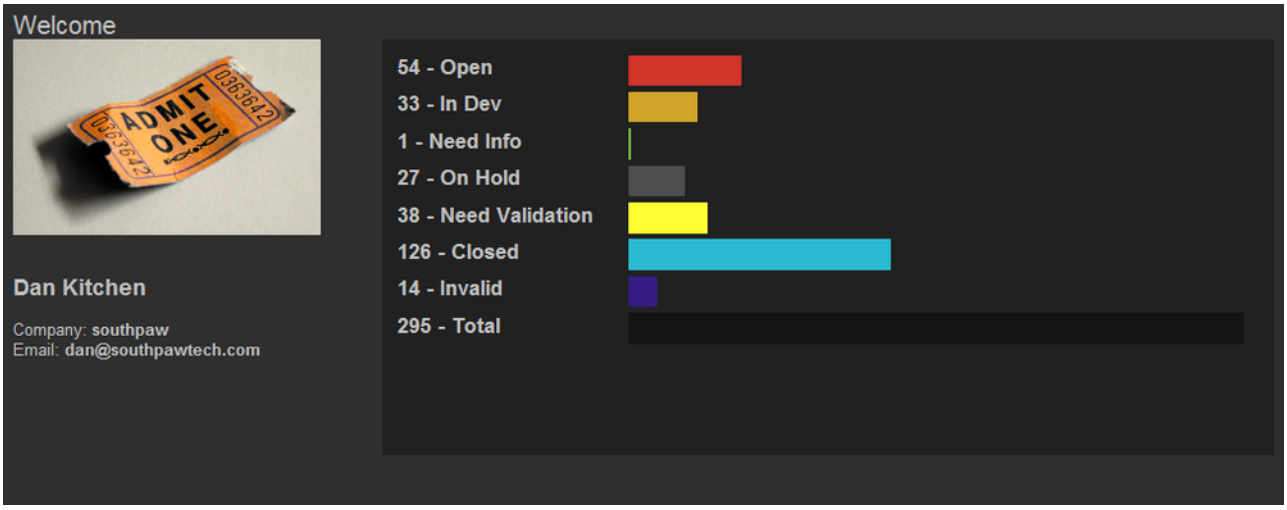
show_row_select	Flag to show row_selection.
popup	Pop the view up in a pop-up window.
layout	**default**, **tile**, **static**, **raw**, **fast_table**, **old_table**
search_type	The type that this widget works with
view	The TACTIC name for the view. e.g. admin.test_asset_tracking
do_initial_search	Run the search on loading of the view.
simple_search_view	Specify the simple search view.
custom_filter_view	View for custom filters. Defaults to "custom_filter".
process	The process which is applicable in the UI when load view is used.
mode	**simple**, **insert**
parent_key	Provides a parent item to filter in the search.
search_key	Provides the starting search key.
element_names	Provides a list of column names (ie. "preview,name,description") for the view.
schema_default_view	(INTERNAL) flag to show whether this is generated straight from the schema.
order_by	The column name to order ascending by.
search_view	(INTERNAL) View for custom searches.
width	Set the default width of the table
expression	Use an expression for the search. The expression must return items.
filter	JSON data structure representing the settings for SearchWdg

Advanced

Often, the ViewPanelWdg is defined from a side bar link. It can be defined by XML as follows

```
<element name='summary'>
  <display class='tactic.ui.panel.ViewPanelWdg'>
    <search_type>sthpw/task</search_type>
    <view>task_summary</view>
  </display>
</element>
```

Custom Layout



Description

The Custom Layout Widget is a simple tool which opens up an incredible amount of customizable interface flexibility and integration from within the TACTIC UI. This widget provides a container in the web page which supports embedding of HTML code including TACTIC Widgets, Expressions and Behaviours. This allows development of complex widgets similar to the standard widgets delivered with TACTIC.

With this, the following examples can be achieved:

- Custom reports can be made which include dynamic TACTIC Expressions presented in a customized web page design.
- Views can be assembled using a combination of TACTIC widgets along with regular HTML elements.
- Embeddable web code such as Google maps, timezone clocks, web mail clients etc. can be embedded in the TACTIC interface.

Info

Name	CustomLayoutWdg
Class	tactic.ui.panel.CustomLayoutWdg
TACTIC Version Support	2.5.0 +
Required database columns	none

Implementation

The Custom Layout Widget in its simplest form is a delivery mechanism for HTML code. The following "Hello World" example below demonstrates this.

```
<element name="hello_world">
  <display class="tactic.ui.panel.CustomLayoutWdg">
    <html>
       <h2>Hello World</h2>
    </html>
  </display>
</element>
```

Where a large part of the considerations for usage of a Custom Layout is where it will be embedded and how it will get retrieved. There are a few ways to implement this widget:

- In a cell (element) in a TableLayoutWdg (Example 1a).
- In the widget config, then called from a link in the sidebar (Example 1b).
- In the widget config, than called from a Custom Script (Javascript) (Example 1c).

Once a delivery method has been decided, it also needs to be decided if the custom Layout will need to evaluate based on an item being passed in as the parent or 'starting point' (technically speaking a 'relative' expression). For example, to use a CustomLayout to display a report for a item, the dynamic data in the CustomLayout needs to be derived starting from the specified item.

Taking advantage of relative expressions is usually accessed/assumed through the search_key value for the widget. This is most often done through TACTIC Expressions embedded in the HTML code or, through JavaScript code interacting with the CustomLayout. Either way, the search_key value must me passed into the widget for relative behavior. A simple example is that a button in a table can pass in the search key based on the item (row) it was clicked for. This would allow for loading of a custom dashboard which shows all information pertaining to that item.

Embedded Expressions

Expressions can be embedded in the Custom Layout through usage of a [expr] style tag. This Tag allows for embedding of expressions that are evaluated before the HTML which provide the resulting values into the HTML code.

The following example displays the task status of the modelling process.

```
<element name="hello_world">
 <display class="tactic.ui.panel.CustomLayoutWdg">
  <html>
   <div>
     Model Status: [expr]@GET(sthpw/task['process', 'model'].status)[/expr]
   </div>
  </html>
 </display>
</element>
```

Embedded Widgets

The CustomLayoutWdg provides full support for embedding of TACTIC Widgets. For example TableLayoutWdg and EditWdg can placed in a CustomLayout. This for allows, for example, the ability to create a 'dashboard' which can show multiple Tables, CustomLayouts HTML, etc.

```
<element name="hello_widget">
  <display class="tactic.ui.table.CustomLayoutwdg">
    <html>
      <element name="tasks">
        <display class="TableLayoutWdg">
          <search_type>sthpw/task</search_type>
          <view>task_list</view>
          <mode>simple</mode>
          <do_search>true</do_search>
          <search_key>{@GET(state.search_key)}</search_key>
        </display>
      </element>
```

```
    </html>
  </display>
</element>
```

Note

In the example above, the <search_key> option is automatically being passed the search_key from the state of the overall Custom Layout. What this will do is pass in the searhc key to the table which will automatically filter it to only show items related to the search_key (parent). For example in a dashboard for a shot, the tasks table will only display tasks related to the shot as opposed to all tasks in the system.

Embedded Behaviours

The Custom Layout also supports usage of the TACTIC JavaScript Behaviour system. With this, elements in the Custom Layout can contain embedded behaviours which allow for creation of custom interfaces and utilities. This opens up full a connection with the interface, clientAPI and Java Applet.

```
<?xml version='1.0' encoding='UTF-8'?>
<config>
  <hello_world>
    <html>
      <span>This is a button:</span>
      <input type='button' class='spt_button1' value='Press Me'/>
    </html>
    <behavior class='spt_button1'>{
     "type": "click_up",
     "cbjs_action": '''
         alert('Hello World');
     '''
    }</behavior>
  </hello_world>
</config>
```

Options

view	The view to retrieve from the Widget Config. This is not required if the HTML option is supplied.
html	This option is where the HTML code is embedded.
search_type	The Search Type the CustomLayoutWdg applies to (if applicable)

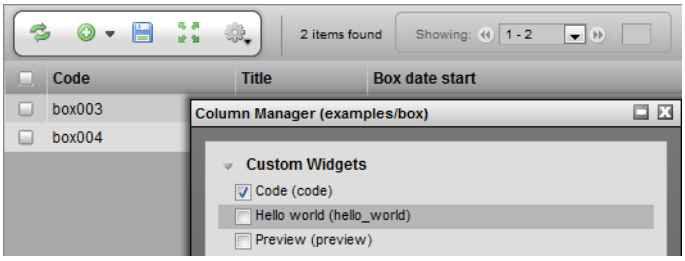
Examples

Example 1a

This can be stored in the definition view and called as an element by name (<element name="hello_world"/>) or, directly in the view config.

Category	Search type	View	Config	Login
	examples/box	definition	<config> <definition> <element name="preview"/> <element name="code"/> <element name="hello_world"> <display class="tactic.ui.panel.CustomLayoutWdg"> <html> Hello World </html> </display> </element> </definition> </config>	admin

If added to the definition, it will be available as a Widget Column in the **Column Manager**.




```
<config>
  <definition>
    <element name="preview"/>
    <element name="code"/>

    <element name="hello_world">
      <display class="tactic.ui.panel.CustomLayoutWdg">
        <html>
           <h2>Hello World</h2>
        </html>
      </display>
    </element>

  </definition>
</config>
```

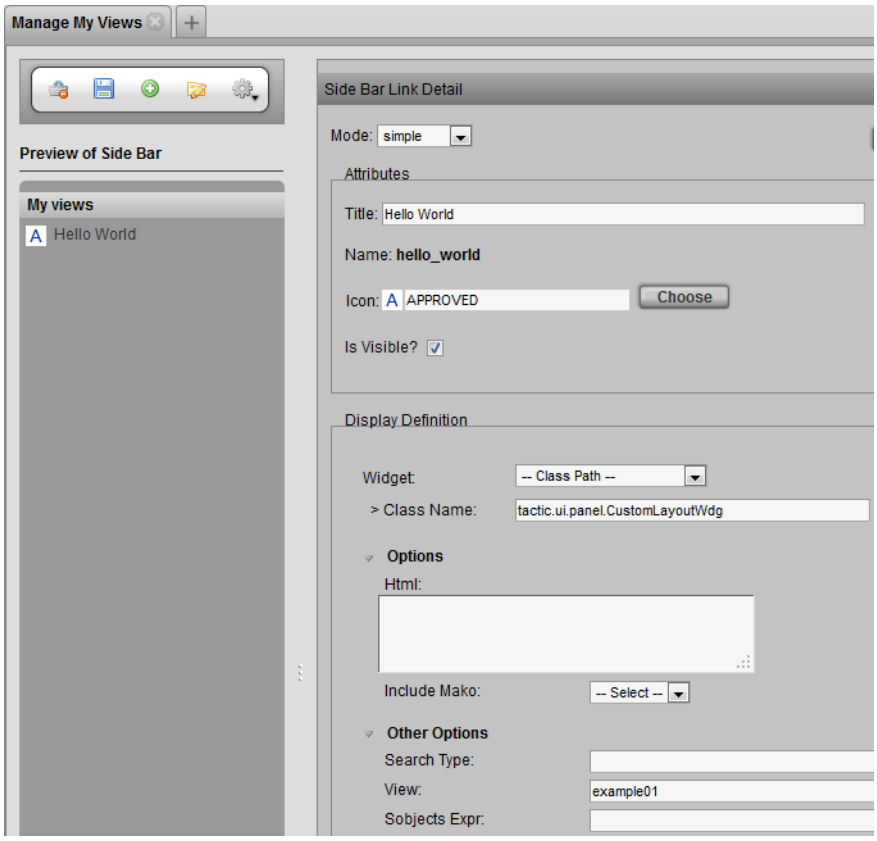
Example 1b

The following example shows how to create a sidebar link which loads a Custom Layout view defined in the Widget Config.

1. In the Widget Config enter the following hello_world view. This can be called from The Javascript code and sent to a popup.

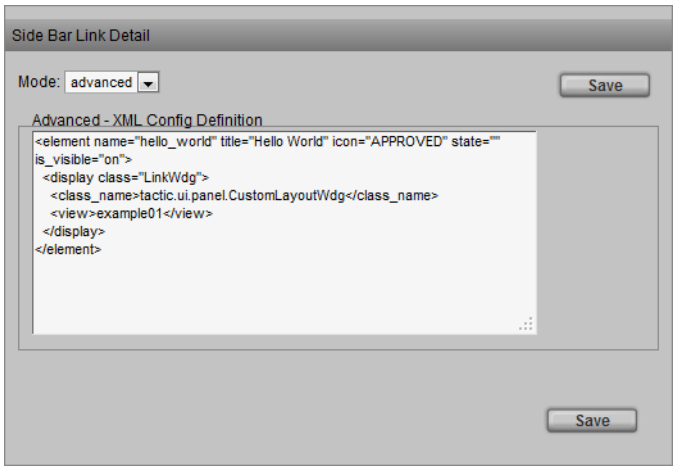
	Category	Search type	View	Config	Login
		CustomLayoutWdg	example01	<config> <example01> <html> Hello World </html> </example01> </config>	

2. The link can be configured in the Project Views Manager. Under the action menu, select "New Link". In the pop-up, Fill the options as shown in the following image.



3. Once the link is saved, select it in the Preview of Side Bar to load its options into the Element Detail panel on the right. Once loaded switch the mode to 'Advanced' and double check that the XML config contains the following:

```
<element name="hello_world" title="Hello World" icon="APPROVED" state="" is_visible="on">
  <display class="LinkWdg">
    <class_name>tactic.ui.panel.CustomLayoutWdg</class_name>
    <view>example01</view>
  </display>
</element>
```



Example 1c

The following example shows how to create a CustomLayoutWdg View in the widget config then, call it from the Javascript Editor

1. In the Widget Config enter the following hello_world view. This can be called from The Javascript code and sent to a pop-up.

	Category	Search type	View	Config	Login
		CustomLayoutWdg	hello_world	<config> <hello_world> <html> Hello World </html> </hello_world> </config>	

2. In the Javascript Editor create the following custom script example to load the view into a pop-up.

```
kwargs = {
 view: 'hello_world',
};

spt.panel.load_popup('Custom Layout Popup', \
    'tactic.ui.panel.CustomLayoutWdg', kwargs);
```

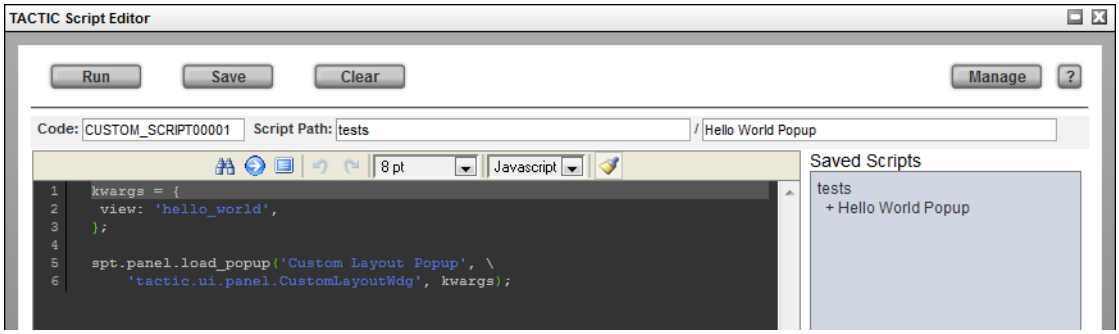
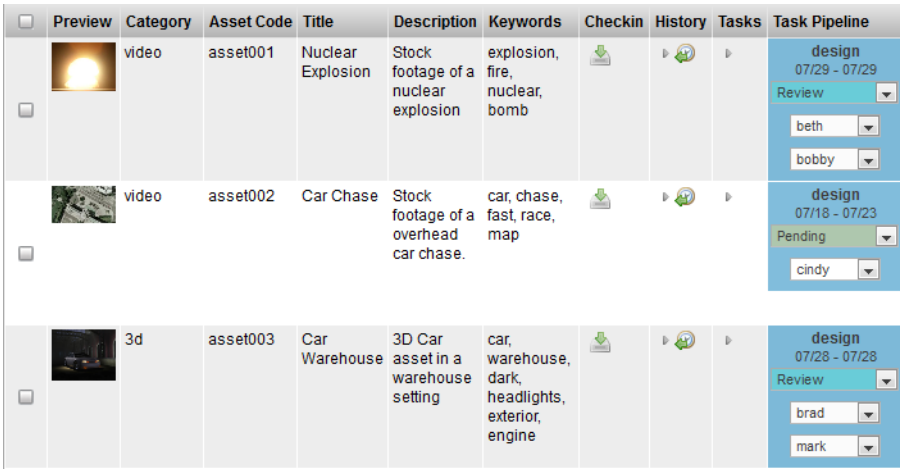


Table Layout



Description

The TableLayoutWdg is the primary widget used to layout tabular data. It is primarily driven by the widget configuration. The TableLayoutWdg has the ability to display complex widgets inside each cell, to inline edit the data and to color code cells. It is the widget that is most often used to display information within the TACTIC.

Info

Name	Table Layout
Class	tactic.ui.panel.TableLayoutWdg
TACTIC Version Support	2.5.0 +
Required database columns	none

Implementation

The TableLayoutWdg makes use of "views" which are defined in the widget config for each project. When the Table is loaded as part of an interface, a view configuration is passed into it which defines which columns and widgets should be displayed in the view. Typically, these view configurations are automatically saved in the background when a user saves a view from within the TACTIC interface. The table itself provides the ability to add, remove, rearrange, resize and group columns which can then be saved out often as links in the sidebar.

The following shows a simplified version for an "asset tracking" view as saved in the background widget config.

```
<config>
  <asset_tracking layout="TableLayoutWdg" >
    <element name="preview" width="74px"/>
    <element name="asset_category_code" width="64px"/>
    <element name="code" width="61px"/>
    <element name="title" width="121.883px"/>
    <element name="description" width="276.75px"/>
    <element name="keywords" width="253.367px"/>
    <element name="general_checkin" width="27px"/>
    <element name="history" width="42px"/>
    <element name="task_edit" width="29px"/>
    <element name="task_status_edit" width="223.167px"/>
  </asset_tracking>
</config>
```

The widget configuration is an XML document. In this example, it defines an "asset_tracking" view with elements (preview, asset_category, code, title, description, keywords, etc...).

To draw what to display, TableLayoutWdg looks at the list of elements defined in the widget config and draws a column for each element. TACTIC then draws a row for each item that was either retrieved from a search, an expression or by supplied items. Each cell in the table represents an item being drawn by the defined element for a given column.

While the top widget configuration defines the list of elements to draw the columns, the exact definition of each element do not necessarily appear here. There are a number of views which define an element. Some of these elements may be defined inline or they may be defined elsewhere. There is a set hierarchy which the TableLayoutWdg looks for to find the definition of a particular element.

The hierarchy which TableLayoutWdg looks to find the definition for an element is as follows:

1. the given type, view combination in the widget_config table
2. the "definition" view for the given type in the widget_config table
3. the predefined views for a given type (modules shipped with TACTIC will have predefined views for may of the items to ensure proper functioning of TACTIC even if there are no entries in the widget_config database)
4. the "default_definition" for a given type as defined in the predefined views.

The third and fourth locations only apply to predefined types that are shipped with TACTIC. All custom types will only use the first two.

Options

search_type	Defines the type that this table will be displaying. It is used both for finding the appropriate widget config and for handling search (if necessary). Defaults to "table".
view	Defines the view that this table will displaying. It used to find the appropriate widget config to display the table.
do_search	By default, the TableLayoutWdg will handle the search itself. However, certain widgets may wish to turn this functionality off because they are supplying the search (internally used by ViewPanelWdg)
order_by	Add an explicit order by in the search
expression	Use an expression to drive the search. The expression must return items.
parent_key	Set a specific parent for the search
width	Define an initial overall width for the table
show_row_select	Flag to determine whether or not to show row_selection
show_gear	Flag to determine whether or not to show the gear menu.
show_insert	Flag to determine whether or not to show the insert button.
insert_mode	aux|inline|pop-up|none - set the insert mode of the table
search_limit	An overriding search limit. A value < 0 means no limit affecting the search
config_xml	Explicitly define the widget config
element_names	Explicitly set the element names to be drawn

Advanced

Very often, the TableLayoutWdg is not used directly, but is used through the ViewPanelWdg, which combines the TableLayoutWdg with the SearchWdg. Using ViewPanelWdg will provide all the functionality in a table view

Using the TableLayoutWdg does provide a simpler view if the search is already known,

This simple example shows the login table and the objects are explicitly given.

```
from tactic.ui.panel import TableLayoutWdg
div = DivWdg()
table = TableLayoutWdg(search_type='sthpw/login', view='table')
sObjects = Search("sthpw/login").get_sObject()
table.set_sObjects(sObjects)
div.add(table)
```

An expression can be set for the search as well.

```
from tactic.ui.panel import TableLayoutWdg
div = DivWdg()
expression = "@SOBJECT(sthpw/login)"
table = TableLayoutWdg(search_type='sthpw/login', view='table',expression=expression)
div.add(table)
```

This example embeds the login table with a "table" view in a CustomLayoutWdg.

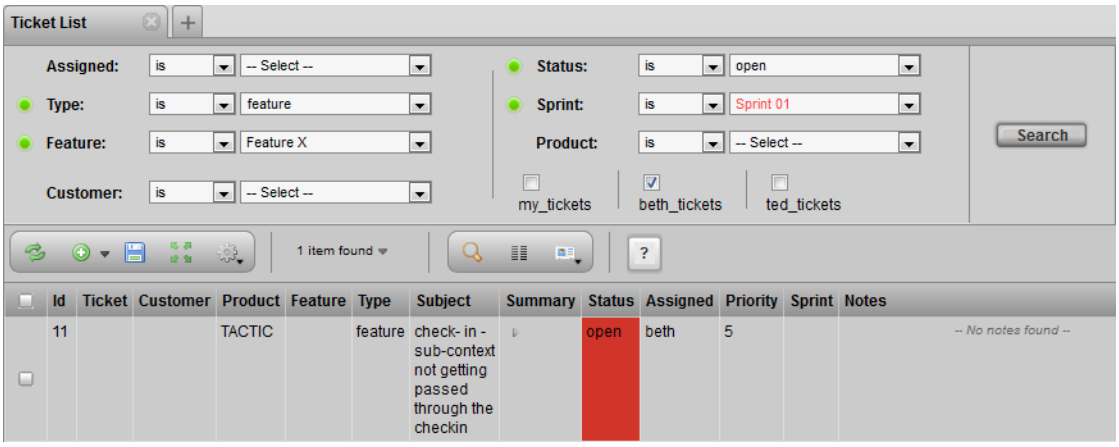
```
<config>
<login>
  <html>
    <h1>This is the login table</h1>
    <element name='login_table'/>
  </html>
  <element name='login_table'>
    <display class='tactic.ui.panel.TableLayoutWdg'>
      <search_type>sthpw/login</search_type>
      <view>table</view>
      <expression>@SOBJECT(sthpw/login)</expression>
    </display>
  </element>
</login>
</config>
```

The widget config views determine how the TableLayoutWdg draws itself. There are a few custom attributes that a view can define. The view can define many parts of how the TableLayoutWdg is displayed. The following hides the "insert" button and makes each of the cells non-editable. These attributes are useful for reports which are generally not editable.

```
<?xml version="1.0" encoding="UTF-8"?>
<config>
  <simple insert='false' edit='false'>
    <element name="preview"/>
    <element name="code"/>
    <element name="name"/>
    <element name="description"/>
  </simple>
</config>
```

Simple Search Widgets

How To Set Up A Simple Search Filter



Description

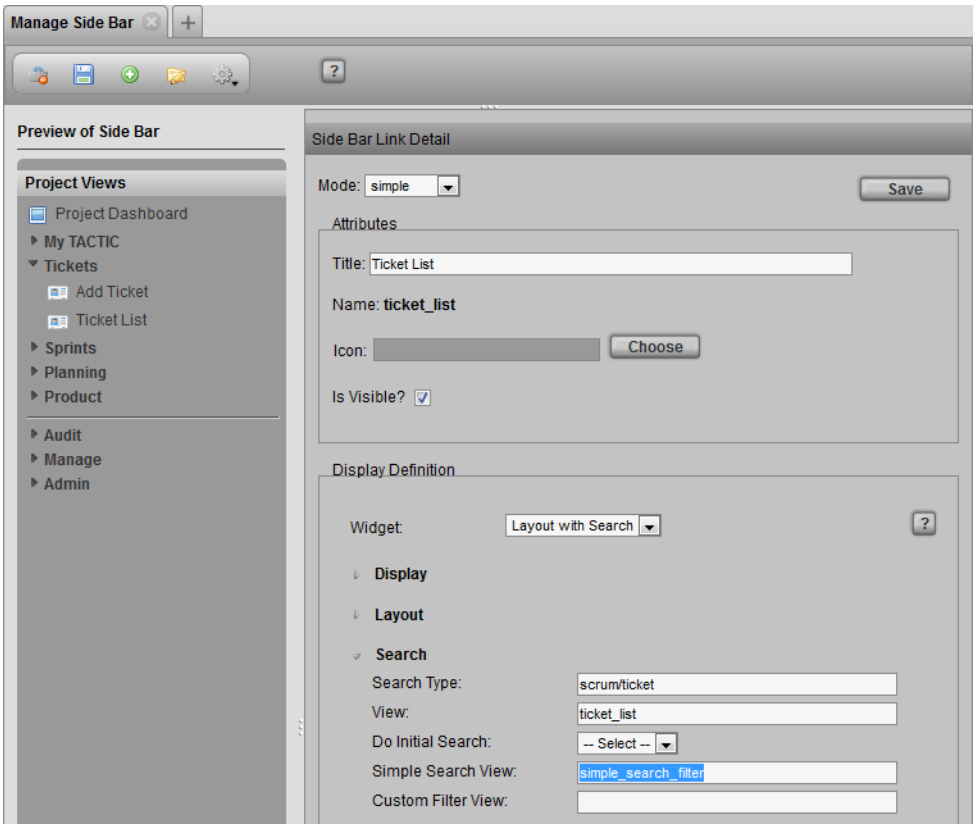
Adding a Simple Search Filter at the top of a view helps filter the table for particular values on certain columns. A filter can be created using a Select Filter Element Widget or by running an expression using a Checkbox Filter Element Widget. (To set up the Select and Checkbox Filter Element Widgets, please refer to the setup docs by the same name.)

Implementation

Below are the steps to modify or add a Simple Search Filter to a view. The Simple Search View for the ticket list in the Scrum Project is used below as an example.

1) Go to the sidebar and open the view:

Admin Views -> Project -> Manage Side Bar



2) Look for the value in the following field:

Display Definition -> Search -> Simple Search View

3) Open the Widget Config under:

Admin Views -> Project -> Widget Config.

Filter by the *search_type*: **scrum/ticket**

Filter by the *view* found in the Simple Search View field of the Manage Side Bar view.

In the Scrum example with the tickets, we would search for the *view* named: **simple_search_filter**

Note

If the *Simple Search View* field is empty, TACTIC will look for the default Simple Search View filter named: **custom_filter**.

4) In the Widget Config entry, edit the *config* field:

In the example below, the following Checkbox Filter Element Widgets were added: my_tickets, beth_tickets and ted_tickets

```
<config>
  <simple_search_filter>

    <element name='assigned'>
        <display class='tactic.ui.filter.SelectFilterElementWdg'>
          <values_expr>@GET(sthpw/login.login)</values_expr>
```

```
          <column>assigned</column>
        </display>
    </element>

    <element name='status'>
        <display class='tactic.ui.filter.SelectFilterElementWdg'>
          <values>new|open|in_dev|need_info|on_hold|need_validation|closed|invalid</values>
          <column>status</column>
        </display>
    </element>

    <element name='type'>
        <display class='tactic.ui.filter.SelectFilterElementWdg'>
          <values_expr>@UNIQUE(@GET(scrum/ticket.type))</values_expr>
          <column>type</column>
        </display>
    </element>


    <element name='sprint'>
        <display class='tactic.ui.filter.SelectFilterElementWdg'>
          <values_expr>@GET(scrum/sprint.title)</values_expr>
          <column>scrum/sprint.title</column>
        </display>
    </element>

    <element name='feature'>
        <display class='tactic.ui.filter.SelectFilterElementWdg'>
          <values_expr>@GET(scrum/feature.title)</values_expr>
          <column>scrum/feature.title</column>
        </display>
    </element>

    <element name='product'>
        <display class='tactic.ui.filter.SelectFilterElementWdg'>
          <values_expr>@GET(scrum/product.title)</values_expr>
          <column>scrum/feature.scrum/product.title</column>
        </display>
    </element>

    <element name='customer'>
        <display class='tactic.ui.filter.SelectFilterElementWdg'>
          <values_expr>@UNIQUE(@GET(scrum/ticket.customer_code))</values_expr>
          <column>customer_code</column>
        </display>
    </element>

    <element name='mine'>
        <display class='tactic.ui.filter.CheckboxFilterElementWdg'>
          <options>my_tickets|beth_tickets|ted_tickets</options>
          <my_tickets>@SOBJECT(scrum/ticket['assigned',$LOGIN])</my_tickets>
          <beth_tickets>@SOBJECT(scrum/ticket['assigned','beth'])</beth_tickets>
          <ted_tickets>@SOBJECT(scrum/ticket['assigned','ted'])</ted_tickets>
        </display>
    </element>

  </simple_search_filter>
</config>
```

Here are some miscellaneous date related examples:

```
   <element name="dates">
      <display class="tactic.ui.filter.DateFilterElementWdg">
            <column>creation_date</column>
      </display>
```

```
    </element>

  <element name="date_range">
     <display class="tactic.ui.filter.DateRangeFilterElementWdg">
           <start_date_col>bid_start_date</start_date_col>
           <end_date_col>bid_end_date</end_date_col>
           <op>in</op>
     </display>
    </element>
```

For more examples of the Keyword Search, Select Filter, and Date Filter, refer to those docuements.

Select Filter Element Widget

Description

This widget provides a drop down selection menu of values for a column for the Simple Search to do filtering on.

Info

Name	Select Filter Element Widget
Class	tactic.ui.filter.SelectFilterElementWdg
TACTIC Version Support	3.7+
Required database columns	none

Options

title	The title for the Select Filter Element. For example: `<element name='artist_name' title='Artist Name'>`

values *(required)*	The values to populate the drop down selection with. For example, it can be a TACTIC expression:
	`<values_expr>@GET(sthpw/login.login)</values_expr>`
	or, it can be a pipe separated list of values. For example:
	`<values>new|open|in_dev|need_info|on_hold|need_validation|closed|invalid</values>`

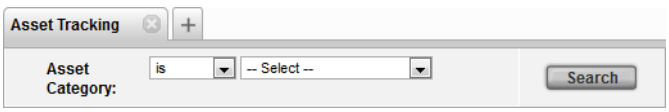
column *(required)*	The table column to do the select from. For example: `<column>asset_category_code</column>`

Implementation

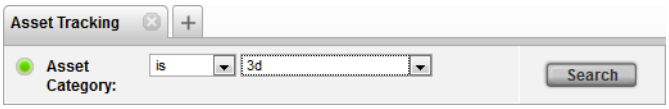
Find or define the filter view in the Widget Config and use the following XML code as an example of what to add to the config:

```
<config>
  <custom_filter>
    <element name='dynamic'>
      <display class='tactic.ui.filter.SelectFilterElementWdg'>
          <values_expr>@GET(project/asset_category.code))</values_expr>
          <column>asset_category_code</column>
      </display>
    </element>
  </custom_filter>
</config>
```

For the above example, this filter will provide a list of asset category codes to select from.



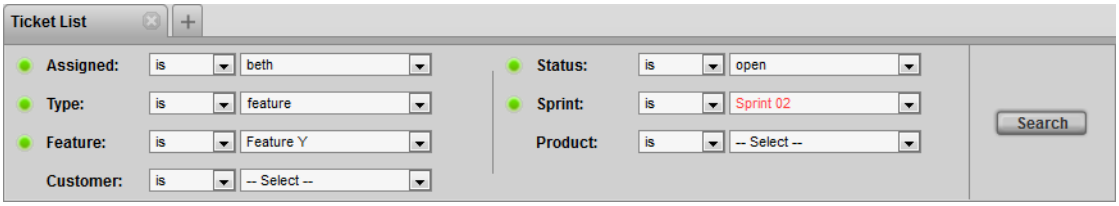
Notice that an icon of a green light appears next to the filter if it is being used:



Example 1

The following example demonstrates the Select Filter Element Widget providing filtering options for scrum tickets.

Below is what the Select Filter Elements look like in the user interface:



Below is what the config for the above example looks like in the Widget Config:

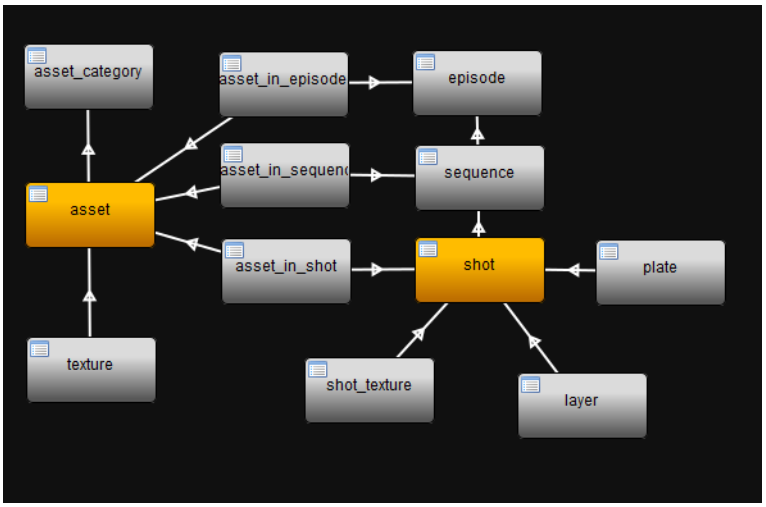
```
<config>
  <custom_filter>

    <element name='assigned'>
        <display class='tactic.ui.filter.SelectFilterElementWdg'>
          <values_expr>@GET(sthpw/login.login)</values_expr>
          <column>assigned</column>
        </display>
    </element>

    <element name='status'>
        <display class='tactic.ui.filter.SelectFilterElementWdg'>
          <values>new|open|in_dev|need_info|on_hold|need_validation|closed|invalid</values>
          <column>status</column>
        </display>
    </element>

    <element name='type'>
        <display class='tactic.ui.filter.SelectFilterElementWdg'>
          <values_expr>@UNIQUE(@GET(scrum/ticket.type))</values_expr>
          <column>type</column>
        </display>
    </element>

    <element name='sprint'>
        <display class='tactic.ui.filter.SelectFilterElementWdg'>
          <values_expr>@GET(scrum/sprint.title)</values_expr>
          <column>scrum/sprint.title</column>
        </display>
    </element>

    <element name='feature'>
        <display class='tactic.ui.filter.SelectFilterElementWdg'>
          <values_expr>@GET(scrum/feature.title)</values_expr>
          <column>scrum/feature.title</column>
        </display>
    </element>

    <element name='product'>
        <display class='tactic.ui.filter.SelectFilterElementWdg'>
          <values_expr>@GET(scrum/product.title)</values_expr>
          <column>scrum/feature.scrum/product.title</column>
```

```
        </display>
    </element>

    <element name='customer'>
        <display class='tactic.ui.filter.SelectFilterElementWdg'>
          <values_expr>@UNIQUE(@GET(scrum/ticket.customer_code))</values_expr>
          <column>customer_code</column>
        </display>
    </element>

  </custom_filter>
</config>
```

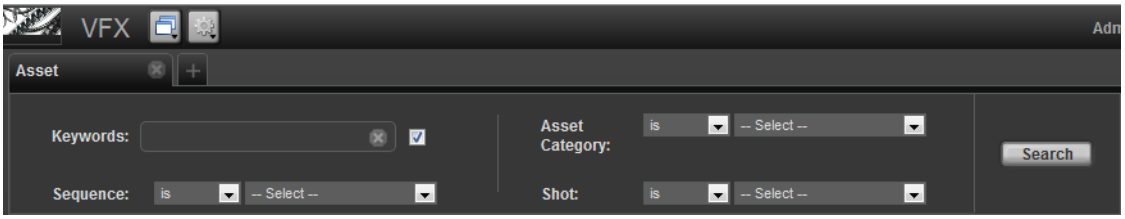
Example 2

The following example is from the VFX project. It demonstrates how the Select Filter Element Widget can provide filtering options on assets based on columns not belonging to the current table itself.

Below is the schema for the VFX project. From the **asset** search type, a Select Filter Element is built based for attributes in the **asset_category**, **sequence**, **shot** and search types.



Below is what the Select Filter Elements look like in the user interface:

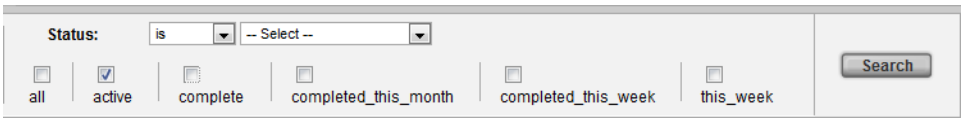


Below is what the config for the above example looks like in the Widget Config:

```
<config>
  <custom_filter>
    <element name='keywords'/>

    <element name='asset_category'>
        <display class='tactic.ui.filter.SelectFilterElementWdg'>
          <values_expr>@GET(vfx/asset_category.code))</values_expr>
          <column>asset_category</column>
        </display>
    </element>
```

```
    <element name='sequence'>
        <display class='tactic.ui.filter.SelectFilterElementWdg'>
          <values_expr>@GET(vfx/sequence.code))</values_expr>
          <column>vfx/asset_in_sequence.sequence_code</column>
        </display>
    </element>

    <element name='shot'>
        <display class='tactic.ui.filter.SelectFilterElementWdg'>
          <values_expr>@GET(vfx/shot.code))</values_expr>
          <column>vfx/asset_in_shot.shot_code</column>
        </display>
    </element>

  </custom_filter>
</config>
```

Checkbox Filter Element Widget



Description

The Checkbox Filter Element Widget appears as a check box which activates filteringm when checked. This widget provides a convenient way to perform more complex search operations.

Info

Name	Checkbox Filter Element Widget
Class	tactic.ui.filter.CheckboxFilterElementWdg
TACTIC Version Support	3.7+
Required database columns	none

Options

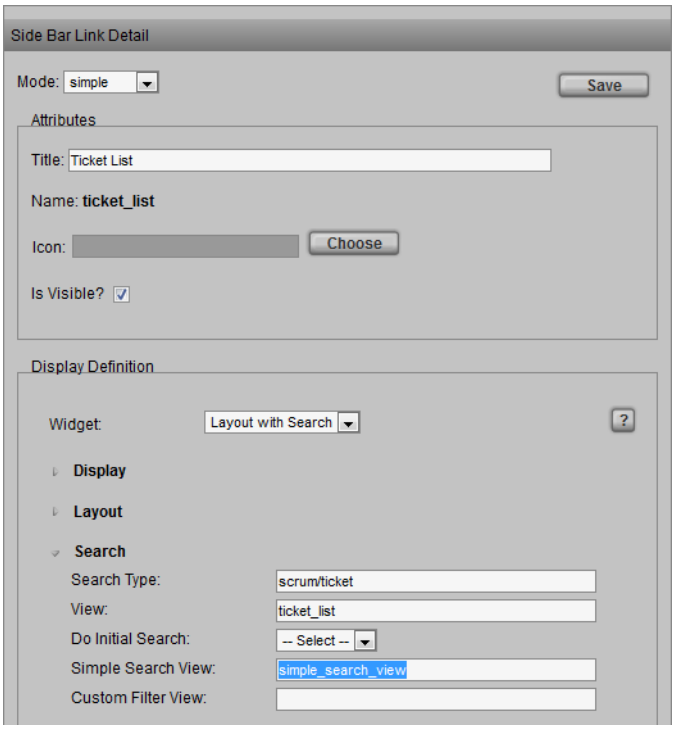
titles	Titles for Checkbox Filter Element. For example:
	`<display class='tactic.ui.filter.CheckboxFilterElementWdg'>`
	`  <titles>Active|Pending|Closed</titles>`
	`</display>`

options	A list of the names of search filters, separated by pipes: '|'. For example:
	`<options>my_tickets|beth_tickets|ted_tickets</options>`
	`  <my_tickets>@SOBJECT(scrum/ticket['assigned',$LOGIN])</my_tickets>`
	`  <beth_tickets>@SOBJECT(scrum/ticket['assigned','beth'])</beth_tickets>`
	`  <ted_tickets>@SOBJECT(scrum/ticket['assigned','ted'])</ted_tickets>`

Implementation

Specify (or look up) the name of the *Simple Search View* under **Admin Views -> Project -> Manage Side Bar -> Simple Search View**.

In the example below, the *Simple Search View* is named: **simple_search_view**



Look up and edit that simple search view in the Widget Config. Use the following XML code as an example of what to add to the config:

```
<config>
  <simple_search_view>
    <element name='dynamic'>
      <display class='tactic.ui.filter.CheckboxFilterElementWdg'>
        <options>asset_category_3d</options>
        <asset_category_3d>@SOBJECT(project/asset['asset_category_code','3d'])</
asset_category_3d>
      </display>
    </element>
  </simple_search_view>
</config>
```

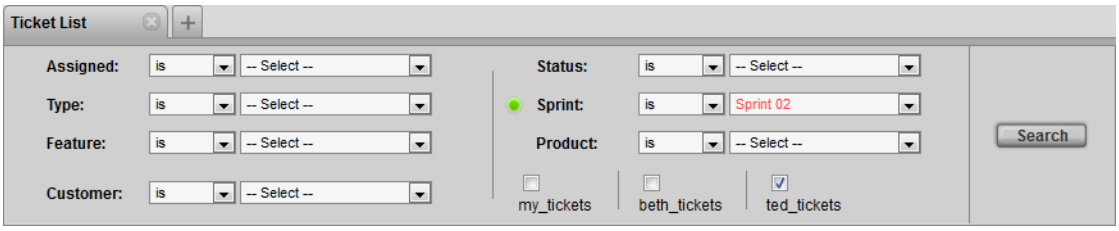
For the above example, this filter returns results where the *asset_category_code* is: **3d**

Examples

Below is an example of adding 3 check box filters: a filter to search for tickets that belong to the currently logged in user, the user **beth** and the user **ted**. Notice that the options are pipe '|' separated.

```
<config>
  <simple_search_view>
     <element name='mine'>
        <display class='tactic.ui.filter.CheckboxFilterElementWdg'>
          <options>my_tickets|beth_tickets|ted_tickets</options>
          <my_tickets>@SOBJECT(scrum/ticket['assigned',$LOGIN])</my_tickets>
          <beth_tickets>@SOBJECT(scrum/ticket['assigned','beth'])</beth_tickets>
          <ted_tickets>@SOBJECT(scrum/ticket['assigned','ted'])</ted_tickets>
```

```
        </display>
      </element>
  </simple_search_view>
</config>
```

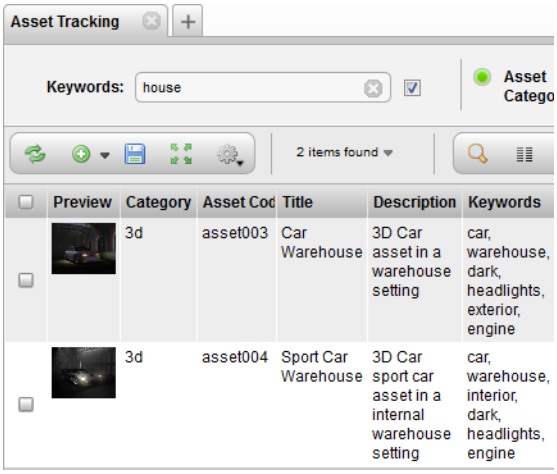


Advanced

Below is an example of filtering for the condition of having one or more icons snapshots related to shots:

```
<config>
  <simple_search_view>
    <element name='dynamic'>
      <display class='tactic.ui.filter.CheckboxFilterElementWdg'>
        <options>some_icon</options>
        <some_icon>@SOBJECT(prod/shot.sthpw/snapshot['context','icon']
['project_code','sample3d'].prod/shot)</some_icon>
      </display>
    </element>
  </simple_search_view>
</config>
```

Keyword Search



Description

The Keyword Search allows for filtering of the table results on words occurring in either the default columns (**code, name, description**) or words in the column named **keywords**.

Info

Name	Keyword Filter Element Widget
Class	tactic.ui.filter.KeywordFilterElementWdg
TACTIC Version Support	3.8+
Required database columns	none

Options

mode	The mode for the Keyword Search: **global** or **keyword**. For example:
	`<mode>global</mode>`
	or
	`<mode>keyword</mode>`

column	A pipe separated list of column names to perform the keyword search on. For example:
	`<column>code|description|title</column>`
	If no <column> is specified, then the name specified in the element name attribute is assumed to be the column name and is used to perform the search on. In the example below, the 'title' column will be used to perform the search on.
	`<element name='title'>`

Usage

Once the Simple Search Keyword Search Filter is set up, input the search criteria into the search field, hit enter to submit the criteria and the matching results will appear in the table.

Modes for Keyword Search

There are 2 different modes for the Keyword Search. They are described below:

Global Search Mode: Whenever a new item is inserted or updated, the keywords (from **code, name, description** and **keywords** column are recorded to a global table. This global table is read from when the Keyword Search is in Global Search Mode.

Below is an example of the Widget Config for a Simple Search Custom Filter in *Global Search Mode*:

```
<config>
  <custom_filter>
    <element name='title'>
        <display class='tactic.ui.filter.KeywordFilterElementWdg'>
            <mode>global</mode>
        </display>
    </element>
  </custom_filter>
</config>
```

Keyword Search Mode In this search mode, the user specifies the column in the current view to do the Keyword Search on. This mode allows the user to create a Simple Search Keyword Search per column.

Below is an example of the Widget Config for a Simple Search Custom Filter in *Keyword Search Mode*:

```
<config>
  <custom_filter>
    <element name='title'>
        <display class='tactic.ui.filter.KeywordFilterElementWdg'>
            <mode>keyword</mode>
        </display>
    </element>
  </custom_filter>
</config>
```

In the above example, since no <column> is specified in the XML, the name specified in attribute <element name='title'> is assumed to be the column name and so it is used to run the search on the 'title' column.

Note

If no mode is specified, the mode defaults to **Global Search Mode**.

The XML definition will look like the following:

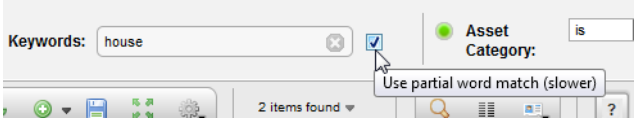
```
<element name='keywords'/>
```

Features and Options

Partial Word Match There is a check box next on the right of the Keywords Search field. When checked (which is the default), the search will do a partial word match.

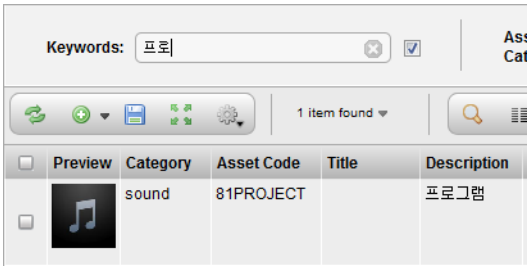
For example, if the input the search criteria is: *house*, this could return results with the keyword *warehouse*.

Otherwise, if the partial word match is turned off, there would be no match on the keyword *warehouse*.



Support for Different Languages

The Keyword Search also supports searches in different languages. The search is simply doing a match on individual characters in the words.



Advanced Configuration

Specifying more than one keyword search column: Below is an example in Keyword Mode where *3 columns* are specified to do the search on:

```
<config>
  <custom_filter>
    <element name='description'>
        <display class='tactic.ui.filter.KeywordFilterElementWdg'>
        <mode>keyword</mode>
        <column>code|description|title</column>
        </display>
    </element>
  </custom_filter>
</config>
```