Trace

Configuration Manual

Applicable for Sharpen360 Trace version 5.0+

Revision 9

Sharpen360
Knowledge Worker Tools

Table of Content

1 Overview and Introduction

Thank you for using our Process Assessment Tool, Sharpen360 *Trace*.

This document describes the configuration options of *Trace*. We try to use a precise naming of concepts in Trace. Please see chapter 5 for our list of Terms and Concepts.

If you have questions, have ideas that you would like to discuss, or just need an introduction to specific parts of *Trace*, please contact us!

Also, we would very much appreciate if you would report any bug or inconvenience you might find. Please use the email below, and add screenshots and descriptions as needed and we will immediately prioritize this.

Use support@sharpen360.com as much as you like. You are welcome!

The Sharpen360 Team.

PS: Please help us by sharing knowledge about Trace to your colleagues, network, family, friends, neighbors, mother, or anybody else interested 😊
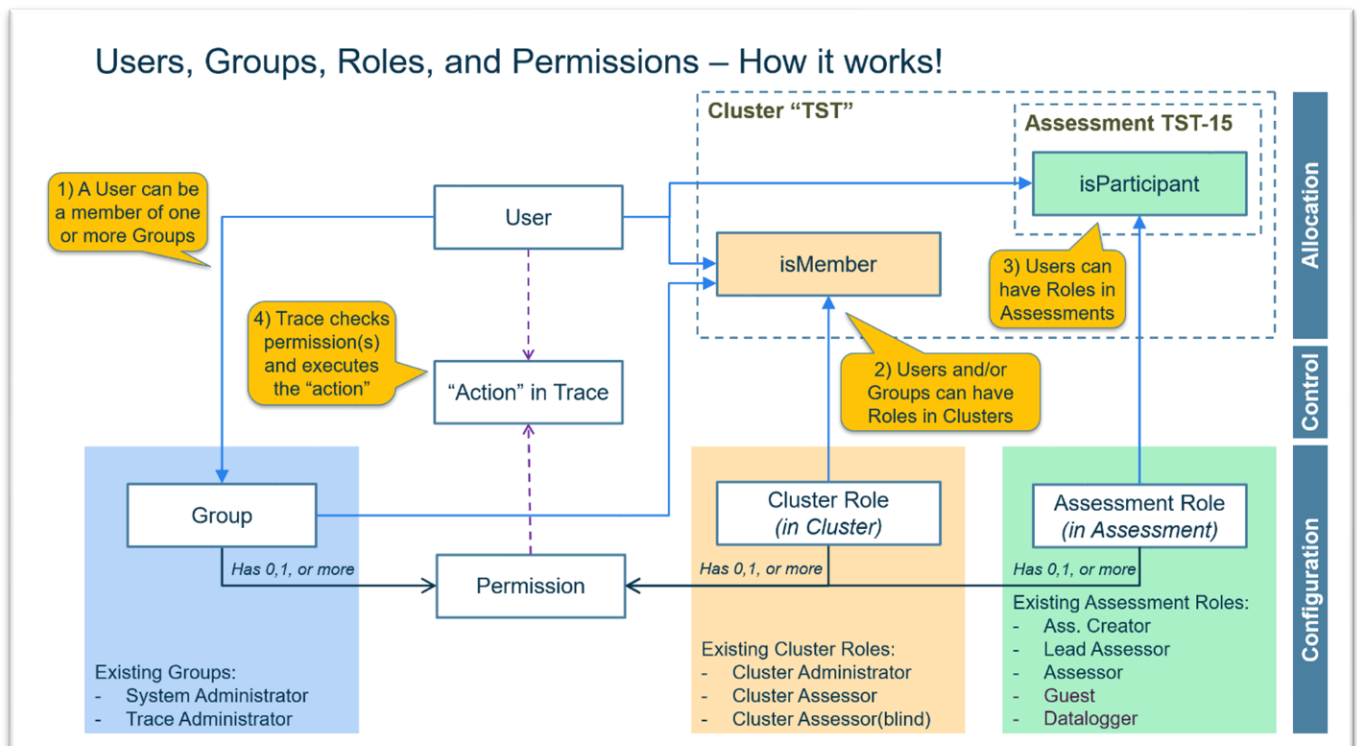
2 Users, Clusters, Roles, and Permissions

2.1 Definition of Trace permission concept

Access to functions and data in Trace are protected by permissions. In general, permissions are checked both front-end (in the application that executes in the User's browser) and in the back-end (in the Trace server application).

The following picture illustrates how users, groups, roles, and permissions relate and work.

The users are granted permissions by one or a combination of the following mechanisms:
- Being a member of one or more of the groups
- Having one or more cluster roles assigned (for the relevant cluster)
- Having one of the assessment roles assigned (for the relevant assessment)

2.2 Overview of Permission Configuration

The mapping between permissions and Groups, Cluster Roles, and Assessment Roles are illustrated in the following table.

Permission	Groups		Cluster roles				Dynamic roles				
	System Administrator	Trace Administrator	Cluster Administrator	Cluster Assessor	Cluster Assessor (Blind)	Cluster QA	Assessment Creator	Lead Assessor	Assessor	Assessment Guest	Data Logger
Administer Site	x										
Administer Trace	x	x									
Administer	x	x	x								
View Assessment List	x	x	x	x		x					
Manage Cluster Overlays			x								
Manage Assessment Planning								x			
Manage Assessment Participants			x				x	x	x		
Create Assessment			x	x	x						
Close Assessment			x				x	x			
Delete Assessment			x				x	x			
Create Record								x	x		
Manage Evidence								x	x		x
Rate Process Attribute								x			
Register Broken Rule								x	x		
Rate Practices								x	x		
Open Assessment			x			x	x	x	x	x	x
Manage Models and Standards	x	x									
Scheduler Permissions	x	x									
Create and update Type Sets	x	x									
View Assessment Analytics	x	x									

2.3 Managing Users

Users can be either locally created (in the Trace application) or created by linking to organizational users via LDAP/LDAPS or OAuth2 mechanisms. Typically, these users are defined in Microsoft / Azure Active Directory by the customer's IT organization.

Users are created in Trace in one of the following ways:

- Organizational users: When somebody searches for and adds a user for the first time in Trace, e.g., as a participant in an Assessment or as a member of a Cluster, Trace stores the UPN (User Principal Name) in the Trace database.
- Local Users: Local users can be created manually via Trace user interface. This is used running the Laptop version of Trace where no connection to Active Directory is possible.

Users are stored in the Trace database, e.g., allowing for providing a specific user access to a specific assessment or to provide a personalized of upcoming assessment where the user are to participate (My assessment view).

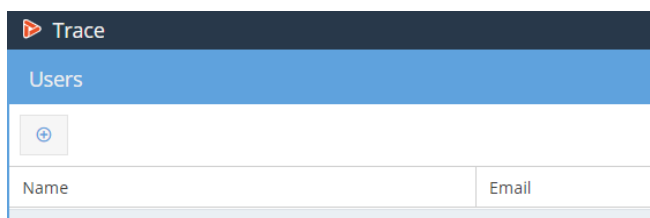## 2.3.1 Creating and Managing Local Users

Please notice that, typically, local users are not used in installations hosted by the customer.

Local users are created going to:
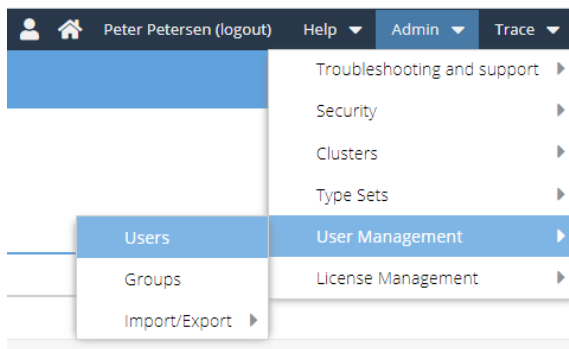
Trace will show a list of the existing users.

Click "+" button to add a new local user:

In the pop-up window, add (required)

- "User Principal Name" is the login username to be used
- "Name" is the name being displayed in Trace to show who is logged in
- "Password" is the password that the user must enter when logging in. Please notice: When logging the first time, the user can change password.

The user in now created and can be added into Clusters/groups or invited as a participant into assessments.

2.4 Managing Groups and Group Membership

Groups are predefined in Trace. A Group has relations to zero, one, or more Permissions.

A User can be a member of one or more Groups.

The following groups exist:

Name	Description (Please also see the permission overview)
System Administrator	• Has access to technical functions related to administering the Trace Site.
Trace Administrator	• Can create Clusters and assign Cluster Members

2.4.1 Managing Group Membership

Users can be added to Groups by going to:
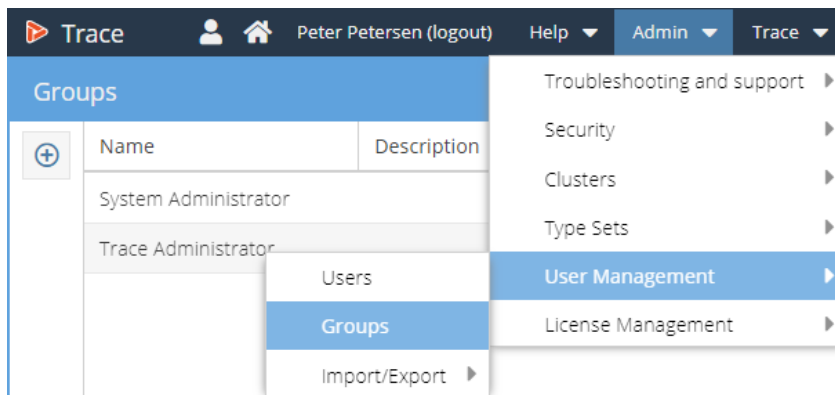
And clicking the cogwheel in the right-hand side.
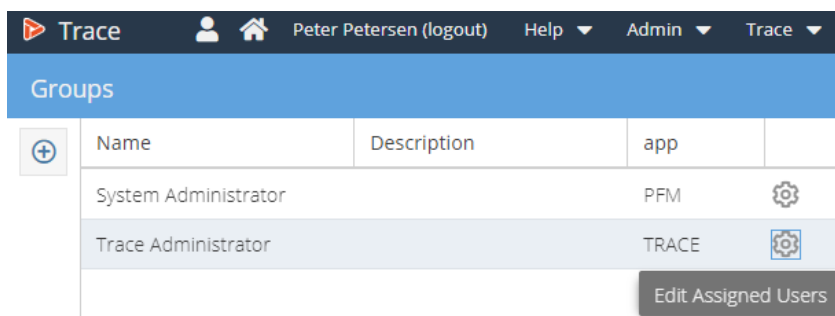
Please notice: Groups can be created but currently it is not possible to manage associations from Groups to Permissions.

2.5 Managing Clusters and Cluster Membership

A Cluster is a logical grouping of Assessments. The Clusters restricts access to assessment data based on assignment of Cluster Roles to Users/Groups.

The following Cluster Roles are defined.

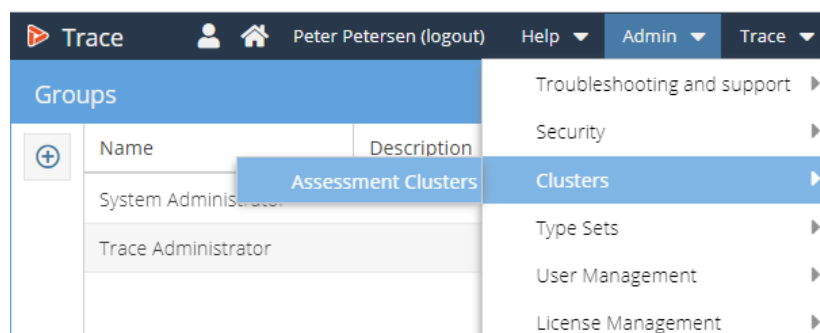| Name	Description (Please also see the permission overview)
Cluster Administrator	• Can add Users as Cluster Members • Can open all assessments in the Cluster • Can manage the overlays in the Cluster • Can see Assessment Analytics / Metrics across assessments
Cluster Assessor	• Can create assessments in the Cluster • Can see the assessment list (the names of the assessments)
Cluster Assessor (Blind)	• Can create assessments in the Cluster
Cluster QA	• Can open all assessments in the cluster

Please see section 2.2 for the full overview of Cluster Roles and corresponding permissions.

Regarding the Cluster Assessor (Blind): This membership is useful if consultants are hired in to do assessments e.g., in a specific business unit but they should only be allowed to see the names of the assessments that they create by themselves, not all other assessments.

An example of a use scenario for Clusters: Assessors doing "internal assessments" within one business unit should not be allowed access to assessment data related to "Supplier assessments". Therefore, a Cluster name "Supplier Assessments" are created, and the relevant users are added to this cluster as cluster members. Other Assessors will not be allowed to access the assessments in the "Supplier Assessment" Cluster.

2.5.1 Managing Clusters

Clusters are managed from:

The following overview appears:

New Clusters can be added by clicking the "+" in the table.

2.5.2 Manage Cluster Membership

Click a specific Cluster to enter the Cluster. This will show the list of Assessments in the cluster.

From here, select the following menu to see the Users being members of the Cluster:
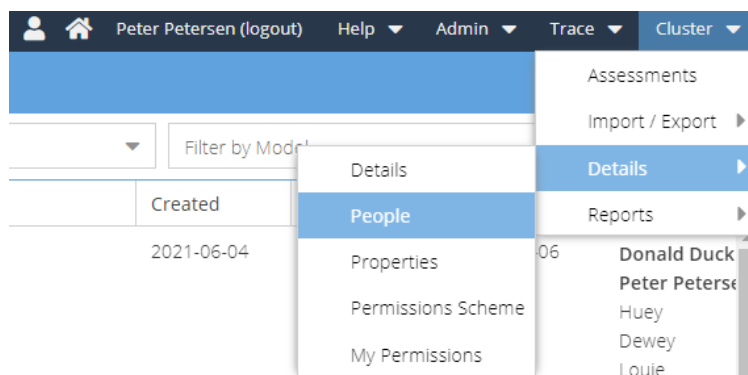
This will provide an overview of the members of the Cluster.

New Users can be added as members by clicking the "+" and selecting the relevant Cluster Roles.

Cluster membership can be removed from a User by double-clicking the table and deleting the membership.

2.6 Participating in Assessments (Assessment Roles)

Assessment Roles are assigned as part of planning the individual assessments.

The following Assessment Roles exist:

| Name	Description (Please also see the permission overview)
Assessment Creator	• Open, close and delete the Assessment

	• Manage participants Please notice that the "Assessment Creator" role is automatically assigned by Trace to the creator of the assessment. This cannot be changed afterwards.
Lead Assessor	• All functions within the assessment in Trace

Assessor	• All functions within the assessment in Trace excluding:
	   o Rate Process Attributes
	   o Close and delete the Assessment

Data Logger	• No access to anything except the following views and functions
	   o Access to Evidence Inventory
	   o Create, Edit, and Delete Evidence

Guest	• Can only view assessment data, nothing can be changed

Example of use scenario: Only the Assessment Leader will be allowed to rate the process attributes as these will determine the final assessment result.

2.7 Trace Permission Helper

Trace has a build-in permission helper which can be accessed here:
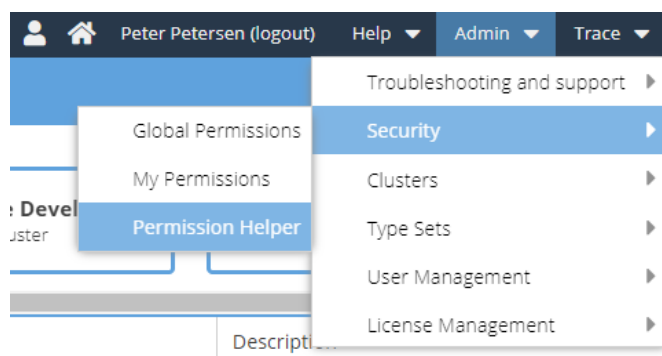
Trace Permission Helper is useful if an administrator needs to understand which Permissions a specific user has in a specific use scenario in Trace.

The Permissions Helper looks like this:

Selecting the User, and possibly adding a specific Cluster, and possibly a specific Assessment; and then clicking "Query Permissions" will provide the list of Permissions.

3 Assessment Attributes (Type Sets)

3.1 Recommended Assessment Attributes

Sharpen360 has compiled and maintains an overview of recommended assessment attributes.

We encourage our customers to report any additional assessment attributes that they would like to see in Trace.

There are several benefits of using and reporting back assessment attributes to Sharpen360, including:

- The attributes and their selection can be extracted into generated Trace Reports and Presentations
- The Trace Assessment Analysis Report will include these attributes as "dimensions" in the report and you will be able to easily use the attributes when analyzing your assessment data.

Current recommended assessment attributes are (**bold** names indicate that the attributes are part of a Trace standard setup. * indicates default selected values):

Display Id	XML Name	Selector	Example of values	Purpose of field
Agile Project	agile	Single	Yes No	Document if the assessed project is an agile or non-agile project.
Application Area	appl_area	Single	Body Electronics Integrated Systems/Services Multimedia / Applications Powertrain and Chassis Control	Document the application area of the project being assessed.
ASIL	asil	Single	ASIL A ASIL B ASIL C ASIL D ASIL QM	ASIL Level of the assessed project.
Assessment Class	aclass	Single	1 2 3*	Select the class of the assessment (as defined in ISO/IEC 33002).
Assessment Purpose	atype	Single	Process Improvement Process Related Product Risk	Whether the assessment focus is process improvement or process related product risk (As defined in VDA Automotive SPICE Guidelines)
Independence Category	acat	Single	A B C D	Select category of independence (as defined in ISO/IEC 33002).

Disciplines	disciplines	Multiple	Software Hardware Mechanics Mechatronics System Level	Engineering disciplines being part the assessed project.
Distributed Development	dist_dev	Single	Yes No	Document if the project includes distributed development.
OEM	oem	Single	<list of car manufactures – no one mentioned, no one forgotten ;-) >	Document the end manufacturer of the product of which the assessed project is part.
Process Context Category	pccat	Single	A: Parts of Product/Delivery B: Entire Product/Delivery	Process Context Category (As defined in VDA Automotive SPICE Guidelines)
Standards	standards	Multiple	ISO9001:2015 ISO21434:DIS ISO26262:2018 ISO27001:2013	What standards apply for the assessed project.
Substate	Substate	Single	Identified* BeingPlanned PlanAvailable Ongoing Postponed	Used to set an additional state of each assessment. Intended to help filtering across assessments in "My assessments" / list of assessments in a cluster
Supply Chain Position	s_c_pos	Single	OEM Tier 1 Tier 2 Tier 3	Indication of which position the project has in the supply train.

Furthermore, we know that some customers are interested in additional attributes, see bullet list below. Currently, we do not encourage to add these fields as assessment attributes as we expect that they will be added to Trace in a future version requiring "special handling/meaning". Please see explanation in bullet list:

- Project name – needs to tie multiple assessments together to show assessment results over time.
- Countries – needs a list of values that can be understood by business intelligence tools, e.g., PowerBI to tie assessments to maps / geographical locations.
- Business Unit – this needs special handling as some business units are "inside" the customer's organization, but when doing supplier assessments this does not make much sense. Unclear how we will handle this.

3.2 Configuring Type Sets

Prerequisite: You need to be in either the "Trace Administrator" or "System Administrator" groups.

You access the configuration of assessment attributes from the Trace menu "Admin -> Type Sets -> Manage Type Sets".
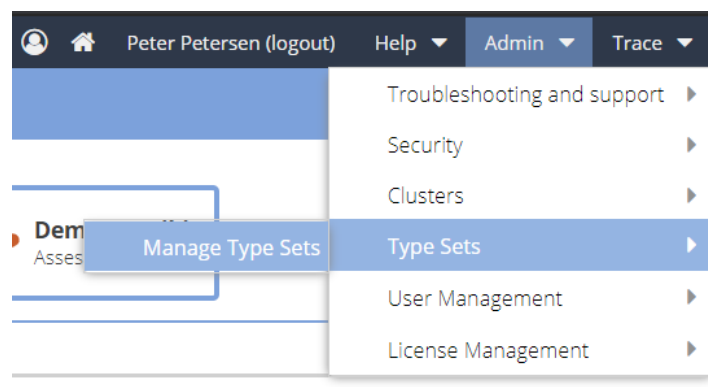
The following window will appear:

Add a new Type Set by clicking the New button and filling out the window defining the Type Set. Please notice that currently there is not mechanism in Trace to "retire" an attribute if it is no longer valid. This will be added in a later version.

Please use values (especially the XML Name) from the table in section 3.1, if possible / feasible. Example here defining "Standards":

Click "Save", and select the Type Set in the dropdown. Add the relevant standards.

Should end up like this (of course other standards could be added as well!):

Please notice that for each value, clicking the cogwheel in the right-hand side of the table will allow for selecting if a value show be default selected and also for disable the value, if it's no longer relevant.

3.3 Verifying that it works

Create a new assessment or open an existing assessment to display the assessment attributes in the planning tab of Trace:

ASIL:	ASIL A	▼	✕
Agile Project:	Yes	▼	✕
Assessment Category: ⓘ	A	▼	✕
Assessment Class:	3	▼	✕
Assessment Purpose:	Select value for typeset Assessment Purpose	▼	✕
Disciplines:	Software ✕ System Level ✕	▼	✕
Independence Category:	B	▼	✕
Process Context Category:	B: Entire Product/Delivery	▼	✕
Substate:	Ongoing	▼	✕
Type:	Process Related Product Risk	▼	✕

4 Ticket System Integration

Currently, Jira is the only ticket system which Trace supports.

Exports of Records (e.g., Weaknesses) to other ticket systems must be done by exporting the Records into an Excel workbook (use the report: Trace Record List) and importing it manually into the relevant ticket system.

Please let us know if you are interested in having connectors to other ticket system.

4.1 Ticket System Integration Concept

Trace allows for automatically transferring selected Records (e.g., Weaknesses) to a Ticket System. Currently, Jira is the only ticket system which has a connector integrated in Trace.

The configuration of Jira as Ticket System requires the configuration of Project in Trace.

4.2 Projects (PLCs) – Which should I create?

Trace allows for creating of "Projects". Projects are entities in Trace linking to "real life projects". In Trace, these projects are called "PLCs". In future versions of Trace, we expect the concept of PLCs will be extended to e.g., link assessments together.

Creating and configuring one or more PLCs are done using the normal URL to your Trace demo installation, but instead of ending the URL with /cat.html, this should be /plc.html, e.g. (for our trace installation):

https://tracedemo.sharpen360.com/plc.html

Accessing the URL, you should see a page like this:
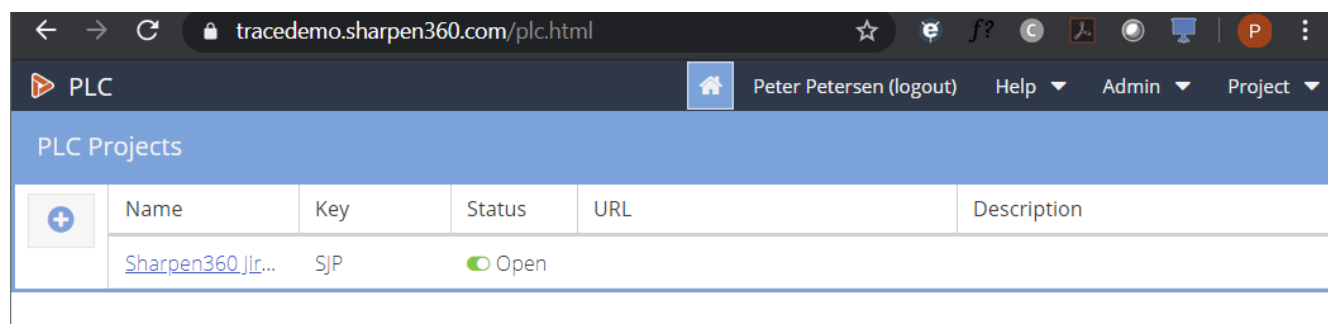
Your list will be empty, but you can create new PLCs using the "+" button on the left-hand side.

Which PLCs to create?

If you would like to have all Weaknesses found across all assessment transferred to the same Jira instance, you should create one PLC representing the "owner project" of that instance. In this case this would typically be the "assessor's jira instance" where all weaknesses are created and tracked to completion.
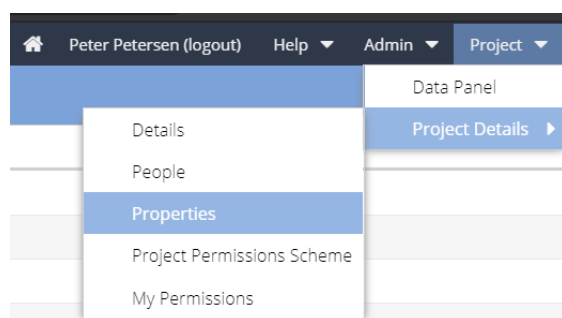
If you would like to transfer the Weaknesses found in an assessment directly to the Jira instance of the project being assessed, create a PLC project for the project.

Any combination in between these two concepts is possibly, e.g. connecting to a Jira for each business unit of the company.

4.3 How to setup Jira as Ticket System

Prerequisite: To allow for Trace to submit tickets into Jira, you need a Jira user having appropriate access to create Jira issues in the relevant Jira Instance(s).

In Trace, go into the relevant PLC and select the menu: "Project -> Project Details -> Properties" here:

You should see a screen like this (but without having values in the "Value" column):

The value must be added based at your Jira setup.

Trace uses these values when accessing the Jira instance via the Jira REST API.

You do not have to create a PLC project for each Jira Project key, this is possible to override in "Trace", the Jira Project Key will be the default value inside "Trace".

We recommend creating and using a Jira API Token for the Jira user's password. A Jira API Token is created and managed by logging into Jira using the relevant User/password. Please contact you Jira admin to understand how this is done. If this is done, this API Token should be entered for the "Jira password".

We have created a default ticket in Jira and if you leave the "Jira message transformation file" empty it will be the default one. If you want to create your own message you will have to create a XSLT transformation file (Please contact Sharpen360 if you need help to do this) and put it inside the "ProcessLibrary/tsi" folder, then you will have to write the filename in the value field for "Jira message transformation file".

The following picture is an example of the default message send from Trace.
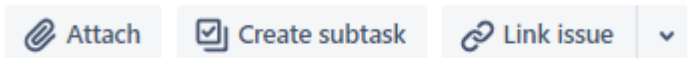
If the "Jira issue type" value field is left empty it will choose the issue type "Task".

4.4 How to submit Records from Trace into Jira

In Trace, in the Plan tab, just before the "Start" and "End" date selectors, you should choose "Ticket Project" to pick the correct Jira instance.

Tickets can be transferred "one by one" or "bulk".

Tickets can be "bulk" submitted by filtering the List view to show the relevant Records, select one of the Records, and click "<shift> + k" to bulk-submit all Records in the List view.

Alternatively, Records can be submitted individually selecting the Record and using "<shift> + j"

5 Terms and Concepts

Term	Definition
Assessment Attribute	"Assessment Attributes" are used to collect various data for the assessments, e.g., what standards the project complies to or the class of the assessment.
Assessment Project	"Assessment Projects" are used to organize assessments in a group having different access levels for different Users.
Evidence	"Evidence" is the term used for work products of any kind presented by the project being. Examples are design documents, requirements, models, and issues. Evidence can be provided before or during interview sessions.
Evidence Inventory	"Evidence Inventory" is the mechanism in *Trace* supporting registration of Evidence. Evidence are assigned a unique id within the assessment and can be referred from Records. *Trace* keeps track of references to each individual Evidence, generates evidence lists per process for reporting, and maintains mappings from the Records where the Evidence is referred.
Grid view	The "Grid view" tab in *Trace* provides an "Excel like" view of PAM, Evidence and Records. Alternative is "List view"
Indicator	Used as a common term for Base Practices (BPs) and Generic Practices (GPs).
Indicator Annotation (IA)	"Indicator Annotation" is the term used for an annotation added to an Indicator. IAs are organized by "Overlays" and can have either personal or project scope.
Instance	"Instance" is the term used when the same process is applied in different process instances within the same project, e.g., when one part of the project is doing agile development and the other part is not. *Trace* supports this scenario by being able to define one or more Instances within the same assessment. Defining Instances is done as part of "Plan Assessment".
List view	The "List view" tab in *Trace* provides an "Tree like" view of PAM with Evidence and Records. Alternative is "Grid view"
Notes / Notepad	"Notepad" is a mechanism to handle unstructured notes, typically during interview sessions. Please note that creating references to Evidence will work from Notepads. The notes can be copied into Records after or during the interview sessions.
Guideline	"Guideline" is the term used for rules and recommendations specifying relations between PAM indicators.
Overlay	An "Overlay" is a container of "Indicator Annotations" and "Record Templates" which can be used to support the Assessor.
Process Assessment Model (PAM)	A "Process Assessment Model" defines processes, attributes, outcomes, and Indicators which is used when performing Assessments. Various PAMs are available and all ISO33000 compliant PAMs can be loaded into *Trace*.
Record	"Record" is the term used for any registration done by the assessor(s). Six types of Records exist: "Strength", "Weakness", "Recommendation", "Observation", "Comment", and "Question". Records can refer to zero, one, or more "Evidence".
Record Template (RT)	"Record Template" is a mechanism to create standardized Records which may be reused (by copy) across multiple Assessments. RTs are organized by "Overlays" and can have either personal or project scope.
Report	"Report" is the term used when Assessment data is extracted into Word, PowerPoint, or Excel using a specific "Report Template".

Report Template	"Report Templates" are used for generating "Reports". *Trace* has several build-in "Report Templates" which can be tailored into customer-specific formats.
Trace Assessor Assistant (TAA)	Trace Assessor Assistant (TAA) support the Assessor by evaluating Guidelines based at a set of predefined evaluation rules. Sharpen360 has defines these evaluation rules for all VDA ASPICE Guidelines.
Workspace	"Workspace" is the mechanism in *Trace* making it possible to group Records into multiple "sets", e.g., by having one group or "mini team" of assessors registering Records in one Workspace and another group of Assessors registering Records in another Workspace. Also, the process of consolidating and agreeing on Records can be supported by having a "Consolidated" workspace.