

itd Advanced Resource Planning 13.0.0

User and Administrator Manual

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We appreciate reports of any errors.

September 2026

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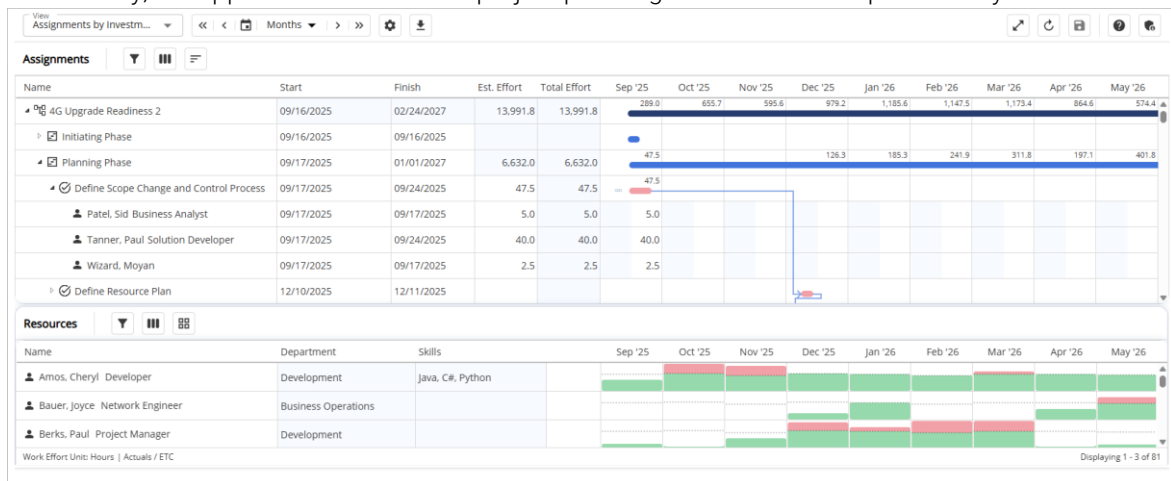
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1 Short Description

itd Advanced Resource Planning is an add-on tightly integrated with Clarity PPM for planning efforts and costs on individual investments or across multiple investments and managing resource pools. Additionally, the application offers basic project planning and a number of productivity features.



Main Features

- > Plan based on investments or based on resources, roles and teams.
- > Plan for a single investment or across multiple investments.
- > Plan for custom investment types and investment hierarchies.
- > Edit allocations, hard allocations and assignments.
- > Enter workloads per resource, role and team for investments and tasks.
- > View workload sums per investment, phase, task, resource, role and team.
- > View and edit investments and team entries, projects with phases, tasks, milestones and dependencies as well as assignments in the interactive Gantt chart.
- > The global overview of resource, role and team utilization and capacity in color-coded numbers or as a graphical histogram highlights over- and underbookings.
- > The tree view displays your selection of standard fields and any custom fields per data record.
- > Filters for standard and custom fields enable you to quickly and precisely select investments, resources, roles, teams, team entries, tasks and assignments.
- > The itd Portfolio Optimizer integration shows you what your portfolio managers see.
- > Edit scenario data with optional comparison to the plan of record or any other scenario in the allocation modes.
- > Integrate the application with the Roadmaps module to edit roadmap scenarios.
- > Integrate the application with the Hierarchies module to edit hierarchies.

2 View Modes

itd Advanced Resource Planning supports the following four view modes:

- > Allocations by Investment
- > Allocations by Resource
- > Assignments by Investment
- > Assignments by Resource

The selected view mode determines whether allocations or assignments are displayed, and whether they are grouped by investments or by resources, roles and teams.

You can customize these views, save them as custom views and share them with other users. The order of views in the menu is also customizable. See chapter "3 Views" on page 13 for details.

2.1 Allocations by Investment

The **Allocations by Investment** mode groups team entries of allocated resources, roles and teams and their allocations or hard allocations by associated investments.

The utilization and capacity of resources, roles and teams are displayed in a separate view in color-coded numbers or as graphical histograms.

View

Allocations by Investment...

Plan

★ Plan of Record

<<

>

Months

>

>>

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Allocations

▼

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☰

Name	Start	Finish	Allocation	Hard Allocation	Aug '26	Sep '26	Oct '26	Nov '26	Dec '26	Jan '27						
4G Upgrade Readiness 2	09/16/2025	02/24/2027	44,573.9	5,908.0	336.0	2,201.7	352.0	2,164.9	352.0	2,290.7	336.0	2,186.5	368.0	2,394.8	240.0	2,188.0
Administrator, Stefan	09/16/2025	02/24/2027	3,016.0	2,824.0	168.0	168.0	176.0	176.0	176.0	168.0	168.0	184.0	184.0	120.0	168.0	
Architect	09/16/2025	02/24/2027	3,016.0			168.0		176.0		176.0		168.0		184.0	168.0	
Bauer, Joyce Network Engineer	09/16/2025	01/28/2027	2,804.0	2,824.0	168.0	168.0	176.0	176.0	176.0	168.0	168.0	184.0	184.0	120.0	100.0	

Resources

▼

☰

☰

Name	Department OBS	Department	Aug '26	Sep '26	Oct '26	Nov '26	Dec '26	Jan '27
Amos, Cheryl Developer	All/IT/Development	Development						
Berks, Paul Project Manager	All/IT/Development	Development						
Cohen, Rita Business Analyst	All/IT/Development	Development						

Work Effort Unit: System Standard (Hours) | Hard Allocation / Allocation

Displaying 1 - 3 of 28

See chapter "4 Allocations by Investment" on page 16 for details.

2.2 Allocations by Resource

The **Allocations by Resource** mode groups team entries for investments and associated allocations by the allocated resources, roles and teams.

Their utilization and capacity are displayed directly in the allocation grid on the right.

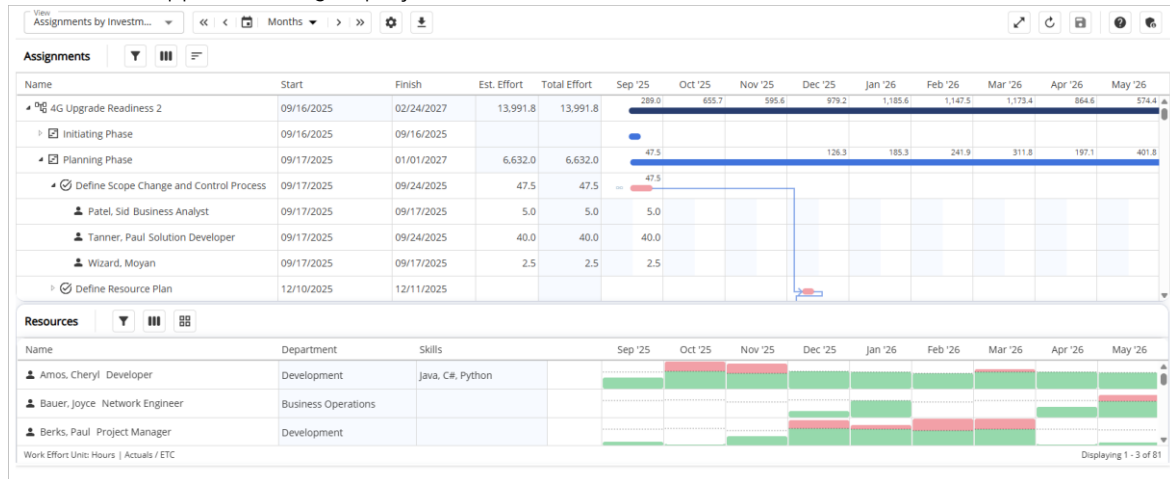
Name	Start	Finish	Aug '26	Sep '26	Oct '26	Nov '26	Dec '26	Jan '27
Amos, Cheryl Developer	01/12/2025	06/26/2026	228.5 / -50.0	237.0 / -50.0	187.0 / 0.0	178.5 / 0.0	195.5 / 0.0	178.5 / 0.0
Architect	01/01/2025	12/31/2029	1,680.0 / -508.4	1,584.0 / -283.7	1,584.0 / -349.8	1,512.0 / -324.1	1,472.0 / -168.2	1,344.0 / -150.0
4G Upgrade Readiness 2	09/16/2025	02/24/2027	168.0	176.0	176.0	168.0	184.0	168.0
BEA Weblogic 10.0 Application Server	04/01/2025	03/31/2027	168.0	176.0	176.0	168.0	184.0	168.0
Headquarters	06/01/2025	05/31/2027	168.0	176.0	176.0	168.0	184.0	168.0
LATAM Research and Development Center	03/01/2025	02/28/2027	168.0	176.0	176.0	168.0	184.0	168.0
Meeting Reservation Portal	08/01/2025	01/30/2027	168.0	176.0	176.0	168.0	184.0	168.0

See chapter "5 Allocations by Resource" on page 56 for details.

2.3 Assignments by Investment

The **Assignments by Investment** mode groups resource, role and team assignments by associated investments and investment sub-structures. The utilization and capacity of resources, roles and teams are displayed in a separate view as graphical histograms or in color-coded numbers.

This mode supports editing of project structures in an interactive Gantt chart.

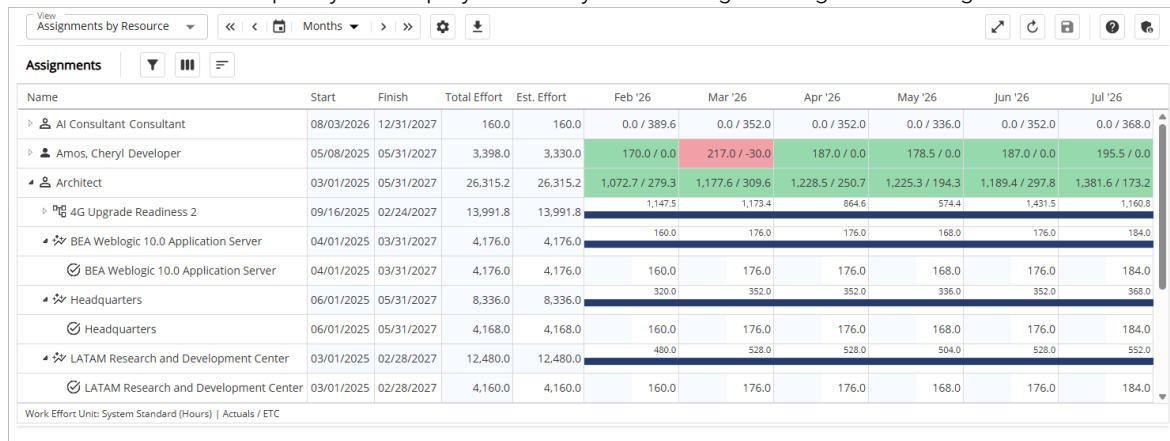


See chapter "6 Assignments by Investment" on page 82 for details.

2.4 Assignments by Resource

The **Assignments by Resource** mode groups investments and associated task assignments by the assigned resources, roles and teams.

Their utilization and capacity are displayed directly in the assignment grid on the right.



See chapter "7 Assignments by Resource" on page 123 for details.

3 Views

You can create any number of custom views based on one of the four basic system view modes described in the previous chapter, and share them with others. Administrators may also save changes to system views and recommend views, setting them as default views for new users.

3.1 Saved Custom View Settings

A custom view stores all changes you make to the view, such as allocation or assignment filters, resource filters, most other settings in the toolbar and the view's **Preferences**.

3.2 Filters Saved with Previous Versions

From version 11.0.0 you can no longer save and load filter settings for the allocation, assignment and resource filters. These settings are now stored in custom views along with all other settings. When first starting itd Advanced Resource Planning 11.0.0 or a more recent version, if filters have been saved with an older version, they will be migrated to custom views.

You can find these in the **View** menu, under the heading of the system view they are based on, with the previous filter's name. The view will initially be shared with all users the filter was shared with.

For **Investment** views, saved allocation or assignment filters will be combined with the application's default resource filter and vice versa in the associated custom views that are created.

3.3 Views and Planning Modes

Individual sets of views are stored for each mode available for itd Advanced Resource Planning.

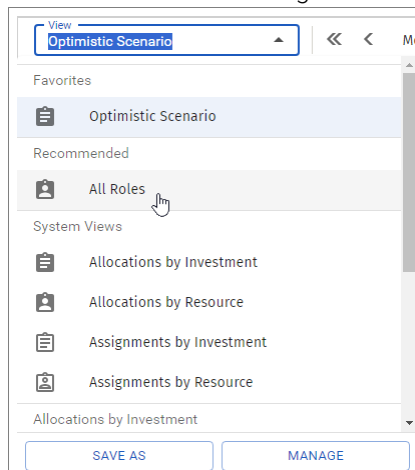
This depends on where you open the application from:

- > Global Multiple Investment Mode (global channel)
- > Single Investment Mode (investment channel)
- > Roadmap Scenario Mode (roadmap channel)
- > Hierarchy Mode (hierarchy channel)

See section "8.7 Planning Modes" on page 154 for details about configuring the individual modes.

3.4 Selecting a View

You can find the following sections in the **View** menu, in this order.



- > Your **Favorites** are always displayed on top of the list in alphabetical order.
- > Views **Recommended by ARP Admins** are listed next, or on top of the list if you have no favorites. The first recommended view is the default for new users. When you open itd Advanced Resource Planning again, it will load the last view you were using.
- > The default **System Views** are listed next, or on top of the list if you have no favorites and there are no recommended views. System views that you've selected as favorites or that have been recommended will appear in the respective list instead.
- > Any other custom views created by you or shared with you are listed next, under the heading of the system view they are based on.

The icons indicate the respective view mode, as listed under **System Views**.

3.5 Saving a View

If you have made any changes to a view that can be saved, the view's name in the **View** menu will appear in italics to indicate this, and a **Save View** button will appear next to the **View** menu.

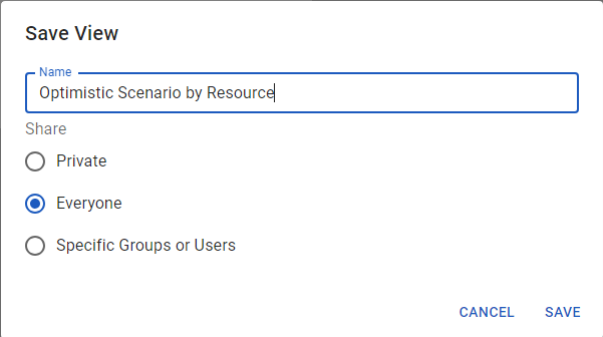
If you don't save the changes you have made to an unsaved view, all view settings will still be retained until you select another view, even if you log out and log on again.

The **Save View** button will only be enabled if you have the rights to change the view:

- > Saving changes to a view is only allowed if you have created the view yourself.
- > System views may only be changed by **ARP Admins**.

If you don't have the right to change a view you want to save, open the **View** menu and click on the **Save As** button.

This will open the **Save View** dialog.



Save View

Name
Optimistic Scenario by Resource

Share

☐ Private

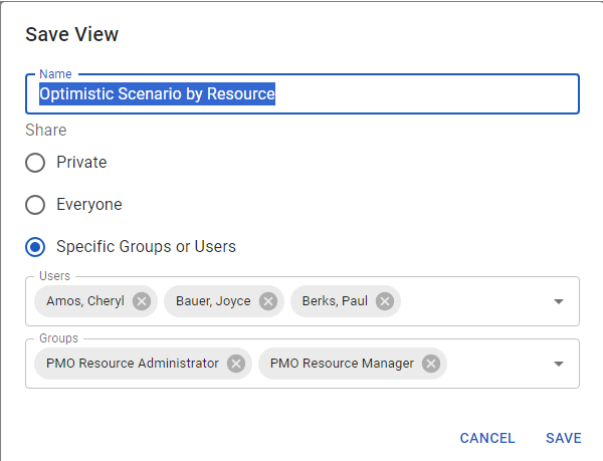
☒ Everyone

☐ Specific Groups or Users

CANCEL SAVE

Name the new view here and select the sharing mode.

The **Specific Groups or Users** option lets you select groups and/or users to share the view with.



Save View

Name
Optimistic Scenario by Resource

Share

☐ Private

☐ Everyone

☒ Specific Groups or Users

Users

Amos, Cheryl X Bauer, Joyce X Berks, Paul X

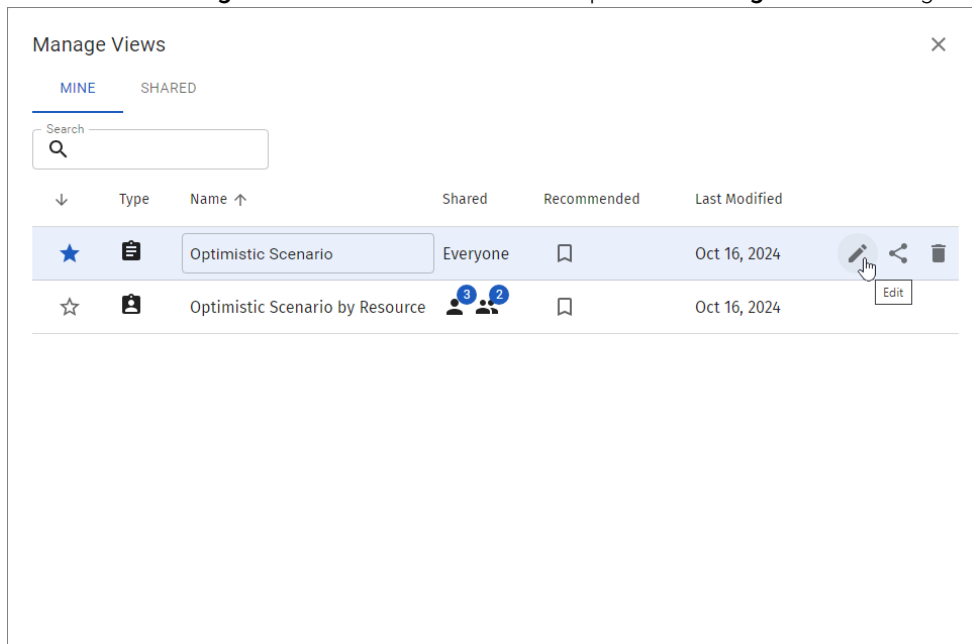
Groups

PMO Resource Administrator X PMO Resource Manager X

CANCEL SAVE

3.6 Managing Views

Click on the **Manage** button in the **View** menu to open the **Manage Views** dialog.



Views you have created are listed under **Mine**.

- > Click on the star icon to add a view to the favorites or to remove it from there.
- > Click in the **Name** column to rename the view.
- > The **Shared** column shows if and with whom you have shared the view, with icons and numbers representing specific groups and/or users. Hover over the icon to display a list.
- > **ARP Admins** may **Recommend** views they have created as well as views shared with them and system views, see below, putting them on top of the **View** list.
The topmost recommended view will be the default view for new users. After the first start, the last used view will be selected when opening itd Advanced Resource Planning.
- > Click on the pen icon to select the sharing mode and/or groups and users to share the view with.
- > Click on the share icon to copy a link to the view into the clipboard.
- > To delete the view, click on the wastebasket icon and then confirm by clicking on the checkmark.

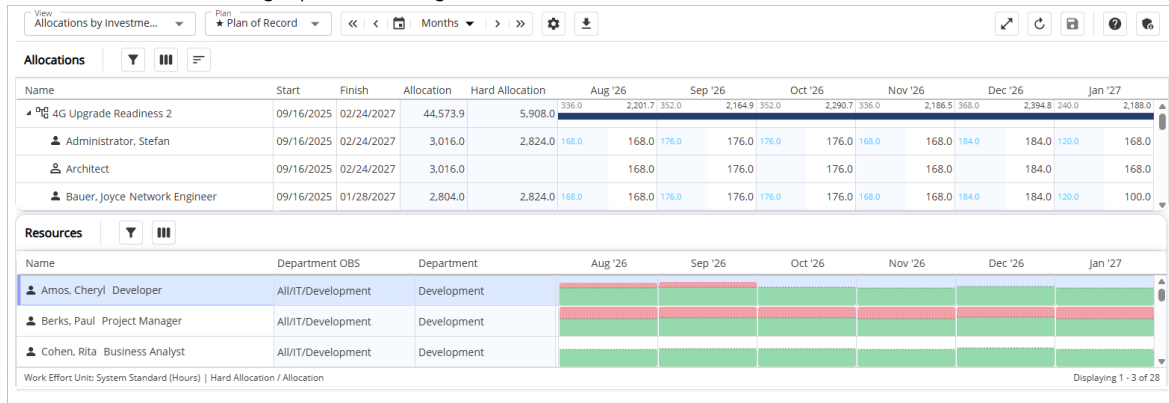
Views shared with you and the four system views are listed under **Shared**.

- > Click on the star icon to add a view to the favorites or to remove it from there.
- > **ARP Admins** may **Recommend** views they have created, see above, as well as views shared with them and system views, putting them on top of the **View** list.
The topmost recommended view will be the default view for new users. After the first start, the last used view will be selected when opening itd Advanced Resource Planning.
- > For any views shared with them, **ARP Admins** can change the access settings via the pen icon or delete them via the wastebasket icon.
- > The four system views are always public and can't be deleted.

4 Allocations by Investment

The **Allocations by Investment** mode groups team entries of allocated resources, roles and teams and their allocations or hard allocations by associated investments.

The utilization and capacity of resources, roles and teams are displayed in a separate view in color-coded numbers or as graphical histograms.



4.1 View Sections

In **Allocations by Investment** mode, the following view sections are displayed.

4.1.1 Main Toolbar

Use the main toolbar at the top to switch to another **View** or save the current one, enable scenario mode or scenario comparison mode, shift and scale the timeline, access **Preferences** for the current view, **Export to Excel**, toggle **Fullscreen**, refresh the view, revert or save changes, and open the **Help** screen. **ARP Admins** also have access to global application **Administration** settings here.

4.1.2 Allocations View

The **Allocations** view shows:

- > Investments you have access to, including custom investment types. Displaying investment hierarchies is optional and can be toggled in the **Visualization** tab of the **Preferences**.
- > Resources, roles and teams with team entries for displayed investments. In this mode, displayed resources, roles and teams represent team entries. Displaying team entries of inactive resources, roles and teams is optional and can be toggled in the **Visualization** tab of the **Preferences**.
- > Associated **Allocation** and/or **Hard Allocation** values per period.

The **Allocations** view is split into two sections:

- > The list on the left shows a tree view of investments and team entries in the **Name** column and other columns for fields of all displayed items. Expand an investment to see its team entries.
- > The timeline on the right is a combined Gantt chart and allocation grid.
 - Toggle the display of Gantt bars for investments and team entries in the **Visualization** tab of the **Preferences**.
 - Without Gantt bars for team entries, you can edit the right allocation grid value, **Allocation** or **Hard Allocation**, as selected in the **Grid** tab of the **Preferences**.

Use the **Allocations** toolbar to filter the view, select columns for the list on the left as well as sorting fields for investments and team entries.

4.1.3 Resources View

The **Resources** view shows:

- > Resources, roles and teams you have access to.
- > Global resource, role and team utilization from allocations and capacity.
You can disable the utilization view to speed up loading by turning off both **Show Histogram** and **Show Utilization** in the **Visualization** tab of the **Preferences**.

The **Resources** view is split into two sections:

- > The list on the left shows resources and teams, in common alphabetic order, followed by roles, also in alphabetic order.
To staff, drag resource list items onto investments or team entries in the allocation list.
- > On the right, the global utilization and capacity of the listed resources, roles and teams are shown.
 - By default, the utilization is displayed as histogram charts stacked against a capacity line.
 - Alternatively, you can display a color-coded grid showing the same data as numeric ratios.
 - Disable both visualizations to speed up loading, see above.

Both visualizations share the time periods displayed in the **Allocations** view.

The displayed utilization is global, based on all allocations in the respective periods.

An optional utilization filter supports filtering by associated team entries and investments.

Depending on the editable right-hand grid value selected in the **Grid** tab of the **Preferences**, the utilization is based either on **Allocation** or **Hard Allocation** values.

Click on a utilization grid cell to show the utilization popup, which lists associated investments and allocations.

Use the **Resources** toolbar to filter the view and select **Resource** and **Utilization Popup Columns**.

4.2 Allocation List

Without an allocation filter, the allocation list shows any investments you have access to, and associated team entries by resource, role and team.

Displaying investment hierarchies is optional, see previous section.

4.2.1 Expanding Investments

Click on the little arrow to the left of an investment icon to expand it and display all associated team entries. Click on the arrow again to hide the associated team entries.

4.2.2 Allocation Filter

Use the allocation filter to select investments and team entries.

 Click on the **Filter** button in the **Allocations** toolbar to access the allocation filter.

- Enter filter conditions and click on **Filter** to filter the view.
- Click on **Clear** to delete all entered filter conditions, then click on **Filter** to apply. All data records you have access to will be displayed.
- Click on **Configure** to select filter fields for the allocation filter.

See section "4.3 Allocation Filter" on page 23 for details.

4.2.3 Columns

The following fields are always displayed in the first list column, labeled **Name**:

- > **Name (investment, resource/role/team of a team entry)**: Editable for investments and team entries of roles (**Requirement Name**).
- > **Primary Role (resource), Parent Role (role)**: A resource's primary role is displayed next to their name, if applicable. A role's parent role is displayed next to their name, if applicable. You can turn this off via a feature toggle, see "8.12.4 Hide Primary/Parent Role Name" on page 164.

 Click on the **Columns** button in the **Allocations** toolbar to select additional list columns:

- > **Start, Finish (investment, team entry)**: Editable, also in scenario mode.
- > **Actuals, Allocation, Hard Allocation (investment, team entry)**: Worked, planned and booked hour totals for investments (first level) and team entries (second level).
Configurable via **Calculate Sums** and **Time-Scaled Value Total Column Calculation** in the **Timeslices** tab of the **Preferences**, see page 53.
- > **ID (investment)**
- > **Investment Status (investment)**: Editable, also in scenario mode.
- > **Investment Type (investment)**
- > **Predecessors, Successors (investment)**: Investments connected via agreements.
- > **Default Allocation (team entry)**: Editable; this applies in periods during the team entry where no allocation segments have been defined.
- > **Effective Role (team entry)**: Resource/role/team investment role.
- > **Staff OBS Unit (team entry)**: Editable.
- > **Skills (team entry of a role)**: Editable; only with additional configuration, see page 163.

ARP Admins may add standard and custom investment and team entry fields to the selection and enable editing for them. See "8.11 Configuring List and Filter Fields" on page 158.

4.2.4 Editing List Fields

In **Allocations by Investment** mode, you can edit the following list fields by default.

ARP Admins may enable editing for additional fields, see "Additional Fields" below.

> **Name of Investments and Requirement Name of Role Team Entries**

- Click in the associated row in the **Name** column and press [F2] or [Return].
- Enter the desired name.
- Press [Return] to confirm or [Esc] to cancel.

Alternatively, you can rename investments and role team entries via the context menu.

> **Start and Finish of Investments:** You can change the duration of investments via the **Start** and **Finish** list fields. This changes the duration of associated team entries proportionally (e.g., changing the total duration from 8 to 6 weeks reduces a team entry of 4 weeks to 3 weeks). For each affected team entry, this will also redistribute associated **Allocation** and **Hard Allocation** values over the new duration with the same proportions as before the change.

Therefore, shortening a team entry will raise the allocation per period while extending will lower it.

> **Start and Finish of Team Entries:** You can change the duration of team entries via the **Start** and **Finish** list fields. This redistributes associated **Allocation** and **Hard Allocation** values over the new duration with the same proportions as before the change. Therefore, shortening a team entry will raise the allocation per period while extending will lower it. Extending a team entry beyond the associated investment's **Start** or **Finish** will also extend the investment, such that it includes that team entry.

Reducing the durations of team entries doesn't reduce the investment's duration.

Team entries without a **Start** or **Finish** adopt these values from the associated investment.

> **Investment Status:** Click in the field to select a value.

> **Default Allocation of Team Entries:** Click in the field to edit.

> **Staff OBS Unit of Team Entries:** Click in the field to edit.

 Click on the arrow to switch between filtering by selected unit and children (arrow down), selected unit and parents (arrow up) or only the exact unit (arrow right).

 The lookup browse window lets you select the desired OBS top level, sub levels and units.

 Click here to empty the field.

> **Skills of Role Team Entries:** Click in the field to edit.

- Type to open a list of suggestions and select the desired value.

 Select the desired value or values from a filterable list in the lookup browse window.

 Click here to remove selected values.

This feature is only available with additional configuration, see page 163.

> **Additional Fields:** You can also edit any additional list fields that have been made editable by **ARP Admins**, see "8.11 Configuring List and Filter Fields" on page 158.

To edit lookup fields, click in the field first. This gives you the following editing options.

- Type to open a list of suggestions and select the desired value.

 Select the desired value or values from a filterable list in the lookup browse window.

 Remove selected values or empty the field if it supports entering one value only.

- > **Copying List Fields:** You can copy editable field values up or down via drag-and-drop. This feature supports lookup fields and respects restrictions on column values.
Copying field values this way requires the start and target row to be of the same type, i.e., investment or team entry. For investments, the investment type must also be the same, e.g., project or idea. All custom investment types are considered to be the same type for this feature.
-  Changes will only be applied when you save them via the toolbar. You can easily identify unsaved changes via the red triangle in a field.
-  Refresh the view without saving to revert your changes.
-  Projects will automatically be locked for editing by other users while unsaved changes exist. This is indicated by a padlock icon. Saving or reverting your changes will unlock the project. If your session is interrupted before a project is unlocked, you or any **ARP Admin** can unlock it via the context menu. Please note that this is only possible for projects that were locked due to changes made in itd Advanced Resource Planning or the itd Portfolio Optimizer.

4.2.5 Sort

Use the **Sort** dialog to select sorting fields for investments and team entries.

 Click on the **Sort** button in the **Allocations** toolbar and select:

- > **Sort Investments By: Name (Default) or Investment Type.**
- > **Sort Team Entries By: Name (Default), Effective Role, Finish Date or Start Date.**

In addition to the fields listed here, any custom fields without lookups are available.

The button next to the sort field selection determines the sort order, ascending or descending.

If you don't select the default field, items will be sorted by it on the second level in ascending order.

4.2.6 Investment Actions

Right-click on an investment in the **Name** column to open the associated context menu with the following standard investment actions.

ARP Admins can reorder, restrict or remove the standard actions listed here and add custom actions, see "8.10 Defining Actions" on page 156.

- > **Open Properties:** Open the detail view for the selected investment in a new browser tab.
- > **Allocate From Estimates:** Enter the **Est. Effort** of all associated assignments as **Allocation** for each team entry of the selected investment. This is directly applied without confirmation.
- > **Commit Allocation:** Enter the **Allocation** as **Hard Allocation** for all team entries of the selected investment. This is directly applied without confirmation.
- > **Accept Hard Allocation:** Enter the **Hard Allocation** as **Allocation** for all team entries of the selected investment. This is directly applied without confirmation.
- > **Remove Lock:** Unlock projects locked due to changes made in itd Advanced Resource Planning or the itd Portfolio Optimizer. Available to every user for projects locked due to their own changes. Available to **ARP Admins** for any project locked due to changes made by any user.
Projects locked due to changes that weren't made in itd Advanced Resource Planning or the itd Portfolio Optimizer can only be unlocked via the associated button in the project's properties.
- > **Expand All:** Expand the selected investment to reveal all associated team entries.
- > **Jump to Start Date:** Shift the timeline such that it starts with the selected investment's start date.
- > **Rename:** Rename the selected investment. [Return] confirms, [Esc] cancels.
The change is only applied when saving via the toolbar. Refresh without saving to undo.
- > **Show Investment Team:** Filter the resource list by the selected investment, such that only that investment's team members are displayed.

4.2.7 Team Entry Actions

Right-click on a team entry (resource, role or team) in the **Name** column to open the associated context menu with the following standard team entry actions.

ARP Admins can reorder, restrict or remove the standard actions listed here and add custom actions, see "8.10 Defining Actions" on page 156.

- > **Open Properties:** Open the detail view for the selected team entry in an overlay within the same browser tab.
- > **Create Requisition:** Create a new requisition for the **Allocation** of the selected team entry. This action will be directly applied without further confirmation.
- > **Allocate From Estimates:** Enter the **Est. Effort** of all associated assignments as **Allocation** for the selected team entry. This action will be directly applied without further confirmation.
- > **Commit Allocation:** Enter the **Allocation** as **Hard Allocation** for the selected team entry. This action will be directly applied without further confirmation.
- > **Accept Hard Allocation:** Enter the **Hard Allocation** as **Allocation** for the selected team entry. This action will be directly applied without further confirmation.
- > **Delete:** Available for team entries without actuals. The selected team entry will be deleted instantly without further confirmation.
- > **Jump to Start Date:** Shift the timeline such that it starts with the team entry's start date.
- > The **Unstaff to Effective Role** action is available for team entries of resources and teams without actuals. The team entry will be reset to its effective role. If that role already has a team entry in the investment, a new team entry will be created for a copy of the role. The change will only be applied when saving via the toolbar. Refresh without saving to undo.
- > **Rename:** Available for role team entries. Enter the selected team entry's new **Requirement Name**. [Return] confirms, [Esc] cancels. The change is only applied when saving via the toolbar. Refresh without saving to undo.
- > **Show candidates (by Role, OBS and Skills):** Available for role team entries. This sets the following resource filter conditions, adding missing filter fields automatically:
 - **Primary Role** is the selected role.
 - **Resource OBS Unit** is the **Staff OBS Unit** of the associated team entry, if it has any.
 - **Skills** are the skills selected for the associated team entry, if it has any.
 - **Skill Matching** is set to require all skills to match. Alternatively, you can set this to require at least one skill to match.

Please note: The **Skills** filter and matching aren't available by default due to a switch from the **Skills Hierarchy** to the flat MUX skill system in Clarity 16.2.3. However, you can either enable the old **Skills Hierarchy** or add a **Skills** field to role team entries to use MUX skills:

- 8.12.1 Use Old Skills Hierarchy, see page 163.
- 8.12.2 Use MUX Skills on Role Team Entries, see page 163.

4.2.8 Conversations

The standard MUX conversations for team entries are available in itd Advanced Resource Planning in the **Allocations by Investment** and **Allocations by Resource** views.

Clicking on a team entry adds a small **Details** button at the top right side of the view.

> ALLOCATIONS

View
Allocations by Investment

Months 8 SHOW REFRESH SAVE EXPORT TO EXCEL SCENARIO VISUALIZATION

Name	Team - Coord...	Dec '21	Jan '22	Feb '22	Mar '22	Apr '22	May '22	Jun '22	Jul '22
Cloud Computing Enhancements		2	2	2	2	2	2	2	1
Customer Migration To Cloud		352	303	161	179	163	171	171	163
AI Team	New	41	100						
Amos, Cheryl Engineer	New	18							
Andersson, Peter Engineer	New	26	20	19	22	20	21	21	20
Architect Engineer	New	18	16	15	18	16	17	17	16
Arpel, itdesign Business Analyst	New	22	16	15	18	16	17	17	16
Berry, Jason Engineer	New		5	5	6	5	6	6	5
Bhatt, Rakesh Engineer	New	33	16	15	18	16	17	17	16

DETAILS

This button opens a conversation panel for this team entry only.

> ALLOCATIONS

View
Allocations by Investment

Months 8 SHOW REFRESH

Name	Team - Coord...	Dec '21	Jan '22	Feb '22
Cloud Computing Enhancements		2	2	2
Customer Migration To Cloud		352	303	161
AI Team	New	41	100	
Amos, Cheryl Engineer	New	18		
Andersson, Peter Engineer	New	26	20	19
Architect Engineer	New	18	16	15
Arpel, itdesign Business Analyst	New	22	16	15
Berry, Jason Engineer	New		5	5
Bhatt, Rakesh Engineer	New	33	16	15

Architect
Customer Migration To Cloud (PR2009)

itd | CANCEL SAVE

itd Arpel, itdesign 12/08/21, 02:41 PM
Dana Lewis More architects required!

itd Arpel, itdesign 12/08/21, 02:40 PM
Architect required.

4.3 Allocation Filter

This section describes the allocation filter in **Allocations by Investment** mode.

4.3.1 Displayed Data

The following data will be loaded and displayed in the **Allocations** view without a filter:

- > Any investments to which you have access (custom types included).
- > Any associated team entries of resources, roles and teams.
- > Any associated allocations and hard allocations.
- > Optionally investment hierarchies and team entries of inactive resources, roles and teams, see "4.1.2 Allocations View" on page 16.

4.3.2 Access Rights and Query Limits

The amount of data that will actually be loaded is limited by your access rights and by the query limits entered for itd Advanced Resource Planning by an administrator via the governors lookup:

- > **Access Rights:** Data records to which you have no access in Clarity PPM will not be displayed in itd Advanced Resource Planning either, see "8.5 User Access Rights" on page 150.
- > **Query Limits:** Limits for the number of resources/roles/teams, investments and assignments to load at the same time, entered by an administrator via the governors lookup, see "8.15.1 Query Limits" on page 178. If data records aren't displayed due to query limits, this will be indicated.

4.3.3 Filtering the Allocations View

Use the allocation filter to select investments and team entries.

 Click on the **Filter** button in the **Allocations** toolbar to access the allocation filter.

- Enter filter conditions and click on **Filter** to filter the view.
- Click on **Clear** to delete all entered filter conditions, then click on **Filter** to apply. All data records you have access to will be displayed.
- Click on **Configure** to select filter fields for the allocation filter.

4.3.4 Selecting Filter Fields

Click on the **Configure** button in the allocation filter settings to select available filter fields for the left and right filter column. The selection and order of filter fields is stored per view.

- > You can add filter fields to either column as well as determine their order via drag-and-drop:
 - Drag filter fields from the **Available Filters** list to either column to add them.
 - Drag filter fields from either column to the **Available Filters** list to remove them.
 - Drag filter fields between columns or within a column to change their position.
- > Alternatively, you can use the buttons to the left of a column list in order to...
 - ... add fields selected in its left neighbor list (right arrow).
 - ... remove fields selected in the list and add these fields to its left neighbor list (left arrow).
 - ... change the field order by moving selected fields up or down in the list (up/down arrow).

By default, the filter fields listed in the following sections are available for selection:

- > 4.3.8 Default Filter Fields for Investments, page 25.
- > 4.3.9 Default Filter Fields for Resources, Roles and Teams, page 27.
- > 4.3.10 Default Filter Fields for Team Entries, page 29.

ARP Admins may add other standard and custom fields available for investments, resources, roles, teams and team entries, see "8.11 Configuring List and Filter Fields" on page 158.

4.3.5 Clarity PPM Lookups

Some filter fields are backed by a Clarity PPM lookup.



This icon is available for fields that support entering a Clarity PPM user.

Click on this to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user when the filter is applied.



This icon is available for OBS unit filter fields.

Click on the arrow to switch between filtering by selected unit and children (arrow down), selected unit and parents (arrow up) or only the exact unit (arrow right).



Click on the magnifier icon to access the lookup browse window for a field and select values.



Click on the trashcan icon to empty a field. If you only want to delete some items, click on the field first, select the items to remove and then click on the trashcan icon.

All lookup filters are multi-valued and will display a second empty list box when selected. This is where selected values go. Multiple selected values will always be connected with a logical "or", i.e., all investments or resources, roles and teams matching any selected value will be displayed.

As with all lookups, a list of suggested values will be displayed when typing in the text box.

Select a suggestion by clicking on it or via the arrow keys and [RETURN].

4.3.6 Default Investment Filters

By default, the following kinds of investments will be filtered out in all view modes except for the Roadmap and Hierarchy modes:

- > Investments from the past.
- > Inactive investments.
- > Project templates.

This applies when the associated filter fields are not displayed and is indicated in the filter panel.

Hover over the "?" icon to display the active default filters that apply.

Please note: these default filters don't apply to the Roadmap and Hierarchy modes, which display all included investments by default, even if they are completely in the past, inactive or project templates.

4.3.7 Selecting Investment Hierarchies

With **Show Investment Hierarchy** selected in the **Visualization** tab of the **Preferences**, parent hierarchies of any investments selected via filters will always be displayed.

In **Allocations by Investment** mode, **Show Investment Hierarchy** will also display the full sub-structures of all displayed investments if you use no other investment filters but **Investments**, **Investment Name** and **Investment ID**.

4.3.8 Default Filter Fields for Investments

In **Allocations by Investment** mode, the following investment filter fields are available by default for the allocation filter. If you enter any investment filters, only investments selected via filters are displayed in the allocation list.

Sub-Types: You can also filter investments by fields of investment sub-types. If you do, only investments of that sub-type which match the filter are displayed.

Hierarchies: If applicable, investment hierarchies are also displayed, see previous page.

The following investment filter fields are available by default.

- > **Investment – Investments:** Show only selected investments. Depending on your settings, associated investment hierarchies may also be displayed.
The Roadmap and Hierarchy modes reduce this selection to included investments.
 The lookup browse window lets you filter the selection of available investments by name, investment ID, investment type and status ("active?").
 Click here to remove selected values or to clear the field, if no value is selected.
- > **Investment – Investment Name:** Enter a search term which occurs in the investment name. Use the asterisk character "*" as a placeholder for an arbitrary number of characters. Search terms will be treated as if ending with "*" (e.g., "*CRM" will find investment names containing "CRM", while "CRM", without the asterisk, will find only investment names starting with "CRM").
- > **Investment – Investment ID:** Enter a search term which occurs in the investment ID. Use the asterisk ("*") as a placeholder for an arbitrary number of characters. Search terms will be treated as if ending with "*" (e.g., "*007" will find any investment whose ID contains "007", while "007", without the asterisk, will find only investments whose IDs begin with "007").
- > **Investment – Investment Manager:** Show only investments of selected investment managers.
 Click on this icon to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user when the filter is applied.
 The lookup browse window lets you filter the selection of available investment managers by last name, first name, user name, resource ID, type and status.
 Click here to remove selected values or to clear the field, if no value is selected.
- > **Investment – Investment OBS Unit:** Show only investments with selected OBS units.
 Click on the arrow to switch between filtering by selected unit and children (arrow down), selected unit and parents (arrow up) or only the exact unit (arrow right).
 The lookup browse window lets you select the desired OBS top level, sub levels and units.
 Click here to remove selected values or to clear the field, if no value is selected.
- > **Investment – Investment Type:** Show only investments of selected types (Application, Asset, Idea, Other Work, Product, Project, Service or custom investment types).
 The lookup browse window lets you filter the selection of investment types.
 Click here to remove selected values or to clear the field, if no value is selected.
- > **Investment – Investment Status:** Show only investments with a selected status.
 The lookup browse window lets you filter the selection of investment status values.
 Click here to remove selected values or to clear the field, if no value is selected.

- > **Investment – Hierarchy:** Show only investments of selected hierarchies.



The lookup browse window lets you filter the hierarchy selection by name and ID.



Click here to remove selected items or to clear the field, if no value is selected.

- > **Investment – Roadmap:** Show only investments of selected roadmaps.



The lookup browse window lets you filter the roadmap selection by name and ID.



Click here to remove selected items or to clear the field, if no value is selected.

- > **Investment – Hide Investments from the Past:** Hide investments ending before the start of the previous month.

Without this, a default filter may apply, see "4.3.6 Default Investment Filters" on page 24.

- > **Investment – Inactive Investments:** Display or hide investments deactivated via **Properties - Settings – General – Active**.

- With the default setting **Hide**, inactive investments won't be displayed.
- Select **Show** to display inactive investments.
- Select **Show if relevant** to display inactive investments only if they have team entries that are partly or completely in the selected time period.

Without this, a default filter may apply, see "4.3.6 Default Investment Filters" on page 24.

- > **Project – Project Templates:** Display or hide project templates, i.e., projects for which **Properties - Settings – General – Template** has been selected.

- With the default setting **Hide Project Templates**, project templates won't be displayed.
- Select **Show All** to display any investments, including project templates.
- Select **Show Only Project Templates** to display no investments but project templates.

Without this, a default filter may apply, see "4.3.6 Default Investment Filters" on page 24.

4.3.9 Default Filter Fields for Resources, Roles and Teams

In **Allocations by Investment** mode, the following resource, role and team filter fields are available by default for the allocation filter. If you enter any resource, role or team filters, only associated team entries and their investments are displayed in the allocation list.

- > **Resource – Role/Resource:** Show only selected resources, roles and teams.



The lookup browse window lets you filter the selection of available resources, roles and teams by last name, first name and resource ID.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Is Role:** Show only roles or only resources and teams.

- With the default setting **All**, this filter doesn't apply.
- Select **Yes** to show only roles.
- Select **No** to show only resources and teams.

- > **Resource – Is Team:** Show only teams or only resources and roles.

- With the default setting **All**, this filter doesn't apply.
- Select **Yes** to show only teams.
- Select **No** to show only resources and roles.

- > **Resource – Resource Name:** Filter by resource, role or team name. Use the asterisk ("*") to replace with any number of characters (e.g., "*son" will find "Harrison" and "Jackson"). Search terms will be treated as if ending with "*" (e.g., "Jack" will also find "Jackson").

- > **Resource – Resource Manager:** Show only resources and teams of selected resource managers. Roles have no resource manager and will therefore not be displayed with this filter.



Click on this icon to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user when the filter is applied.



The lookup browse window lets you filter the selection of available resource managers by last name, first name, full name, resource ID and employment type.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Booking Manager:** Show only resources and roles of selected booking managers.

Teams have no booking manager and will therefore not be displayed with this filter.



Click on this icon to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user when the filter is applied.



The lookup browse window lets you filter the selection of available booking managers by last name, first name and resource ID.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Resource OBS Unit:** Show only resources, roles and teams with selected OBS units.



Click on the arrow to switch between filtering by selected unit and children (arrow down), selected unit and parents (arrow up) or only the exact unit (arrow right).



The lookup browse window lets you select the desired OBS top level, sub levels and units.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Resource Type:** Show only resources, roles and teams of selected resource types (Equipment, Expense, Labor or Material).



The lookup browse window lets you select the desired resource types.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Primary Role:** Select roles to show only the following resources and roles.
 - **Resource Primary Role:** all resources with any of the selected roles as their primary roles.
 - **Role:** all selected roles.
 - **Role Parent Role:** all roles having any of the selected roles as their parent roles.

Teams have no primary role and will therefore not be displayed with this filter.

 Click on this icon to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user's primary role when the filter is applied.

 The lookup browse window lets you filter the selection of available roles by role name.

 Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Skills:** Filter resources, roles and teams by skills.
This uses the new Modern UX skills by default, but also supports the legacy skills hierarchy. Refer to section "8.12.1 Use Old Skills Hierarchy" on page 163 for information about how administrators can activate the legacy mode.
By default, all resources, roles and teams with at least one selected skill will be displayed. Alternatively, you can set the filter to require all skills to match via the **Skill Matching** field.
- > **Resource – Skill Matching:** Skill filter mode, **Match at least one skill** or **Match all skills**.
Without this filter field, the **Match at least one skill** mode will be used, such that resources, roles and teams with any selected skill will be displayed.
- > **Resource – Is External:** Filter resources, roles and teams by the **External** property of resources (selected via **Properties – General – Resource Management – External**).
 - The default setting **All** shows any resources, roles and teams selected via other filters.
 - Select **Yes** to show only external resources. With this setting, roles and teams aren't displayed.
 - Select **No** to show only internal resources, roles and teams.

4.3.10 Default Filter Fields for Team Entries

In **Allocations by Investment** mode, the following team entry filter fields are available by default for the allocation filter. If you enter any team entry filters, only team entries selected via filters and associated investments are displayed in the allocation list.

- > **Team – Booking Status:** Show only team entries with a selected booking status.
 -  The lookup browse window lets you filter the selection by booking status name.
 -  Click here to remove selected values or to clear the field, if no value is selected.
- > **Team – Request Status:** Show only team entries with a selected request status.
 -  The lookup browse window lets you filter the selection by request status name.
 -  Click here to remove selected values or to clear the field, if no value is selected.
- > **Team – Staff OBS Unit:** Show only team entries with selected OBS units.
 -  Click on the arrow to switch between filtering by selected unit and children (arrow down), selected unit and parents (arrow up) or only the exact unit (arrow right).
 -  The lookup browse window lets you select the desired OBS top level, sub levels and units.
 -  Click here to remove selected values or to clear the field, if no value is selected.
- > **Team – Team Has Allocation:** Show only team entries with allocation and/or hard allocation in the selected time period:
 - **All:** Don't filter.
 - **Team Has Allocation:** Only team entries with allocation.
 - **Team Has Hard Allocation:** Only team entries with hard allocation.
 - **Team Has Both Allocation AND Hard Allocation:** Only team entries with both allocation and hard allocation.
 - **Team Has Allocation OR Hard Allocation:** Only team entries with either allocation or hard allocation.

This filter requires **Calculate Sums** to be set to **On** or **Filtered**, see "Calculate Sums" on page 53.

4.4 Gantt Chart

In **Allocations by Investment** mode, you can toggle the display of interactive Gantt bars in the timeline separately for investments and team entries via the **Visualization** tab of the **Preferences**.

4.4.1 Timeline

The timeline is shared among the Gantt chart, allocation grid and utilization grid.

See "4.15.3 Timeline" on page 51 for details about timeline settings in the main toolbar.

4.4.2 Gantt Bars for Investments

Gantt bars for investments are displayed with **Show Gantt Bars for Investments** in the **Visualization** tab of the **Preferences**. You can shift or resize investment Gantt bars via drag-and-drop as long as no **Actuals** are recorded for the associated investments.

- > Changes made to investments will also be applied to all associated team entries, even if they aren't displayed. Shifting an investment will shift all associated team entries accordingly. Resizing an investment will resize all associated team entries proportionally (e.g., reducing an investment's duration from 8 to 6 weeks will reduce an associated team entry from 4 weeks to 3 weeks). This will also redistribute the allocation values displayed per period for associated team entries, **Allocation** or **Hard Allocation**, over the capacity of the respective resource, role or team during the new duration with the same proportions as before the change.
- > Shifting investments with phases, tasks, milestones or assignments will shift all of these by the same period. Please note that this is only visible in the **Assignments** modes, as the **Allocations by Investment** mode only shows investments and associated team entries. Resizing investments has no effect on phases, tasks, milestones or assignments.

4.4.3 Gantt Bars for Team Entries

Gantt bars for team entries are displayed with **Show Gantt Bars for Team Members** in the **Visualization** tab of the **Preferences**. With this setting, you can't edit the **Allocation** or **Hard Allocation** values displayed per period directly.

You can shift and resize team entries via drag-and-drop of their Gantt bars.

This will also redistribute the allocation values displayed per period for the respective team entry, **Allocation** or **Hard Allocation**, over the capacity of the respective resource, role or team during the new duration with the same proportions as before the change.

Shifting or extending a team entry beyond the associated investment's **Start** or **Finish** will also extend the investment, such that it includes the team entry.

Reducing the durations of team entries won't reduce the investment's duration.

Team entries without a **Start** or **Finish** will adopt these values from the associated investment.

4.4.4 Displaying Agreements as Investment Dependencies

Select **Show Agreements** in the **Visualization** tab of the **Preferences** to display agreements as dependencies between investments.

When both investments connected via an agreement are visible in the Gantt chart, the dependency will be displayed as an arrow pointing from predecessor to successor.

Additionally, you can add the **Predecessors** and **Successors** columns to the upper list on the left via the **Columns** button in the upper toolbar. These columns always display connected investments, even when **Show Agreements** is disabled or no arrow is displayed because both investments aren't simultaneously visible in the Gantt chart.

4.4.5 Saving or Reverting Changes

Changes made to Gantt bars aren't saved directly.

 Your changes will only be applied when you save them via the toolbar. You can easily identify unsaved changes via the red triangle in a field.

 Refresh the view without saving to revert your changes.

 Projects will automatically be locked for editing by other users while unsaved changes exist. This is indicated by a padlock icon. Saving or reverting your changes will unlock the project. If your session is interrupted before a project is unlocked, you or any **ARP Admin** can unlock it via the context menu. Please note that this is only possible for projects that were locked due to changes made in itd Advanced Resource Planning or the itd Portfolio Optimizer.

4.5 Allocation Grid

Without Gantt bars for team entries, the timeline shows an editable grid of allocation values.

4.5.1 Timeline

The timeline is shared among the Gantt chart, allocation grid and utilization grid.

See "4.15.3 Timeline" on page 51 for details about timeline settings in the main toolbar.

4.5.2 Displayed and Editable Values per Period

In the **Grid** tab of the **Preferences**, you can select up to two values that will be displayed per period for team entries, see "Cell Configuration" on page 55.

- > **Left (read-only):** Empty (no value), Allocation, Hard Allocation, ETC, Actuals, Actuals + ETC, Requested or Capacity.
- > **Right (editable):** Allocation or Hard Allocation; base of utilization and capacity, see "4.9 Utilization and Capacity" on page 41.

The configured values are displayed when hovering over the allocation grid with the associated preferences setting, see "8.12.5 Show Grid Hints for by Investment Views" on page 164.

4.5.3 Displaying Trend Arrows

In the **Grid** tab of the **Preferences**, you can toggle and configure the display of trend arrows comparing the left and right cell values, see "Deviation Highlighting" on page 55.

For instance, this can help you to easily compare actuals with the originally planned values.

Wherever both values are different, a little arrow at the left cell edge visualizes a negative or positive deviation of the left cell value from the right cell value.

4.5.4 Editing Allocations

In the right half of the **Allocations** view, you can see and edit team entries for resources, roles and teams, grouped by the associated investments or by the allocated resources, roles and teams.

Without **Show Gantt Bars for Team Members** in the **Visualization** tab of the **Preferences**, you can enter the desired allocation values in the grid on the right. Extending a team entry by entering values in grid cells outside the duration of the associated investment will also extend the investment such that the duration of the investment includes the team entry.

 Changes made in the allocation grid will only be applied when you save them via the toolbar. You can easily identify unsaved changes via the red triangle in a field.

 Refresh the view without saving to revert your changes.

 Projects will automatically be locked for editing by other users while unsaved changes exist. This is indicated by a padlock icon. Saving or reverting your changes will unlock the project. If your session is interrupted before a project is unlocked, you or any **ARP Admin** can unlock it via the context menu. Please note that this is only possible for projects that were locked due to changes made in itd Advanced Resource Planning or the itd Portfolio Optimizer.

4.6 Resource List

Without a resource filter, the resource list shows all resources, roles and teams you have access to.

Resources and teams are listed first in common alphabetic order.

Roles are listed at the end, also in alphabetic order.

4.6.1 Resource Filter

Use the resource filter to select resources, roles and teams.

 Click on the **Filter** button in the **Resources** toolbar and select **Resource Filter**.

- Enter filter conditions and click on **Filter** to filter the view.
- Click on **Clear** to delete all entered filter conditions, then click on **Filter** to apply. All data records you have access to will be displayed.
- Click on **Configure** to select filter fields for the resource filter.

See "4.8 Resource Filter" on page 37 for details about the resource filter.

4.6.2 Quick Filter by Investment

Via the context menu for an investment, you can also apply a quick filter to the list, such that it only displays team members of that investment. To do this, right-click on the investment in the allocation list to open the context menu, then select the **Show Investment Team** action.

 To undo this selection, click on the **Filter** button in the **Resources** toolbar and select **Resource filter**. Then click on the **Filter** button in the filter dialog to reapply the selected filter settings.

4.6.3 Resource Columns

The following information is always displayed in the first resource list column, labeled **Name**:

- > **Icon (resource/role/team)**
- > **Name (resource/role/team)**
- > **Primary Role (resource), Parent Role (role)**: A resource's primary role is displayed next to their name, if applicable. A role's parent role is displayed next to their name, if applicable. You can turn this off via a feature toggle, see "8.12.4 Hide Primary/Parent Role Name" on page 164.

 Click on the **Columns** button in the **Resources** toolbar and select **Resource Columns** to select additional resource list columns:

- > **Department (resource/team)**
- > **Department OBS, Location (resource/team)**
- > **Is External (resource/role/team)**
- > **Manager (resource/role/team)**
- > **Skills (resource/role/team)**

ARP Admins may add standard and custom resource, role and team fields to the selection and enable editing for them. See "8.11 Configuring List and Filter Fields" on page 158.

4.6.4 Opening Resource, Role or Team Properties

Click on the name of a resource, role or team in the list to open their properties in a new browser tab.

4.6.5 Selecting a Team Entry's Resource, Role or Team

When you select a team entry in the upper view section, the associated resource list item will be scrolled to and selected in the resource list. Other than by clicking on resource list items directly, this selection will not trigger the investment highlighting described in the following section.

4.6.6 Investment Highlighting

When you click in the row of a resource, role or team in the resource list:

- > ... all investments with associated team entries will be highlighted in the upper view section.
- > ... all other investments will be grayed out in the upper view section unless they're expanded.
- > ... clicking on another resource, role or team will highlight their investments instead.
- > ... clicking on a highlighted investment will preserve the highlighting.
- > ... clicking on another investment will remove the highlighting.

Please note: *This works only for one resource, role or team at a time. Multiple selections aren't supported. Only the resource, role or team you last clicked on will be regarded as selected.*

4.7 Staffing via Drag-and-Drop

You can create team entries and replace allocated resources, roles and teams by dragging resource list items onto investments or team entries in the upper view section.

See the following sections for details about the individual processes that are available in this way.

 Team entries and allocations will only be created when saving via the toolbar. You can easily identify unsaved team entries via the red triangle.

 Refresh the view without saving to revert your changes.

 Projects will automatically be locked for editing by other users while unsaved changes exist. This is indicated by a padlock icon. Saving or reverting your changes will unlock the project. If your session is interrupted before a project is unlocked, you or any **ARP Admin** can unlock it via the context menu. Please note that this is only possible for projects that were locked due to changes made in itd Advanced Resource Planning or the itd Portfolio Optimizer.

4.7.1 Allocating a New Resource, Role or Team

Drag a resource, role or team from the utilization view onto an investment in which they are not yet a team member to create a new team entry. When Gantt bars for team entries aren't displayed, you can enter the **Allocation** or **Hard Allocation** for that team entry in the grid on the right.

4.7.2 Replacing a Resource, Role or Team Allocation

Drag a resource, role or team from the utilization view onto an existing team entry without **Actuals** to replace the allocated resource, role or team. You can never replace team entries with **Actuals**.

- > Replacing a resource or team with a role always gives their full allocation and all associated assignments to that role, effectively replacing the original resource or team completely in the team entry and its assignments.
- > Replacing a resource, role or team with a resource or team that doesn't already have a team entry in the investment opens a menu offering **Replacement Options** by default:
 - **Total Capacity** allocates the replacing resource or team up to their total capacity. Distributed allocations are deducted from the original team entry.
If no hours remain, all associated assignments are automatically transferred to the new team entry for the replacing resource or team. By default, the original team entry is then deleted.
 - **Remaining Capacity** allocates the replacing resource or team up to their remaining capacity. Distributed allocations are deducted from the original team entry.
If no hours remain, all associated assignments are automatically transferred to the new team entry for the replacing resource or team. By default, the original team entry is then deleted.
 - **Configurable** opens a dialog showing the investment, replaced resource, role or team and replacing resource or team. Additionally, you can enter a replacement percentage, defaulting to 100%, and a replacement period, defaulting to the team entry's full duration. These settings effectively replace the original resource, role or team completely in the team entry and all associated assignments.
Entering a lower percentage or a smaller period will partially replace allocations and assignments, applying the replacement percentage to the replacement period if that period is smaller than the team entry's full duration.
If no hours remain, the original team entry is then deleted by default, which is always the case when doing a 100% replacement for the full duration of the team entry.
This mode isn't available with timeslice period **Days**.

- > Replacing a role with another role or replacing a resource, role or team with a resource or team that already has a team entry in the investment will automatically select the **Configurable** mode, as the other two modes aren't available in these cases.

Any allocations or assignments you give to a resource or team that already has a team entry in the investment are added to that team entry.

ARP Admins may disable replacement modes via the **Administration** button in the main toolbar, in the **Staffing** tab. If there is only one enabled replacement mode, it will be selected automatically when dragging resource list items on team entries, if available.

The following feature toggles also apply to this feature:

- > 8.12.17 Disable Role Allocation Replacement, page 169.
- > 8.12.18 Remaining Capacity: Don't Remove Team Role Entry, page 169.
- > 8.12.19 Remaining Capacity: Only Shift Editable Value, page 170.

4.7.3 Quick Full Replacement of Team Members

As a shortcut for full replacement of one team member with another one, you can drag the replacement team entry onto the team entry to replace. When you do, the replaced team entry is deleted and its allocations and assignments are added to the team entry you have replaced it with.

As for all replacement processes, you can only replace team entries without **Actuals** this way.

4.7.4 Creating Multiple Role Allocations

You can allocate a role to the same investment multiple times via drag-and-drop, copying the role with an index. For example, "Architect" becomes "Architect (2)".

- > Drag the role from the resource list onto the investment.
- > If the role already has a team entry in the investment, you will be prompted to create a new one.
- > Confirm to create a new team entry for a copy of the selected role.

4.8 Resource Filter

The following section describes the resource filter settings in **Allocations by Investment** mode.

4.8.1 Displayed Data

The following data will be loaded and displayed in the **Resources** view without a filter:

- > Any resources, roles and teams to which you have access.
- > **Allocation** and **Hard Allocation** of any associated team entries in the display period to which you have access.

4.8.2 Access Rights and Query Limits

The amount of data that will actually be loaded is limited by your access rights and by the query limits entered for itd Advanced Resource Planning by an administrator via the governors lookup:

- > **Access Rights:** Data records to which you have no access in Clarity PPM will not be displayed in itd Advanced Resource Planning either, see "8.5 User Access Rights" on page 150.
- > **Query Limits:** Limits for the number of resources/roles/teams, investments and assignments to load at the same time, entered by an administrator via the governors lookup, see "8.15.1 Query Limits" on page 178. If data records aren't displayed due to query limits, this will be indicated.

4.8.3 Filtering the Resources View

Use the resource filter to select resources, roles and teams.

 Click on the **Filter** button in the **Resources** toolbar and select **Resource Filter**.

- Enter filter conditions and click on **Filter** to filter the view.
- Click on **Clear** to delete all entered filter conditions, then click on **Filter** to apply. All data records you have access to will be displayed.
- Click on **Configure** to select filter fields for the resource filter.

Please note that filters entered for the **Allocations** view have no effect on the **Resources** view.

Likewise, filter conditions entered here have no effect on the **Allocations** view.

4.8.4 Selecting Filter Fields

Click on the **Configure** button in the resource filter settings to select available filter fields for the left and right filter column. The selection and order of filter fields is stored per view.

- > You can add filter fields to either column as well as determine their order via drag-and-drop:
 - Drag filter fields from the **Available Filters** list to either column to add them.
 - Drag filter fields from either column to the **Available Filters** list to remove them.
 - Drag filter fields between columns or within a column to change their position.
- > Alternatively, you can use the buttons to the left of a column list in order to...
 - ... add fields selected in its left neighbor list (right arrow).
 - ... remove fields selected in the list and add these fields to its left neighbor list (left arrow).
 - ... change the field order by moving selected fields up or down in the list (up/down arrow).

By default, the filter fields listed here are available for selection:

- > 4.8.6 Default Filter Fields for Resources, Roles and Teams, page 39

ARP Admins may add other fields available for resources, roles and teams to the selection of filter fields, see "8.11 Configuring List and Filter Fields" on page 158.

This includes most Clarity PPM standard fields and most custom fields defined for these objects.

4.8.5 Clarity PPM Lookups

Some filter fields are backed by a Clarity PPM lookup.

 This icon is available for fields that support entering a Clarity PPM user.

Click on this to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user when the filter is applied.

 This icon is available for OBS unit filter fields.

Click on the arrow to switch between filtering by selected unit and children (arrow down), selected unit and parents (arrow up) or only the exact unit (arrow right).

 Click on the magnifier icon to access the lookup browse window for a field and select values.

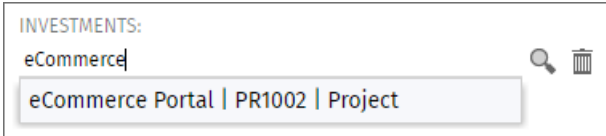
 Click on the trashcan icon to empty a field. If you only want to delete some items, click on the field first, select the items to remove and then click on the trashcan icon.

All lookup filters are multi-valued and will display a second empty list box when selected. This is where selected values go. Multiple selected values will always be connected with a logical "or", i.e., all investments or resources, roles and teams matching any selected value will be displayed.



The screenshot shows a text input field with the label "INVESTMENTS:" in blue. The field contains a single vertical bar "|" at the beginning. To the right of the field are two icons: a magnifier (lookup) and a trashcan (clear).

As with all lookups, a list of suggested values will be displayed when typing in the text box.



The screenshot shows the same "INVESTMENTS:" field, but now the text "eCommerce" is entered. Below the text box, a light blue suggestion box is open, displaying "eCommerce Portal | PR1002 | Project". The magnifier and trashcan icons remain to the right.

Select a suggestion by clicking on it or via the arrow keys and [RETURN].

4.8.6 Default Filter Fields for Resources, Roles and Teams

In **Allocations by Investment** mode, the following resource, role and team filter fields are available by default for the resource filter. If you enter any resource, role or team filters, only resources, roles and teams selected via filters are displayed in the resource list.

- > **Resource – Role/Resource:** Show only selected resources, roles and teams.



The lookup browse window lets you filter the selection of available resources, roles and teams by last name, first name and resource ID.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Is Role:** Show only roles or only resources and teams.

- With the default setting **All**, this filter doesn't apply.
- Select **Yes** to show only roles.
- Select **No** to show only resources and teams.

- > **Resource – Is Team:** Show only teams or only resources and roles.

- With the default setting **All**, this filter doesn't apply.
- Select **Yes** to show only teams.
- Select **No** to show only resources and roles.

- > **Resource – Resource Name:** Enter a search term occurring in the resource, role or team name.

Use the asterisk ("*") to replace with any number of characters (e.g., "*son" will find "Harrison" and "Jackson"). Search terms will be treated as if ending with "*" (e.g., "Jack" will also find "Jackson").

- > **Resource – Resource Manager:** Show only resources and teams of selected resource managers. Roles have no resource manager and will therefore not be displayed with this filter.



Click on this icon to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user when the filter is applied.



The lookup browse window lets you filter the selection of available resource managers by last name, first name, full name, resource ID and employment type.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Booking Manager:** Show only resources and roles of selected booking managers.

Teams have no booking manager and will therefore not be displayed with this filter.



Click on this icon to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user when the filter is applied.



The lookup browse window lets you filter the selection of available booking managers by last name, first name and resource ID.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Resource OBS Unit:** Show only resources, roles and teams with selected OBS units.



Click on the arrow to switch between filtering by selected unit and children (arrow down), selected unit and parents (arrow up) or only the exact unit (arrow right).



The lookup browse window lets you select the desired OBS top level, sub levels and units.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Resource Type:** Show only resources, roles and teams of selected resource types (Equipment, Expense, Labor or Material).



The lookup browse window lets you select the desired resource types.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Primary Role:** Select roles to show only the following resources and roles.
 - **Resource Primary Role:** all resources with any of the selected roles as their primary roles.
 - **Role:** all selected roles.
 - **Role Parent Role:** all roles having any of the selected roles as their parent roles.

Teams have no primary role and will therefore not be displayed with this filter.

 Click on this icon to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user's primary role when the filter is applied.

 The lookup browse window lets you filter the selection of available roles by role name.

 Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Skills:** Filter resources, roles and teams by skills.
This uses the new Modern UX skills by default, but also supports the legacy skills hierarchy. Refer to section "8.12.1 Use Old Skills Hierarchy" on page 163 for information about how administrators can activate the legacy mode.
By default, all resources, roles and teams with at least one selected skill will be displayed. Alternatively, you can set the filter to require all skills to match via the **Skill Matching** field.
- > **Resource – Skill Matching:** Skill filter mode, **Match at least one skill** or **Match all skills**.
Without this filter field, the **Match at least one skill** mode will be used, such that resources, roles and teams with any selected skill will be displayed.
- > **Resource – Is External:** Filter resources, roles and teams by the **External** resource property (selected via **Properties – General – Resource Management – External**).
 - The default setting **All** shows any resources, roles and teams selected via other filters.
 - Select **Yes** to show only external resources. With this setting, roles and teams aren't displayed.
 - Select **No** to show only internal resources, roles and teams.
- > **Resource – Only Roadmap Team (Roadmap Mode only):** Show only resources, roles and teams with team entries for investments in the roadmap.
- > **Resource – Only Hierarchy Team (Hierarchy Mode only):** Show only resources, roles and teams with team entries for investments in the hierarchy.
- > **Resource – Only with Capacity:** Hide resources, roles and teams for which no capacity is displayed when a capacity filter is active.
See "4.10 Utilization and Capacity Filters" on page 43 for details and an example.
- > **Team – Show Investment Team Only (single investment mode only):** Show only resources, roles and teams with team entries in the current investment.

4.9 Utilization and Capacity

The utilization grid optionally shows the global utilization and capacity of listed resources, roles and teams per period currently selected on the timeline.

These values consider all allocations in the displayed period, regardless of your allocation filter.

The utilization and remaining capacity displayed for resources, roles and teams are based on the right or editable allocation value, **Allocation** or **Hard Allocation**, selected in the **Grid** tab of the **Preferences**, see "Cell Configuration" on page 55.

4.9.1 Timeline

The timeline is shared among the Gantt chart, allocation grid and utilization grid.

See "4.15.3 Timeline" on page 51 for details about timeline settings in the main toolbar.

4.9.2 Visualization: Histogram or Color-Coded Grid

There are two display modes for the utilization, histogram or color-coded grid. You can edit coloring thresholds for both in the **Utilization** tab of the **Preferences**, see "4.16.4 Utilization" on page 54.

- > **Show Histogram** in the **Visualization** tab of the **Preferences** displays the global utilization and capacity of resources, roles and teams per period as a histogram chart. This shows the utilization from the right or editable allocation value, **Allocation** or **Hard Allocation**, as a colored stack matched against a dotted capacity line. Colors indicate optimal utilization or overload.

- The dotted horizontal line displays the resource, role or team capacity.
- Workload below the utilization warning threshold is colored green.
- Further workload is colored yellow if it is between the utilization warning and high utilization thresholds or red if it is above the high utilization threshold.
- The low utilization threshold has no effect here.

- > Without the histogram, **Show Utilization** in the **Visualization** tab of the **Preferences** displays the global utilization and/or capacity of listed resources, roles and teams per period in a grid.

You can configure the left and right values of this grid in the **Utilization** tab of the **Preferences**, see "Non-Histogram Mode" on page 55.

Available values are **[Total] Capacity**, **Remaining [Capacity]** (total capacity less editable value, **Allocation** or **Hard Allocation**), **Allocation** and **Hard Allocation**.

Cell colors indicate a low (white), optimal (green), high (yellow) or very high (red) utilization of a resource, role or team in a period, based on their total capacity and the right or editable allocation value, **Allocation** or **Hard Allocation**.

4.9.3 Filtering the View

The following filters are available for the utilization grid.

- > Utilization and capacity filters, see "4.10 Utilization and Capacity Filters" on page 43.
- > Cut-off line, see "4.11.2 Show Cut-off Line" on page 45.

4.9.4 Displaying Utilization Values

Hover over a grid cell or histogram segment to display the associated values.

4.9.5 Displaying the Utilization Popup

Click on a grid cell or histogram segment to display the utilization popup, which lists associated investments and allocations.

Click on a column header to sort this list.

4.9.6 Utilization Popup Columns

The following information is always displayed in the utilization popup:

- > **Type Icon and Name (investment):** First column
- > **Segment Utilization (allocations):** Last column

 Click on the **Columns** button in the **Resources** toolbar and select **Utilization Popup Columns** to select additional utilization popup columns:

- > **Start, Finish (team entry)**
- > **Staff OBS Unit (team entry)**
- > **Default Allocation (team entry)**
- > **Effective Role (team entry)**
- > **Skills (role team entry):** Only with additional configuration, see page 163.

ARP Admins may add standard and custom team entry fields to the selection and enable editing for them. See "8.11 Configuring List and Filter Fields" on page 158.

4.9.7 Role Capacities

The total capacity of a role is the total capacity of all resources with that primary role and, if configured, all resources with any of its sub-roles, see "Role Capacity Calculation" on page 55.

The free capacity of a role is its total capacity less the right or editable value, **Allocation** or **Hard Allocation**, from all allocations of its resources and, if configured, its sub-roles and their resources.

The remaining capacity of a role is its free capacity less all allocations of the role itself.

In grid mode, you can configure the utilization view to always show the remaining capacity for roles when you select either non-histogram capacity value, **Capacity** or **Remaining**, in the **Utilization** tab of the **Preferences**, see "8.12.16 Role Capacities in Allocations by Investment Mode" on page 169.

4.9.8 Team Utilization

For a resource allocated to a team, that allocation is included as a percentage of the resource's capacity as entered in the team (e.g., if a resource is allocated to a team with 50%, in a week where that resource has a capacity of 40 hours, an allocation of 20 hours will be included for the team).

4.10 Utilization and Capacity Filters

You can filter the utilization and capacity displayed for resources, roles and teams.

4.10.1 Utilization Filter Settings

Use the utilization filter to filter the utilization displayed for team entries.

 Click on the **Filter** button in the **Resources** toolbar and select **Utilization Filter**.

- Enter filter conditions and click on **Filter** to filter the view.
- Click on **Clear** to delete all entered filter conditions, then click on **Filter** to apply.
All data records you have access to will be displayed.

By default, you can filter the utilization displayed for team entries by the following fields.

> **Investment Status** of associated investments.

 The lookup browse window lets you select the desired investment status values.

 Click here to remove selected values or to clear the field, if no value is selected.

> **Staff OBS Unit** of team entries.

 Click on the arrow to switch between filtering by selected unit and children (arrow down), selected unit and parents (arrow up) or only the exact unit (arrow right).

This setting applies to all selected units.

 The lookup browse window lets you select the desired OBS top level, sub levels and units.

 Click here to remove selected values or to clear the field, if no value is selected.

ARP Admins may add other **Lookup** and **Boolean** fields available for investments and team entries.

This includes most Clarity PPM standard fields and most custom fields defined for these objects.

See section "8.11 Configuring List and Filter Fields" on page 158 for details.

4.10.2 Capacity Filter Settings

In the **Utilization** tab of the **Preferences**, you can enter a capacity filter by **Staff OBS Unit**.

This setting is independent of the utilization filter by the same field. With this filter, capacity is only displayed for resources and teams with selected **Department OBS** units or with any of their child units. This also affects the capacity displayed for roles.

4.10.3 Effects of the Utilization and Capacity Filters

The utilization displayed for roles includes only team entries matching the selected utilization filter.

The capacity displayed for roles includes only resources matching the selected capacity filter.

The remaining capacity displayed for resources, roles and teams is also based on the filtered utilization as displayed according to the selected utilization filter.

The utilization and capacity filters only affect the utilization, capacity and remaining capacity displayed for resources, roles and teams in the **Resources** view.

The filters have no effect on which resources, roles and teams are displayed in the resource list, nor which team entries and allocations are displayed in the **Allocations** view.

4.10.4 Hiding Roles, Resources and Teams

In **Allocations by Investment** mode, with an active capacity filter, you can hide resources, roles and teams for which no capacity is displayed using the **Only with Capacity** resource filter field, see "Resource – Only with Capacity" on page 40.

4.10.5 Utilization and Capacity Filter Example

The global view shows 170 hours of allocation and an overallocation of 208 hours:

Name	2/17/20	2/24/20	3/2/20	3/9/20	3/16/20	3/23/20
Amos, Cheryl Developer						
Berry, Jason Developer						
Evans, Sean Developer						
Gillian, Erin Developer						
Developer						
Work Effort Unit: System Standard (Hours) Actuals / Allocation		Capacity 440,0 - Allocation (Resources) 478,0 = Free Capacity -38,0 - Allocation (Role) 170,0 = Remaining -208,0				Displaying 1 - 5 of 12

The filtered view shows the allocation and capacity for the selected department and for approved investments only. The role is no longer overallocated:

Name	2/17/20	2/24/20	3/2/20	3/9/20	3/16/20	3/23/20
Amos, Cheryl Developer						
Berry, Jason Developer						
Evans, Sean Developer						
Gillian, Erin Developer						
Developer						
Work Effort Unit: System Standard (Hours) Actuals / Allocation		Capacity 280,0 - Allocation (Resources) 148,0 = Free Capacity 132,0 - Allocation (Role) 130,0 = Remaining 2,0				Displaying 1 - 5 of 12

Note that neither capacity nor utilization is displayed for **Gillian, Erin** because she doesn't belong to the selected department.

In **Allocations by Investment** mode, with an active capacity filter, you can hide resources, roles and teams for which no capacity is displayed using the **Only with Capacity** resource filter field, see "Resource – Only with Capacity" on page 40.

4.11 itd Portfolio Optimizer Integration

When you have licensed both itd Advanced Resource Planning and the itd Portfolio Optimizer, you can now enable the display of both the investment ranking and the cut-off line.

4.11.1 Enable Ranking

In the **Visualization** tab of the **Preferences**, under **Portfolio Management Mode**, select **Enable Ranking** to show the **Ranking** column and automatically sort investments by it.

Editing the ranking isn't possible in itd Advanced Resource Planning.

4.11.2 Show Cut-off Line

In the **Visualization** tab of the **Preferences**, under **Portfolio Management Mode**, select **Show Cut-off Line** to show the cut-off line position.

When the cut-off line is shown, the utilization includes only allocations for investments above it.

Moving the cut-off line isn't possible in itd Advanced Resource Planning.

4.11.3 Navigate to Cut-off Line Position

Can't find the cut-off line? Select **Show Cut-off Line** in the **Visualization** tab of the **Preferences**.

If you still can't see it, the rightmost button in the **Allocations** toolbar will take you there instantly:

 **Navigate to Cut-off Line Position:** This will scroll the page to the cut-off line's position.

Please note that this only works when both **Enable Ranking** and **Show Cut-off Line** are checked in the **Visualization** tab of the **Preferences**.

4.12 Scenario Mode



The **Plan** menu is available in the main toolbar with the **Scenario – Navigate** right unless the **Scenario** button has been hidden by an **ARP Admin** via **Administration**, see "8.9 Global Settings in the Application" on page 155.

- > In the **Plan** menu, the **Plan of Record** is selected by default.
 - Alternatively, you can select any scenarios for which you have the **View** right.
 - You can edit data in any scenario for which you have the **Edit** right.
 - Investment rights are not required, but shifting and resizing investments with **Hard Allocation** values in this mode requires the **Resource – Hard Book** right for all associated resources.
- > **Add New** adds a new scenario after naming it and clicking on **Add** to confirm.
- > **Manage** opens a dialog that lists your own scenarios and scenarios shared with you.
 - To delete a scenario, click on the wastebasket icon and confirm by clicking on the checkmark.
 - Click on the share icon to specify who may view and edit the scenario.
 - Anyone can delete or share their own scenarios with anyone else.
 - **ARP Admins** can also delete or share any scenarios shared with them.
- > Selecting or adding a scenario in the **Plan** menu enables the scenario comparison mode.
 - By default, the selected **Plan** is compared to the **Plan of Record**.
 - Select **--None--** in the **Compare to** menu to disable the scenario comparison.
 - Select any other scenario to compare the selected **Plan** to that scenario.

The Excel export is only available for the **Plan of Record**. You can't export scenario data.

4.12.1 Scenario Data

Although the scenario comparison view implies that all investments and team entries in the plan of record or compared scenario exist in the active scenario as well, only deviations from plan of record data are actually stored as scenario data in the database. That means that any investment you didn't change in a scenario, including associated team entries and allocation grid data, actually shows as plan of record data. This applies to the active scenario as well as to any compared scenario.

- > With the itd Portfolio Optimizer, you can edit the investment ranking order and cut-off line position in a scenario. These data are stored for each investment, i.e., its global **Rank** and position relative to the cut-off line, above or below.
- > With itd Advanced Resource Planning or the itd Portfolio Optimizer, you can edit the **Start**, **Finish** and **Investment Status** investment fields and the **Start** and **Finish** team entry fields in a scenario.
- > With itd Advanced Resource Planning, you can also edit the **Allocation** per period of team entries in a scenario. When itd Advanced Resource Planning is licensed, this feature is also supported in the itd Portfolio Optimizer. You can't edit the **Hard Allocation** per period in a scenario.
- > The itd Portfolio Optimizer global rank and cut-off line inclusion data are stored separately from the investment, team entry and allocation data.
- > Please note that editing investment or team entry fields or allocation grid values in a scenario will store a copy of the associated investment, its team entries and allocation data in that scenario. After that, these data are no longer loaded from the plan of record, such that changes made there are no longer synchronized with the changed scenario in the scenario comparison view.

4.12.2 Scenario Comparison Mode

In scenario comparison mode, investments and team entries are displayed in a two-row layout:

View		Allocations by Investment	Save View	Plan	Optimistic Scen...	Compare to	Plan of Record	« < Months > »											
Allocations																			
Name	Start	Finish	Investment Status	Allocation	Aug. '26	Sept. '26	Oct. '26	Nov. '26	Dez. '26	Jan. '27	Feb. '27	März '27							
4G Upgrade Readiness 2	16.09.2025	30.09.2026	Unapproved	49,005.7	336.0	5,143.3	352.0	2,395.2	352.0	336.0	369.0	240.0							
	16.09.2025	24.02.2027	Unapproved	49,021.7	336.0	2,201.7	352.0	2,164.9	352.0	2,290.7	336.0	2,185.5	369.0	2,394.9	240.0	2,188.0		1,224.0	
Advanced Resource Planning	01.01.2026	31.12.2026	Unapproved	25,032.0		2,096.0		2,192.0		2,192.0		2,096.0		2,232.0					
	01.01.2026	31.12.2026	Unapproved	25,032.0		2,096.0		2,192.0		2,192.0		2,096.0		2,232.0					
Airport Access Security	16.04.2026	15.03.2027	Approved	3,162.1		338.8		355.0		355.0		169.4		185.5		169.4		161.3	88.7
	16.04.2026	15.03.2027	Approved	3,840.0		338.8		355.0		355.0		338.8		371.1		338.8		322.7	177.5
Network Engineer	16.04.2026	28.01.2027		1,242.1		169.4		177.5		177.5									
	16.04.2026	15.03.2027		1,920.0		169.4		177.5		177.5		169.4		185.5		169.4		161.3	88.7
Perez, Carlos Solution Owner	16.04.2026	15.03.2027		1,920.0		169.4		177.5		177.5		169.4		185.5		169.4		161.3	88.7
	16.04.2026	15.03.2027		1,920.0		169.4		177.5		177.5		169.4		185.5		169.4		161.3	88.7

- > The first row displays active scenario data, which you can edit in scenario comparison mode:
 - The **Investment Status**, **Start** and **Finish** of an investment, see the following section.
 - The **Start**, **Finish** and **Allocation** per period of a team entry.
 - With **Show Gantt Bars for Team Members** in the **Visualization** tab of the **Preferences**, you can change the start and duration of team entries via drag-and-drop in the Gantt chart, with the same effect as changing the **Start** and **Finish** fields in the list.

The **Hard Allocation** per period is read-only in scenarios in Clarity PPM and displays the committed plan of record values. You cannot change these values in a scenario.

- > The second row displays the compared scenario or plan of record data, which you cannot edit in scenario comparison mode.

4.12.3 Transferring Investments and Team Entries to a Scenario

Initially, investments and associated team entries exist only in the plan of record.

Editing the **Start**, **Finish** or **Investment Status** in an investment's first row or the **Start**, **Finish** or **Allocation** per period in a team entry's first row copies the associated investment with all team entries and the associated **Allocation** per period values to the scenario.

- > You can change investment fields in **Allocations by Investment** mode only.
- > In a scenario, you can set the **Investment Status** to **Approved** or **Unapproved** only, and the respective status must be available for the investment.
- > Team entries added to an investment in the plan of record after that investment has been added to a scenario will not be available in the scenario.
- > Investments and team entries deleted in the plan of record will also be deleted in all scenarios in which they exist, even if differences have been entered for them in a scenario.

While the comparison is active, you can only edit scenario copies of investments and team entries.

Any differences from the compared scenario or plan of record data are highlighted in light blue:

- > Investment **Start**, **Finish**, **Investment Status**, **Allocation** totals and associated Gantt bars.
- > Team entry **Start**, **Finish**, **Allocation** per period and associated Gantt bars.

Consider this when changing the **Start** and **Finish** of investments and team entries:

- > Changing the **Start** and **Finish** of an investment via the list or Gantt chart also affects associated team entries unless they have a different **Start** and **Finish**.
- > Extending a team entry beyond the **Start** or **Finish** of the associated investment also extends the investment, such that it includes that team entry.
- > Reducing the durations of team entries doesn't reduce the investment's duration.
- > Team entries without a **Start** or **Finish** adopt these values from the associated investment.
- > Changing the duration of a team entry redistributes its allocation values with the same proportion as before the change.

4.12.4 Saving Scenario Data

Changes made to scenario data aren't saved directly.

 Any changes you make to scenario data in this mode will only be applied when you save them via the toolbar. You can easily identify unsaved changes via the red triangle in a field.

 Refresh the view without saving to revert your changes.

4.12.5 Utilization View

The following specifics apply to the utilization view while scenario comparison is active.

- > In **Allocations by Investment** mode, while the scenario comparison is active, the resource utilization view shows active scenario data where they exist.
 - Team entries of investments existing in the active scenario and associated allocations are loaded from the active scenario.
 - Team entries of investments that don't exist in the active scenario and associated allocations are loaded from the plan of record or compared scenario.
- > The utilization and capacity filters are applied here as well. See section "4.10 Utilization and Capacity Filters" on page 43 for details and an example.
- > In **Allocations by Investment** mode, while the scenario comparison is active, you can't add team entries to investments via drag-and-drop of resources, roles and teams from the utilization view.

4.12.6 Context Menu Actions

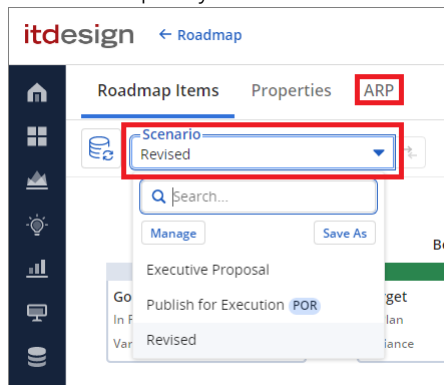
While the scenario comparison is active, only the following context menu actions are available:

- > **Investment Actions**
 - **Open Properties:** Open the detail view for the selected investment in a new browser tab.
 - **Expand All:** Expand the selected investment to reveal all associated team entries.
 - **Show Investment Team:** Filter the resource list by the selected investment, such that only that investment's team members are displayed.
- > **Team Entry Actions**
 - **Open Properties:** Open the detail view for the selected team entry in an overlay within the same browser tab.

4.13 Roadmap Scenario Mode

Please note that the roadmap scenario mode feature is only available after adding an itd Advanced Resource Planning channel to the roadmap blueprint, see "8.7 Planning Modes" on page 154.

With the roadmap scenario mode, roadmaps offer an itd Advanced Resource Planning tab, which shows a capacity scenario for the currently selected roadmap scenario in its **Allocations** modes:



This view compares the current schedule of investments with the schedule of their linked roadmap items. Additionally, you can filter by, display and edit the **In Plan** property of roadmap items, and you can filter the utilization by the **In Plan** field in this mode with the standard utilization filter feature.

- > The itd Advanced Resource Planning application in this view is automatically filtered (in addition to any manually entered filters and automatic standard filters such as **Hide investments from the past**) and includes any investments linked to roadmap items in the selected roadmap scenario.
- > In the **Allocations** modes, the scenario mode, see previous section, is always active.
- > The capacity scenario is initially created when first opening the view for a specific roadmap scenario and is then linked to that roadmap scenario.

Reopening the view for a roadmap scenario for which a capacity scenario already exists will load that capacity scenario.

Capacity scenarios are shared among all users and are updated with changes saved by any user.

- > Investments in the capacity scenario are synchronized with their linked roadmap items in the roadmap scenario, such that any changes you save for an investment's **Start** or **In Plan** field in the capacity scenario affect its linked roadmap item in the roadmap scenario and vice versa.

- The investment's **Start** date in the capacity scenario is equal to and synchronized with its linked roadmap item's start date.

The investment's **Finish** date is shifted according to its duration, both of which are not linked to the roadmap item.

Any associated team entries are shifted accordingly in the capacity scenario.

Shifting and resizing roadmap items linked to investments with hard allocations in this mode requires the **Resource – Hard Book** right for all associated resources.

- The **In Plan** value in the capacity scenario is equal to and synchronized with its linked roadmap item's **In Plan** value.
- Any changes made to allocations in the capacity scenario are synchronized back to Clarity PPM and show up under **Capacity**.

Please note that capacity changes made in Clarity PPM won't be synchronized back to the capacity scenario.

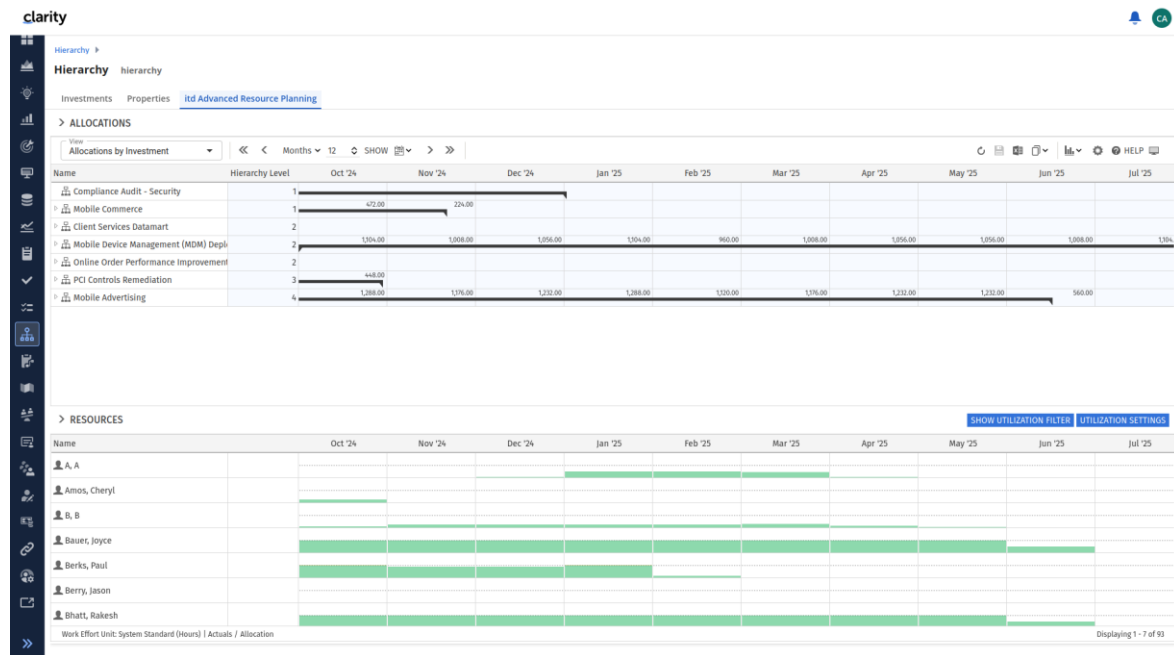
- > Any changes saved to the capacity scenario are restored when you or another user reopens the view for the same roadmap scenario, including changes not affecting linked roadmap items.

4.14 Hierarchy Mode

You can integrate itd Advanced Resource Planning in the **Hierarchies** module for hierarchies of the **Investment** type.

Please note that the hierarchy mode feature is only available after adding an itd Advanced Resource Planning channel to the hierarchy blueprint, see "8.7 Planning Modes" on page 154.

With the hierarchy mode, hierarchies offer an itd Advanced Resource Planning tab.



In this mode, the view is automatically filtered to show only investments included in the hierarchy.

The selection for the **Investments** filter field is also reduced to include only these investments.

You can display and sort by the **Hierarchy Level** field, which displays an investment's hierarchy level.

With the **Resource – Only Hierarchy Team** filter, the lower list will only display resources, roles and teams allocated to investments in the hierarchy via team entries.

Please note: This mode is currently in the beta phase and is included as a preview. Further features are planned. We look forward to receiving feedback on this mode.

4.15 Main Toolbar

In **Allocations by Investment** mode, you have access to the following features in the main toolbar.

4.15.1 View



The **View** menu displays the active view and allows switching views, saving the current view under a new name and editing your favorites and view sharing settings under **Manage**.

If you have the right to save changes to the current view, the **Save View** button is active. If it isn't, you can still save a copy of the current view. For details, see chapter "3 Views" on page 13.

4.15.2 Plan



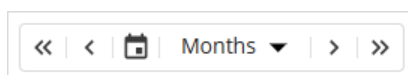
The **Plan** menu is available with the **Scenario – Navigate** right unless the **Scenario** button has been hidden by an **ARP Admin**, see "8.9 Global Settings in the Application" on page 155.

- > In the **Plan** menu, the **Plan of Record** is selected by default.
 - Alternatively, you can select any scenarios for which you have the **View** right.
 - You can edit data in any scenario for which you have the **Edit** right.
 - **Add New** adds a new scenario after naming it and clicking on **Add** to confirm.
 - **Manage** opens a dialog that lists your own scenarios and scenarios shared with you.
- > Selecting or adding a scenario in the **Plan** menu enables the scenario comparison mode.
 - By default, the selected **Plan** is compared to the **Plan of Record**.
 - Select **--None--** in the **Compare to** menu to disable the scenario comparison.
 - Select any other scenario to compare the selected **Plan** to that scenario.

The Excel export is only available for the **Plan of Record**. You can't export scenario data.

See section "4.12 Scenario Mode" on page 46 for details.

4.15.3 Timeline



Use the **Timeline** menu to change the display period, or the **Slice Period**. The **Slice Period** is saved with the view and is synchronized with the **Timeslices** tab of the **Preferences**, where you can also edit the **Slice Count**, see "4.16.2 Timeslices" on page 53. The start date isn't saved with the view. The application starts with the current date and retains the selected start date when changing views.

⏪ **Previous Periods**: Here you switch back by the selected display period (e.g., 6 months).

⏴ **Previous Period**: Here you switch back by the selected slice period (e.g., 1 month).

📅 **Select Start Date**: Here you select the view's start date in a calendar view.

▼ **Slice Period**: e.g., **Months**. The selection may be limited by **ARP Admins** via **Administration** in the main toolbar, see "8.9 Global Settings in the Application" on page 155.

⏵ **Next Period**: Here you switch ahead by the selected slice period (e.g., 1 month).

⏩ **Next Periods**: Here you switch ahead by the selected display period (e.g., 6 months).

4.15.4 Preferences

 **Preferences:** Here you configure general view settings, sum calculation and timeslice settings, visualization settings, utilization settings, grid value and visual value comparison settings, see "4.16 Preferences" on page 53. Preferences will be saved separately for each view.

4.15.5 Export to Excel

You can export all rows and columns of the **Allocations** view to Microsoft Excel.

 **Export to Excel:** Here you export the **Allocations** view to Microsoft Excel. The data will be exported as displayed, with the same filter settings and with all rows and columns that are currently displayed. For list items with sub-elements, these sub-elements will only be exported if their parent item has been expanded, such that they are currently visible. The Excel export is limited to a maximum of 15,000 rows and is only available for the **Plan of Record**. You can't export scenario data.

4.15.6 Fullscreen

 **Fullscreen:** Turn fullscreen mode on or off. In fullscreen mode, the Clarity PPM navigation will be hidden, such that more items can be displayed in itd Advanced Resource Planning.

4.15.7 Refresh and Save

Use the **Refresh** and **Save** buttons to discard or save your changes.

 **Refresh:** This will reload all data. If there are unsaved changes, you will be asked if you want to save first. Answering no will discard your changes.

 **Save:** This will save all unsaved changes you have made in the current view.

4.15.8 Help

 **Help:** Here you can find information about itd Advanced Resource Planning and about asking for support. If you do, please always specify your version, which you can find under **About**. Select **License** for license information and to obtain and enter licenses.

4.15.9 Administration

 **Administration:** **ARP Admins** may access administration settings here. All of these settings are global for all views. Some settings affect only specific view modes. This is indicated where it applies. See section "8.9 Global Settings in the Application" on page 155 for details.

4.16 Preferences

 Click on the **Preferences** button in the toolbar to edit view options.

4.16.1 General

Settings in the **General** tab control the display and behavior of the current view.

> Generic

- **Decimal Places:** Controls the number of decimal places for all numbers in the current view.
- **Load Data on Startup:** Load data directly when opening itd Advanced Resource Planning. Otherwise, data will only be loaded after clicking on the **Filter** button.

> Accessibility

- **Use Colors with Higher Contrast:** Select this for improved readability. This setting is saved in the web browser instead of the view and is therefore global per user when accessing the application with the same web browser on the same machine.

4.16.2 Timeslices

Settings in the **Timeslices** tab control the calculation of sums, timeline scale, display period and work effort unit.

- > **Calculate Sums:** Calculate and show totals of the **Allocation**, **Hard Allocation** and **Actuals** fields per investment. Team entry totals are always displayed.

- **On:** Calculate and show global sums. Slows down loading the view.
- **Filtered:** Apply allocation filter to global sums. Slower loading than with **On**.
- **Off:** Don't show any sums. Faster loading than with **On** or **Filtered**.

This applies to sum columns in the allocation list and to the time-scaled allocation grid.

For sum columns, also see "Time-Scaled Value Total Column Calculation" below.

The **Team Has Allocation** filter, see page 29, is only available when setting this to **On** or **Filtered**.

- > **Time-Scaled Value Total Column Calculation:** Defines the behavior of the **Allocation**, **Hard Allocation** and **Actuals** columns in the allocation list.

- **Grand Total:** Show the total for the full investment or team entry duration.
- **Sum of Periods:** Sum up the figures only for the currently displayed periods.

- > **Slice Period:** Enter the planning period here. Possible settings are **Days**, **Weeks**, **Months**, **Quarters**, **Calendar Years** and, if configured, **Fiscal Period**.

The selection may be limited by **ARP Admins** via **Administration** in the main toolbar, see "8.9 Global Settings in the Application" on page 155. Only enabled options are available.

- > **Slice Count:** Enter the number of slices to be displayed.

- > **Work Effort Unit:** Specify the unit for efforts here. By default, the **System Standard** will be applied. Alternatively, you may select **Hours**, **Days** or **FTE** (full time equivalents).

The selection may be limited by **ARP Admins** via **Administration** in the main toolbar, see "8.9 Global Settings in the Application" on page 155. Disabled options aren't available.

- > **Fiscal Entity** and **Fiscal Period:** With the **Fiscal Period** setting, if multiple fiscal entities or periods have been defined in your Clarity PPM system, select the desired fiscal entity and period here.

4.16.3 Visualization

Settings in the **Visualization** tab control the visualization in the **Allocations** and **Resources** views.

> **Tree View**

- **Show Investment Hierarchy:** Display or hide parent and sub-investments of investments explicitly selected via your allocation filter, see "4.3.7 Selecting Investment Hierarchies" on page 24. Hiding investment hierarchies may speed up loading the view.
- **Show Team Entries of Inactive Resources:** Display or hide team entries of inactive resources.

> **Gantt Bars:** See "4.4 Gantt Chart" on page 30.

- **Show Gantt Bars for Investments:** Display or hide Gantt bars for investments.
- **Show Gantt Bars for Team Members:** Display or hide Gantt bars for team entries. Without Gantt bars, the editable allocation grid is displayed for team entries.
- **Show Agreements:** Display or hide agreements as dependencies between investments.

> **Utilization**

- **Show Histogram:** Switch between the two display modes for resource, role and team utilization and capacity, see "4.9.2 Visualization: Histogram or Color-Coded Grid" on page 41.
- **Show Utilization:** Without the histogram, this controls whether the **Resources** view displays the utilization, total and/or remaining capacity of resources, roles and teams per period. Turning off both **Show Histogram** and **Show Utilization** will completely disable the calculation and display of utilization and capacities in the **Resources** view, speeding up loading the view.

> **Portfolio Management Mode:** See "4.11 itd Portfolio Optimizer Integration" on page 45.

- **Enable Ranking:** Show the **Ranking** column and automatically sort investments by it.
- **Show Cut-off Line:** Turn the cut-off line on or off. This will effectively disable the cut-off line when not displayed. All investments in the global ranking will be considered included in the overall portfolio, affecting resource utilization.

4.16.4 Utilization

Settings in the **Utilization** tab control the display and calculation of the utilization. In **Allocations by Investment** mode, the utilization is based on **Allocation** or **Hard Allocation** values from team entries.

> The **Utilization Rate** controls the visualization of low or high utilization.

- **Low Utilization at and Below:** Upper boundary below which resources, roles and teams will be marked as underutilized with a white background in the respective period. Utilization between the thresholds for low utilization and utilization warning (e.g., between 80% and 100%) will be marked as optimal with a green background. This threshold value has no effect in the histogram.
- **Utilization Warning Above:** Lower boundary above which resources, roles and teams will be marked as slightly over-utilized with a yellow background in the respective period. This applies as long as the utilization stays at or below the lower boundary for high utilization. In the histogram, workload is colored green up to this threshold value.
- **High Utilization Above:** Lower boundary above which resources, roles and teams will be marked as highly over-utilized with a red background in the respective period. In the histogram, workload is colored yellow up to this threshold value and red above.

> The **Capacity Filter** by **Staff OBS Unit** is applied to the capacity displayed for resources, roles and teams, such that only resources and teams with selected **Department OBS** units and children of selected units are displayed as available. This also affects the capacity displayed for roles. Additionally, you can filter the utilization by investment and team entry properties. See section "4.10 Utilization and Capacity Filters" on page 43 for details and an example.

- > The **Role Capacity Calculation** option is available after activation by a Clarity PPM application administrator in the **itd AE Preferences** lookup, see "8.12.15 Include Sub-Roles in Role Capacity in Allocations Modes" on page 168. It controls the inclusion of sub-roles in role capacities.

Under **Calculate Capacity of Roles Based On**, select:

- **All Role Owners (Standard):** With the default setting, the capacity of a role is calculated based only on resources with that primary role.
 - **All Role Owners and Sub-Roles:** Include sub-role resources.
- > Under **Non-Histogram Mode**, you can configure the left- and right values in the utilization grid that is displayed when the histogram is turned off.

Available values:

- **Capacity**
- **Remaining**
- **Allocation**
- **Hard Allocation**

Remaining is the **Capacity** minus the editable value, **Allocation** or **Hard Allocation**.

4.16.5 Grid

Settings in the **Grid** tab control the values that are displayed and can be edited in the allocation grid as well as the visual comparison of the left and right value via trend arrows.

- > **Cell Configuration:** Here you select the values displayed in the allocation grid.
 - **Field to Display on the Left Part of the Cell (Read Only):** Empty, Allocation, Hard Allocation, ETC, Actuals, Actuals + ETC, Requested or Capacity
 - **Field to Display on the Right Part of the Cell (Editable):** Allocation or Hard Allocation
The displayed utilization is always based on the editable value.
- > **Deviation Highlighting**
 - **Highlight Deviation (only when Gantt Bars are disabled):** Display trend arrows for deviations of the left cell value from the right one, see "4.5.3 Displaying Trend Arrows" on page 32.
 - **Tolerance of Deviation:** Threshold value for displaying trend arrows to indicate a deviation of the left cell value from the right one.
 - **Consider Zero Values in Deviation:** Display an arrow even if one of the two values is zero.

5 Allocations by Resource

The **Allocations by Resource** mode groups team entries for investments and associated allocations by the allocated resources, roles and teams.

Their utilization and capacity are displayed directly in the allocation grid on the right.

Name	Start	Finish	Aug '26	Sep '26	Oct '26	Nov '26	Dec '26	Jan '27
Amos, Cheryl Developer	01/12/2025	06/26/2026	228.5 / -50.0	237.0 / -50.0	187.0 / 0.0	178.5 / 0.0	195.5 / 0.0	178.5 / 0.0
Architect	01/01/2025	12/31/2029	1,680.0 / -508.4	1,584.0 / -283.7	1,584.0 / -349.8	1,512.0 / -324.1	1,472.0 / -168.2	1,344.0 / -150.0
4G Upgrade Readiness 2	09/16/2025	02/24/2027	168.0	176.0	176.0	168.0	184.0	168.0
BEA Weblogic 10.0 Application Server	04/01/2025	03/31/2027	168.0	176.0	176.0	168.0	184.0	168.0
Headquarters	06/01/2025	05/31/2027	168.0	176.0	176.0	168.0	184.0	168.0
LATAM Research and Development Center	03/01/2025	02/28/2027	168.0	176.0	176.0	168.0	184.0	168.0
Meeting Reservation Portal	08/01/2025	01/30/2027	168.0	176.0	176.0	168.0	184.0	168.0

Work Effort Unit: System Standard (Hours) | Actuals / Allocation

5.1 View Sections

In **Allocations by Resource** mode, the following view sections are displayed.

5.1.1 Main Toolbar

Use the main toolbar at the top to switch to another **View** or save the current one, enable scenario mode or scenario comparison mode, shift and scale the timeline, access **Preferences** for the current view, **Export to Excel**, toggle **Fullscreen**, refresh the view, revert or save changes, and open the **Help** screen. **ARP Admins** also have access to global application **Administration** settings here.

5.1.2 Allocations View

The **Allocations** view shows:

- > Resources, roles and teams you have access to.
- > Investments (custom types included) with team entries of displayed resources, roles and teams. In this mode, displayed investments represent associated team entries.
- > Associated **Allocation** and/or **Hard Allocation** values per period.

The **Allocations** view is split into two sections:

- > The list on the left shows a tree view of resources, roles, teams and team entries in the **Name** column and other columns for fields of all displayed items. Expand a resource, role or team to see their team entries.
- > The timeline on the right is a combined utilization view, Gantt chart and allocation grid.
 - With **Show Utilization** selected in the **Visualization** tab of the **Preferences**, resource, role and team rows show a color-coded grid view of their utilization and capacity.
 - Team entries are represented by Gantt bars or an allocation grid you can type into.
 - Turn off Gantt bars for team entries in the **Visualization** tab of the **Preferences** to access the allocation grid. You can then edit the right grid value per period, **Allocation** or **Hard Allocation**, as selected in the **Grid** tab of the **Preferences**.

Use the **Allocations** toolbar to filter the view, select columns for the list on the left as well as sorting fields for resources, roles, teams and team entries.

5.2 Allocation List

Without an allocation filter, the allocation list shows any resources, roles and teams you have access to, and associated team entries by investment.

5.2.1 Expanding Resources, Roles and Teams

Click on the little arrow to the left of a resource, role or team icon to expand it and display all associated team entries. Click on the arrow again to hide the associated team entries.

5.2.2 Allocation Filter

Use the allocation filter to select resources, roles, teams and team entries.

-  Click on the **Filter** button in the **Allocations** toolbar and select **Allocations Filter**.
- Enter filter conditions and click on **Filter** to filter the view.
 - Click on **Clear** to delete all entered filter conditions, then click on **Filter** to apply. All data records you have access to will be displayed.
 - Click on **Configure** to select filter fields for the allocation filter.

See "5.3 Allocation Filter" on page 61 for details.

5.2.3 Columns

The following fields are always displayed in the first list column, labeled **Name**:

- > **Name (resource/role/team, investment of a team entry)**
- > **Primary Role (resource), Parent Role (role)**: A resource's primary role is displayed next to their name, if applicable. A role's parent role is displayed next to their name, if applicable. You can turn this off via a feature toggle, see "8.12.4 Hide Primary/Parent Role Name" on page 164.

 Click on the **Columns** button in the **Allocations** toolbar to select additional list columns:

- > **Start, Finish (resource/role/team, team entry)**: Duration of all team entries displayed for a resource, role or team (first level) or duration of team entries (second level). Editable for team entries, also in scenario mode.
- > **Actuals, Allocation, Hard Allocation (resource/role/team, team entry)**: Worked, planned and booked hours per resource, role or team (first level) and team entry (second level). Configurable via **Calculate Sums** and **Time-Scaled Value Total Column Calculation** in the **Timeslices** tab of the **Preferences**, see page 79.
- > **Skills (resource/role/team, team entry of a role)**: Editable; only available for role team entries with additional configuration, see page 163.
- > **ID (resource/role/team)**
- > **Department OBS, Location (resource/team)**
- > **Effective Role (resource)**: Primary role.
- > **Effective Role (role)**: Parent role.
- > **Effective Role (team entry)**: Resource/role/team investment role.
- > **Default Allocation (team entry)**: Editable; this applies in periods during the team entry where no allocation segments have been defined.
- > **Staff OBS Unit (team entry)**: Editable.

ARP Admins may add standard and custom resource, role, team and team entry fields to the selection and enable editing for them. See "8.11 Configuring List and Filter Fields" on page 158.

5.2.4 Editing List Fields

In **Allocations by Resource** mode, you can edit the following list fields by default.

ARP Admins may enable editing for additional fields, see "Additional Fields" below.

- > **Start and Finish of Team Entries:** You can change the duration of team entries via the **Start** and **Finish** list fields. This redistributes associated **Allocation** and **Hard Allocation** values over the new duration with the same proportions as before the change.
Therefore, shortening a team entry will raise the allocation per period while extending will lower it. Extending a team entry beyond the associated investment's **Start** or **Finish** will also extend the investment, such that it includes that team entry.
Reducing the durations of team entries doesn't reduce the investment's duration.
Team entries without a **Start** or **Finish** adopt these values from the associated investment.
 - > **Skills of Resources, Roles, Teams and Role Team Entries:** Click in the field to edit.
 - Type to open a list of suggestions and select the desired value.
 -  Select the desired value or values from a filterable list in the lookup browse window.
 -  Click here to remove selected values.
This feature is only available for role team entries with additional configuration, see page 163.
 - > **Default Allocation of Team Entries:** Click in the field to edit.
 - > **Staff OBS Unit of Team Entries:** Click in the field to edit.
 -  Click on the arrow to switch between filtering by selected unit and children (arrow down), selected unit and parents (arrow up) or only the exact unit (arrow right).
 -  The lookup browse window lets you select the desired OBS top level, sub levels and units.
 -  Click here to empty the field.
 - > **Additional Fields:** You can also edit any additional list fields that have been made editable by **ARP Admins**, see "8.11 Configuring List and Filter Fields" on page 158.
To edit lookup fields, click in the field first. This gives you the following editing options.
 - Type to open a list of suggestions and select the desired value.
 -  Select the desired value or values from a filterable list in the lookup browse window.
 -  Remove selected values or empty the field if it supports entering one value only.
 - > **Copying List Fields:** You can copy editable field values up or down via drag-and-drop. This feature supports lookup fields and respects restrictions on column values. Copying field values this way requires the start and target row to be of the same type, i.e., resource, role, team or team entry.
-  Changes will only be applied when you save them via the toolbar. You can easily identify unsaved changes via the red triangle in a field.
-  Refresh the view without saving to revert your changes.
-  Projects will automatically be locked for editing by other users while unsaved changes exist. This is indicated by a padlock icon. Saving or reverting your changes will unlock the project. If your session is interrupted before a project is unlocked, you or any **ARP Admin** can unlock it via the context menu. Please note that this is only possible for projects that were locked due to changes made in itd Advanced Resource Planning or the itd Portfolio Optimizer.

5.2.5 Sort

Use the **Sort** dialog to select sorting fields for resources, roles, teams and team entries.

☰ Click on the **Sort** button in the **Allocations** toolbar and select:

- > **Sort Resources By: Name (Default) or Primary Role.**
- > **Sort Investments By: Name (Default) or Investment Type.**

In addition to the fields listed here, any custom fields without lookups are available.

The button next to the sort field selection determines the sort order, ascending or descending.

If you don't select the default field, items will be sorted by it on the second level in ascending order.

5.2.6 Resource, Role and Team Actions

Right-click on a resource, role or team in the **Name** column to open the associated context menu with the following standard resource, role and team actions.

ARP Admins can reorder, restrict or remove the standard actions listed here and add custom actions, see "8.10 Defining Actions" on page 156.

- > **Open Properties:** Open the selected resource, role or team's detail view in a new browser tab.
- > **Expand All:** Expand the selected resource, role or team to reveal all associated team entries.
- > **Jump to Start Date:** Shift the timeline such that it starts with the earliest investment for which a team entry is displayed for the selected resource, role or team.

5.2.7 Team Entry Actions

Right-click on a team entry (investment) in the **Name** column to open the associated context menu with the following team entry actions.

ARP Admins can reorder, restrict or remove the standard actions listed here and add custom actions, see "8.10 Defining Actions" on page 156.

- > **Open Properties:** Open the detail view for the selected team entry in an overlay within the same browser tab.
- > **Create Requisition:** Create a new requisition for the **Allocation** of the selected team entry.
This action will be directly applied without further confirmation.
- > **Allocate From Estimates:** Enter the **Est. Effort** of all associated assignments as **Allocation** for the selected team entry.
This action will be directly applied without further confirmation.
- > **Commit Allocation:** Enter the **Allocation** as **Hard Allocation** for the selected team entry.
This action will be directly applied without further confirmation.
- > **Accept Hard Allocation:** Enter the **Hard Allocation** as **Allocation** for the selected team entry.
This action will be directly applied without further confirmation.
- > **Delete:** Available for team entries without actuals.
The selected team entry will be deleted instantly without further confirmation.
- > **Jump to Start Date:** Shift the timeline such that it starts with the team entry's start date.

5.2.8 Conversations

The standard MUX conversations for team entries are available in itd Advanced Resource Planning in the **Allocations by Investment** and **Allocations by Resource** views.

Clicking on a team entry adds a small **Details** button at the top right side of the view.

> ALLOCATIONS											
View Allocations by Investment		<< < Months 8 > >>		SHOW		REFRESH		SAVE		EXPORT TO EXCEL	
Name		Team - Coord...		Dec '21	Jan '22	Feb '22	Mar '22	Apr '22	May '22	Jun '22	Jul '22
Cloud Computing Enhancements				2	2	2	2	2	2	2	1
Customer Migration To Cloud				352	303	161	179	163	171	171	163
AI Team		New		41	100						
Amos, Cheryl Engineer		New		18							
Andersson, Peter Engineer		New		26	20	19	22	20	21	21	20
Architect Engineer		New		18	16	15	18	16	17	17	16
Arpel, itdesign Business Analyst		New		22	16	15	18	16	17	17	16
Berry, Jason Engineer		New			5	5	6	5	6	6	5
Bhatt, Rakesh Engineer		New		33	16	15	18	16	17	17	16

This button opens a conversation panel for this team entry only.

> ALLOCATIONS

View

Allocations by Investment

<<

<

Months

8

SHOW

>

>>

REFRESH

Name	Team - Coord...	Dec '21	Jan '22	Feb '22
Cloud Computing Enhancements		2	2	2
Customer Migration To Cloud		352	303	161
AI Team	New	41	100	
Amos, Cheryl Engineer	New	18		
Andersson, Peter Engineer	New	26	20	19
Architect Engineer	New	18	16	15
Arpel, itdesign Business Analyst	New	22	16	15
Berry, Jason Engineer	New		5	5
Bhatt, Rakesh Engineer	New	33	16	15

Architect

Customer Migration To Cloud (PR2009)

itd

CANCEL

SAVE

itd

Arpel, itdesign

12/08/21, 02:41 PM

Dana Lewis

More architects required!

itd

Arpel, itdesign

12/08/21, 02:40 PM

Architect required.

A
Architect
Customer Migration To Cloud (PR2009)

itd |

CANCEL SAVE

itd Arpel, itdesign 12/08/21, 02:41 PM
Dana Lewis More architects required!

itd Arpel, itdesign 12/08/21, 02:40 PM
Architect required.

5.3 Allocation Filter

The following section describes the allocation filter in **Allocations by Resource** mode.

5.3.1 Displayed Data

The following data will be loaded and displayed in the **Allocations** view without a filter:

- > Any resources, roles and teams with team entries for investments to which you have access (custom types included), optionally any resources, roles and teams to which you have access instead, with no investment rights required, see page 166.
- > Investments with team entries of displayed resources, roles and teams.
- > Associated team entries and allocations or hard allocations.
- > Team allocations of resources (allocated percentage of resource capacity)

5.3.2 Access Rights and Query Limits

The amount of data that will actually be loaded is limited by your access rights and by the query limits entered for itd Advanced Resource Planning by an administrator via the governors lookup:

- > **Access Rights:** Data records to which you have no access in Clarity PPM will not be displayed in itd Advanced Resource Planning either, see "8.5 User Access Rights" on page 150.
- > **Query Limits:** Limits for the number of resources/roles/teams, investments and assignments to load at the same time, entered by an administrator via the governors lookup, see "8.15.1 Query Limits" on page 178. If data records aren't displayed due to query limits, this will be indicated.

5.3.3 Filtering the Allocations View

Use the allocation filter to select resources, roles, teams and team entries.

 Click on the **Filter** button in the **Allocations** toolbar and select **Allocations Filter**.

- Enter filter conditions and click on **Filter** to filter the view.
- Click on **Clear** to delete all entered filter conditions, then click on **Filter** to apply. All data records you have access to will be displayed.
- Click on **Configure** to select filter fields for the allocation filter.

5.3.4 Selecting Filter Fields

Click on the **Configure** button in the allocation filter settings to select available filter fields for the left and right filter column. The selection and order of filter fields is stored per view.

- > You can add filter fields to either column as well as determine their order via drag-and-drop:
 - Drag filter fields from the **Available Filters** list to either column to add them.
 - Drag filter fields from either column to the **Available Filters** list to remove them.
 - Drag filter fields between columns or within a column to change their position.
- > Alternatively, you can use the buttons to the left of a column list in order to...
 - ... add fields selected in its left neighbor list (right arrow).
 - ... remove fields selected in the list and add these fields to its left neighbor list (left arrow).
 - ... change the field order by moving selected fields up or down in the list (up/down arrow).

By default, the filter fields listed in the following sections are available for selection:

- > 5.3.7 Default Filter Fields for Resources, Roles and Teams, page 63.
- > 5.3.8 Default Filter Fields for Investments, page 65.
- > 5.3.9 Default Filter Fields for Team Entries, page 67.

ARP Admins may add standard and custom resource, role, team, investment and team entry fields to the selection of filter fields, see "8.11 Configuring List and Filter Fields" on page 158.

5.3.5 Clarity PPM Lookups

Some filter fields are backed by a Clarity PPM lookup.



This icon is available for fields that support entering a Clarity PPM user.

Click on this to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user when the filter is applied.



This icon is available for OBS unit filter fields.

Click on the arrow to switch between filtering by selected unit and children (arrow down), selected unit and parents (arrow up) or only the exact unit (arrow right).



Click on the magnifier icon to access the lookup browse window for a field and select values.



Click on the trashcan icon to empty a field. If you only want to delete some items, click on the field first, select the items to remove and then click on the trashcan icon.

All lookup filters are multi-valued and will display a second empty list box when selected. This is where selected values go. Multiple selected values will always be connected with a logical "or", i.e., all investments or resources, roles and teams matching any selected value will be displayed.

As with all lookups, a list of suggested values will be displayed when typing in the text box.

Select a suggestion by clicking on it or via the arrow keys and [RETURN].

5.3.6 Default Investment Filters

By default, the following kinds of investments will be filtered out in all view modes except for the Roadmap and Hierarchy modes:

- > Investments from the past.
- > Inactive investments.
- > Project templates.

This applies when the associated filter fields are not displayed and is indicated in the filter panel.

Hover over the "?" icon to display the active default filters that apply.

Please note: these default filters don't apply to the Roadmap and Hierarchy modes, which display all included investments by default, even if they are completely in the past, inactive or project templates.

5.3.7 Default Filter Fields for Resources, Roles and Teams

In **Allocations by Resource** mode, the following resource, role and team filter fields are available by default for the allocation filter. If you enter any resource, role or team filters, only resources, roles and teams selected via filters are displayed in the allocation list.

- > **Resource – Role/Resource:** Show only selected resources, roles and teams.



The lookup browse window lets you filter the selection of available resources, roles and teams by last name, first name and resource ID.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Is Role:** Show only roles or only resources and teams.

- With the default setting **All**, this filter doesn't apply.
- Select **Yes** to show only roles.
- Select **No** to show only resources and teams.

- > **Resource – Is Team:** Show only teams or only resources and roles.

- With the default setting **All**, this filter doesn't apply.
- Select **Yes** to show only teams.
- Select **No** to show only resources and roles.

- > **Resource – Resource Name:** Filter by resource, role or team name. Use the asterisk ("*") to replace with any number of characters (e.g., "*son" will find "Harrison" and "Jackson"). Search terms will be treated as if ending with "*" (e.g., "Jack" will also find "Jackson").

- > **Resource – Resource Manager:** Show only resources and teams of selected resource managers. Roles have no resource manager and will therefore not be displayed with this filter.



Click on this icon to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user when the filter is applied.



The lookup browse window lets you filter the selection of available resource managers by last name, first name, full name, resource ID and employment type.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Booking Manager:** Show only resources and roles of selected booking managers.

Teams have no booking manager and will therefore not be displayed with this filter.



Click on this icon to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user when the filter is applied.



The lookup browse window lets you filter the selection of available booking managers by last name, first name and resource ID.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Resource OBS Unit:** Show only resources, roles and teams with selected OBS units.



Click on the arrow to switch between filtering by selected unit and children (arrow down), selected unit and parents (arrow up) or only the exact unit (arrow right).



The lookup browse window lets you select the desired OBS top level, sub levels and units.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Resource Type:** Show only resources, roles and teams of selected resource types (Equipment, Expense, Labor or Material).



The lookup browse window lets you select the desired resource types.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Primary Role:** Select roles to show only the following resources and roles.
 - **Resource Primary Role:** all resources with any of the selected roles as their primary roles.
 - **Role:** all selected roles.
 - **Role Parent Role:** all roles having any of the selected roles as their parent roles.

Teams have no primary role and will therefore not be displayed with this filter.

 Click on this icon to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user's primary role when the filter is applied.

 The lookup browse window lets you filter the selection of available roles by role name.

 Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Skills:** Filter resources, roles and teams by skills.
This uses the new Modern UX skills by default, but also supports the legacy skills hierarchy. Refer to section "8.12.1 Use Old Skills Hierarchy" on page 163 for information about how administrators can activate the legacy mode.
By default, all resources, roles and teams with at least one selected skill will be displayed. Alternatively, you can set the filter to require all skills to match via the **Skill Matching** field.
- > **Resource – Skill Matching:** Skill filter mode, **Match at least one skill** or **Match all skills**.
Without this filter field, the **Match at least one skill** mode will be used, such that resources, roles and teams with any selected skill will be displayed.
- > **Resource – Is External:** Filter resources, roles and teams by the **External** resource property (selected via **Properties – General – Resource Management – External**).
 - The default setting **All** shows any resources, roles and teams selected via other filters.
 - Select **Yes** to show only external resources. With this setting, roles and teams aren't displayed.
 - Select **No** to show only internal resources, roles and teams.

5.3.8 Default Filter Fields for Investments

In **Allocations by Resource** mode, the following investment filter fields are available by default for the allocation filter. If you enter any investment filters, only associated team entries and their resources, roles and teams are displayed in the allocation list.

Sub-Types: You can also filter investments by fields of investment sub-types. If you do, only investments of that sub-type which match the filter are displayed.

- > **Investment – Investments:** Show only selected investments. Depending on your settings, associated investment hierarchies may also be displayed.

The Roadmap and Hierarchy modes reduce this selection to included investments.

 The lookup browse window lets you filter the selection of available investments by name, investment ID, investment type and status ("active?").

 Click here to remove selected values or to clear the field, if no value is selected.

- > **Investment – Investment Name:** Enter a search term which occurs in the investment name. Use the asterisk character "*" as a placeholder for an arbitrary number of characters. Search terms will be treated as if ending with "*" (e.g., "*CRM" will find investment names containing "CRM", while "CRM", without the asterisk, will find only investment names starting with "CRM").

- > **Investment – Investment ID:** Enter a search term which occurs in the investment ID. Use the asterisk "*" as a placeholder for an arbitrary number of characters. Search terms will be treated as if ending with "*" (e.g., "*007" will find any investment whose ID contains "007", while "007", without the asterisk, will find only investments whose IDs begin with "007").

- > **Investment – Investment Manager:** Show only investments of selected investment managers.

 Click on this icon to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user when the filter is applied.

 The lookup browse window lets you filter the selection of available investment managers by last name, first name, user name, resource ID, type and status.

 Click here to remove selected values or to clear the field, if no value is selected.

- > **Investment – Investment OBS Unit:** Show only investments with selected OBS units.

 Click on the arrow to switch between filtering by selected unit and children (arrow down), selected unit and parents (arrow up) or only the exact unit (arrow right).

 The lookup browse window lets you select the desired OBS top level, sub levels and units.

 Click here to remove selected values or to clear the field, if no value is selected.

- > **Investment – Investment Type:** Show only investments of selected types (Application, Asset, Idea, Other Work, Product, Project, Service or custom investment types).

 The lookup browse window lets you filter the selection of investment types.

 Click here to remove selected values or to clear the field, if no value is selected.

- > **Investment – Investment Status:** Show only investments with a selected status.

 The lookup browse window lets you filter the selection of investment status values.

 Click here to remove selected values or to clear the field, if no value is selected.

- > **Investment – Hierarchy:** Show only investments of selected hierarchies.

 The lookup browse window lets you filter the hierarchy selection by name and ID.

 Click here to remove selected items or to clear the field, if no value is selected.

- > **Investment – Roadmap:** Show only investments of selected roadmaps.



The lookup browse window lets you filter the roadmap selection by name and ID.



Click here to remove selected items or to clear the field, if no value is selected.

- > **Investment – Hide Investments from the Past:** Hide investments ending before the start of the previous month.

Without this filter field, a default filter may apply, see "5.3.6 Default Investment Filters" on page 62.

- > **Investment – Inactive Investments:** Display or hide investments deactivated via **Properties - Settings – General – Active**.

- With the default setting **Hide**, inactive investments won't be displayed.
- Select **Show** to display inactive investments.
- Select **Show if relevant** to display inactive investments only if they have team entries that are partly or completely in the selected time period.

Without this filter field, a default filter may apply, see "5.3.6 Default Investment Filters" on page 62.

- > **Project – Project Templates:** Display or hide project templates, i.e., projects for which **Properties - Settings – General – Template** has been selected.

- With the default setting **Hide Project Templates**, project templates won't be displayed.
- Select **Show All** to display any investments, including project templates.
- Select **Show Only Project Templates** to display no investments but project templates.

Without this filter field, a default filter may apply, see "5.3.6 Default Investment Filters" on page 62.

5.3.9 Default Filter Fields for Team Entries

In **Allocations by Resource** mode, the following team entry filter fields are available by default for the allocation filter. If you enter any team entry filters, only team entries selected via filters and associated resources, roles and teams are displayed in the allocation list.

- > **Team – Booking Status:** Show only team entries with a selected booking status.



The lookup browse window lets you filter the selection by booking status name.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Team – Request Status:** Show only team entries with a selected request status.



The lookup browse window lets you filter the selection by request status name.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Team – Staff OBS Unit:** Show only team entries with selected OBS units.



Click on the arrow to switch between filtering by selected unit and children (arrow down), selected unit and parents (arrow up) or only the exact unit (arrow right).



The lookup browse window lets you select the desired OBS top level, sub levels and units.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Team – Team Has Allocation:** Show only team entries with allocation and/or hard allocation in the selected time period:

- **All:** Don't filter.
- **Team Has Allocation:** Show only team entries with allocation.
- **Team Has Hard Allocation:** Show only team entries with hard allocation.
- **Team Has Both Allocation AND Hard Allocation:** Show only team entries with both allocation and hard allocation.
- **Team Has Allocation OR Hard Allocation:** Show only team entries with either allocation or hard allocation.

This filter requires **Calculate Sums** to be set to **On** or **Filtered** or, in **Allocations by Resource** only, **Show Utilization** to be selected, see "Calculate Sums" on page 79.

In **Allocations by Resource** mode, an active utilization filter will be applied to this filter with **Calculate Sums** set to **On** or **Off**. Team entries with hidden utilization will then be treated as if they had no allocations. See "5.5 Utilization and Capacity Filters" on page 69 for details.

5.4 Utilization and Capacity

With **Show Utilization** in the **Visualization** tab of the **Preferences**, the grid on the right displays the utilization, total and/or remaining capacity of resources, roles and teams, based on allocations.

Select two display values in the **Grid** tab of the **Preferences** from among **[Total] Capacity**, **Remaining [Capacity]** (total capacity less editable value, **Allocation** or **Hard Allocation**), **Allocation** and **Hard Allocation**, see "Cell Configuration" on page 81.

The remaining capacity is based on the editable allocation value, **Allocation** or **Hard Allocation**.

5.4.1 Timeline

The timeline is shared among the utilization grid, Gantt chart and allocation grid.

See "5.11.3 Timeline" on page 77 for details about timeline settings in the main toolbar.

5.4.2 Visualization of Low, Optimal, High and Very High Utilization

Cell colors indicate a low (white), optimal (green), high (yellow) or very high (red) utilization of a resource, role or team in a period, based on their total capacity and the right or editable allocation value, **Allocation** or **Hard Allocation**. You can edit the thresholds for each color in the **Utilization** tab of the **Preferences**, see "5.12.4 Utilization" on page 80.

Utilization histogram charts are not available in this mode.

5.4.3 Filtering the View

With **Calculate Sums** set to **Filtered** in the **Timeslices** tab of the **Preferences**, the allocation filter is also applied to the utilization. In this case, the displayed utilization values only include **Allocation** or **Hard Allocation** values of team entries currently displayed in the allocation list.

With **Calculate Sums** set to **On** or **Off**, the global utilization is displayed instead. In this case, the utilization values sum up the **Allocation** or **Hard Allocation** values of all associated team entries in the corresponding period, regardless of whether they're currently displayed in the allocation list.

The displayed remaining capacity is always based on the global utilization. It is never affected by the allocation filter, regardless of the **Calculate Sums** setting.

Separate utilization and capacity filters are available in this mode. See "5.5 Utilization and Capacity Filters" on page 69 for details.

5.4.4 Displaying Utilization and Capacity Details

Hover over a grid cell to show the displayed resource fields, utilization mode (**Filtered** or not) and remaining capacity calculation, if applicable.

5.4.5 Role Capacities

The total capacity of a role is the total capacity of all resources with that primary role and, if configured, all resources with any of its sub-roles, see "Role Capacity Calculation" on page 81.

The remaining capacity of a role subtracts the right or editable value, **Allocation** or **Hard Allocation**, from all allocations of itself, its resources and, if configured, its sub-roles and their resources.

5.4.6 Team Utilization

For a resource allocated to a team, that allocation is included as a percentage of the resource's capacity as entered in the team (e.g., if a resource is allocated to a team with 50%, in a week where that resource has a capacity of 40 hours, an allocation of 20 hours will be included for the team).

5.5 Utilization and Capacity Filters

You can filter the utilization and capacity displayed for resources, roles and teams.

5.5.1 Utilization Filter Settings

Use the utilization filter to filter the utilization displayed for team entries.

-  Click on the **Filter** button in the **Allocations** toolbar and select **Utilization Filter**.
 - Enter filter conditions and click on **Filter** to filter the view.
 - Click on **Clear** to delete all entered filter conditions, then click on **Filter** to apply.
 All data records you have access to will be displayed.

By default, you can filter the utilization displayed for team entries by the following fields.

- > **Investment Status** of associated investments.

 The lookup browse window lets you select the desired investment status values.

 Click here to remove selected values or to clear the field, if no value is selected.

- > **Staff OBS Unit** of team entries.

 Click on the arrow to switch between filtering by selected unit and children (arrow down), selected unit and parents (arrow up) or only the exact unit (arrow right).

This setting applies to all selected units.

 The lookup browse window lets you select the desired OBS top level, sub levels and units.

 Click here to remove selected values or to clear the field, if no value is selected.

ARP Admins may add other **Lookup** and **Boolean** fields available for investments and team entries.

This includes most Clarity PPM standard fields and most custom fields defined for these objects.

See section "8.11 Configuring List and Filter Fields" on page 158 for details.

5.5.2 Capacity Filter Settings

In the **Utilization** tab of the **Preferences**, you can enter a capacity filter by **Staff OBS Unit**.

This setting is independent of the utilization filter by the same field. With this filter, capacity is only displayed for resources and teams with selected **Department OBS** units or with any of their child units. This also affects the capacity displayed for roles.

5.5.3 Effects of the Utilization and Capacity Filters

The utilization displayed for roles includes only team entries matching the selected utilization filter.

The capacity displayed for roles includes only resources matching the selected capacity filter.

The remaining capacity displayed for resources, roles and teams is also based on the filtered utilization as displayed according to the selected utilization filter.

The utilization and capacity filters only affect the utilization, capacity and remaining capacity displayed for resources, roles and teams. The filters have no effect on which team entries and allocations are displayed in the allocation list and grid.

5.5.4 Hiding Team Entries

In **Allocations by Resource** mode, the utilization filter is applied to the **Team Has Allocation** filter for team entries with **Calculate Sums** set to **On** or **Off**. This way, you can hide team entries for which no utilization is displayed, see "Team – Team Has Allocation" on page 67.

5.6 Gantt Chart

In **Allocations by Resource** mode, you can toggle the display of interactive Gantt bars for team entries only via the **Visualization** tab of the **Preferences**.

5.6.1 Timeline

The timeline is shared among the utilization grid, Gantt chart and allocation grid.

See "5.11.3 Timeline" on page 77 for details about timeline settings in the main toolbar.

5.6.2 Gantt Bars for Team Entries

Gantt bars for team entries are displayed when selecting **Show Gantt Bars for Team Members** in the **Visualization** tab of the **Preferences**.

While Gantt bars are displayed for team entries, you can't edit the **Allocation** or **Hard Allocation** values displayed per period directly.

You can shift and resize team entries via drag-and-drop of their Gantt bars.

This will redistribute the allocation values displayed per period for the respective team entry, **Allocation** or **Hard Allocation**, over the capacity of the respective resource, role or team during the new duration with the same proportions as before the change.

Shifting or extending a team entry beyond the associated investment's **Start** or **Finish** will also extend the investment, such that it includes the team entry.

Reducing the durations of team entries won't reduce the investment's duration.

Team entries without a **Start** or **Finish** will adopt these values from the associated investment.

5.6.3 Saving or Reverting Changes

Changes made to Gantt bars aren't saved directly.

 Your changes will only be applied when you save them via the toolbar. You can easily identify unsaved changes via the red triangle in a field.

 Refresh the view without saving to revert your changes.

 Projects will automatically be locked for editing by other users while unsaved changes exist. This is indicated by a padlock icon. Saving or reverting your changes will unlock the project. If your session is interrupted before a project is unlocked, you or any **ARP Admin** can unlock it via the context menu. Please note that this is only possible for projects that were locked due to changes made in itd Advanced Resource Planning or the itd Portfolio Optimizer.

5.7 Allocation Grid

Without Gantt bars for team entries, the timeline shows an editable grid of allocation values.

5.7.1 Timeline

The timeline is shared among the utilization grid, Gantt chart and allocation grid.

See "5.11.3 Timeline" on page 77 for details about timeline settings in the main toolbar.

5.7.2 Displayed and Editable Values per Period

In the **Grid** tab of the **Preferences**, you can select up to two values that will be displayed per period for team entries, see "Cell Configuration" on page 81.

- > **Left (read-only):** Empty (no value), Allocation, Hard Allocation, ETC, Actuals, Actuals + ETC, Requested or Capacity.
- > **Right (editable):** Allocation or Hard Allocation; base of utilization and capacity, see "5.4 Utilization and Capacity" on page 68.

The configured values are displayed when hovering over the allocation grid with the associated preferences setting, see "8.12.6 Show Grid Hints for by Resource Views" on page 164.

5.7.3 Displaying Trend Arrows

In the **Grid** tab of the **Preferences**, you can toggle and configure the display of trend arrows comparing the left and right cell values, see "Deviation Highlighting" on page 81.

For instance, this can help you to easily compare actuals with the originally planned values.

Wherever both values are different, a little arrow at the left cell edge visualizes a negative or positive deviation of the left cell value from the right cell value.

5.7.4 Editing Allocations

In the right half of the allocations view, you can see and edit team entries for resources, roles and teams, grouped by the associated investments or by the allocated resources, roles and teams.

Without **Show Gantt Bars for Team Members** in the **Visualization** tab of the **Preferences**, you can enter the desired allocation values in the grid on the right. Extending a team entry by entering values in grid cells outside the duration of the associated investment will also extend the investment such that the duration of the investment includes the team entry.

 Changes made in the allocation grid will only be applied when you save them via the toolbar. You can easily identify unsaved changes via the red triangle in a field.

 Refresh the view without saving to revert your changes.

 Projects will automatically be locked for editing by other users while unsaved changes exist. This is indicated by a padlock icon. Saving or reverting your changes will unlock the project. If your session is interrupted before a project is unlocked, you or any **ARP Admin** can unlock it via the context menu. Please note that this is only possible for projects that were locked due to changes made in itd Advanced Resource Planning or the itd Portfolio Optimizer.

5.8 Scenario Mode



The **Plan** menu is available in the main toolbar with the **Scenario – Navigate** right unless the **Scenario** button has been hidden by an **ARP Admin** via **Administration**, see "8.9 Global Settings in the Application" on page 155.

- > In the **Plan** menu, the **Plan of Record** is selected by default.
 - Alternatively, you can select any scenarios for which you have the **View** right.
 - You can edit data in any scenario for which you have the **Edit** right.
 - Investment rights are not required, but shifting and resizing investments with **Hard Allocation** values in this mode requires the **Resource – Hard Book** right for all associated resources.
- > **Add New** adds a new scenario after naming it and clicking on **Add** to confirm.
- > **Manage** opens a dialog that lists your own scenarios and scenarios shared with you.
 - To delete a scenario, click on the wastebasket icon and confirm by clicking on the checkmark.
 - Click on the share icon to specify who may view and edit the scenario.
 - Anyone can delete or share their own scenarios with anyone else.
 - **ARP Admins** can also delete or share any scenarios shared with them.
- > Selecting or adding a scenario in the **Plan** menu enables the scenario comparison mode.
 - By default, the selected **Plan** is compared to the **Plan of Record**.
 - Select **--None--** in the **Compare to** menu to disable the scenario comparison.
 - Select any other scenario to compare the selected **Plan** to that scenario.

The Excel export is only available for the **Plan of Record**. You can't export scenario data.

5.8.1 Scenario Data

Although the scenario comparison view implies that all investments and team entries in the plan of record or compared scenario exist in the active scenario as well, only deviations from plan of record data are actually stored as scenario data in the database. That means that any investment you didn't change in a scenario, including associated team entries and allocation grid data, actually shows as plan of record data. This applies to the active scenario as well as to any compared scenario.

- > With the itd Portfolio Optimizer, you can edit the investment ranking order and cut-off line position in a scenario. These data are stored for each investment, i.e., its global **Rank** and position relative to the cut-off line, above or below.
- > With itd Advanced Resource Planning or the itd Portfolio Optimizer, you can edit the **Start**, **Finish** and **Investment Status** investment fields and the **Start** and **Finish** team entry fields in a scenario.
- > With itd Advanced Resource Planning, you can also edit the **Allocation** per period of team entries in a scenario. When itd Advanced Resource Planning is licensed, this feature is also supported in the itd Portfolio Optimizer. You can't edit the **Hard Allocation** per period in a scenario.
- > The itd Portfolio Optimizer global rank and cut-off line inclusion data are stored separately from the investment, team entry and allocation data.
- > Please note that editing investment or team entry fields or allocation grid values in a scenario will store a copy of the associated investment, its team entries and allocation data in that scenario. After that, these data are no longer loaded from the plan of record, such that changes made there are no longer synchronized with the changed scenario in the scenario comparison view.

5.8.2 Scenario Comparison Mode

While the comparison is active, team entries are displayed in a two-row layout:

Name	Start	Finish	Aug. '26	Sept. '26	Oct. '26	Nov. '26	Dec. '26	Jan. '27	Feb. '27	März '27	Apr. '27	Mai '27	Juni '27	Juli '27
Amos, Cheryl Developer	12.01.2025	28.02.2027	389.0 / -219.5	407.5 / -220.5	407.5 / -220.5	389.0 / -219.5	426.1 / -230.8	389.0 / -219.5	370.5 / -200.5	0.0 / 195.5	0.0 / 187.0	0.0 / 178.5	0.0 / 187.0	0.0 / 187.0
My CI	01.10.2025	28.02.2027	357.0 / -178.5	374.0 / -187.0	374.0 / -187.0	357.0 / -178.5	391.0 / -195.5	357.0 / -178.5	340.0 / -170.0	195.5 / 0.0	187.0 / 0.0	178.5 / 0.0	0.0 / 187.0	0.0 / 187.0
Solution B	24.11.2025	31.01.2027	178.5	187.0	187.0	178.5	195.5	178.5	170.0	195.5	187.0	178.5		

- > The first row displays the active scenario data, which you can edit in scenario comparison mode:
 - The **Start**, **Finish** and **Allocation** per period of a team entry.
 - With **Show Gantt Bars for Team Members** in the **Visualization** tab of the **Preferences**, you can change the start and duration of team entries via drag-and-drop in the Gantt chart, with the same effect as changing the **Start** and **Finish** fields in the list.

The **Hard Allocation** per period is read-only in scenarios in Clarity PPM and displays the committed plan of record values. You cannot change these values in a scenario.

- > The second row displays the compared scenario or plan of record data, which you cannot edit in scenario comparison mode.

5.8.3 Transferring Investments and Team Entries to a Scenario

Initially, investments and associated team entries exist only in the plan of record.

Editing the **Start**, **Finish** or **Allocation** per period in a team entry's first row copies the associated investment with all team entries and the associated **Allocation** per period values to the scenario.

- > You can change investment fields in **Allocations by Investment** mode only, see page 47.
- > Team entries added to an investment in the plan of record after that investment has been added to a scenario will not be available in the scenario.
- > Investments and team entries deleted in the plan of record are also deleted in all scenarios in which they exist, even if differences have been entered for them in a scenario.

While the comparison is active, you can only edit scenario copies of team entries.

Any differences from the compared scenario or plan of record data are highlighted in light blue:

- > Resource, role and team **Allocation** totals.
- > Team entry **Start**, **Finish**, **Allocation** per period and associated Gantt bars.

Consider this when changing the **Start** and **Finish** of team entries:

- > Extending a team entry beyond the **Start** or **Finish** of the associated investment also extends the investment, such that it includes that team entry.
- > Reducing the durations of team entries doesn't reduce the investment's duration.
- > Team entries without a **Start** or **Finish** adopt these values from the associated investment.
- > Changing the duration of a team entry redistributes its allocation values with the same proportion as before the change.

5.8.4 Saving Scenario Data

Changes made to scenario data aren't saved directly.



Any changes you make to scenario data in this mode will only be applied when you save them via the toolbar. You can easily identify unsaved changes via the red triangle in a field.



Refresh the view without saving to revert your changes.

5.8.5 Utilization

In **Allocations by Resource** mode, the scenario comparison lets you compare the utilization and remaining capacity of resources, roles and teams in the plan of record or compared scenario to their values in the scenario selected as active plan.

The utilization and capacity filters are applied here as well.

See section "5.5 Utilization and Capacity Filters" on page 69 for details.

5.8.6 Context Menu Actions

While the scenario comparison is active, only the following context menu actions are available:

> **Resource, Role and Team Actions**

- **Open Properties:** Open the selected resource, role or team's detail view in a new browser tab.

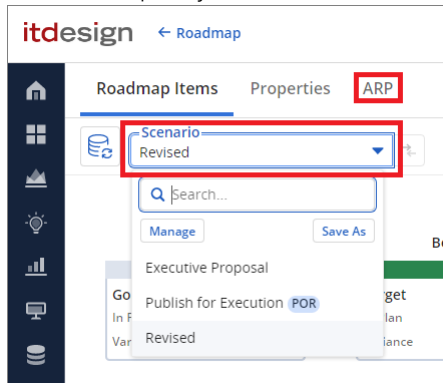
> **Team Entry Actions**

- **Open Properties:** Open the detail view for the selected team entry in an overlay within the same browser tab.

5.9 Roadmap Scenario Mode

Please note that the roadmap scenario mode feature is only available after adding an itd Advanced Resource Planning channel to the roadmap blueprint, see "8.7 Planning Modes" on page 154.

With the roadmap scenario mode, roadmaps offer an itd Advanced Resource Planning tab, which shows a capacity scenario for the currently selected roadmap scenario in its **Allocations** modes:



This view compares the current schedule of investments with the schedule of their linked roadmap items. Additionally, you can filter by, display and edit the **In Plan** property of roadmap items, and you can filter the utilization by the **In Plan** field in this mode with the standard utilization filter feature.

- > The itd Advanced Resource Planning application in this view is automatically filtered (in addition to any manually entered filters and automatic standard filters such as **Hide investments from the past**) and includes any investments linked to roadmap items in the selected roadmap scenario.
- > In the **Allocations** modes, the scenario mode, see previous section, is always active.
- > The capacity scenario is initially created when first opening the view for a specific roadmap scenario and is then linked to that roadmap scenario.

Reopening the view for a roadmap scenario for which a capacity scenario already exists will load that capacity scenario.

Capacity scenarios are shared among all users and are updated with changes saved by any user.

- > Investments in the capacity scenario are synchronized with their linked roadmap items in the roadmap scenario, such that any changes you save for an investment's **Start** or **In Plan** field in the capacity scenario affect its linked roadmap item in the roadmap scenario and vice versa.

- The investment's **Start** date in the capacity scenario is equal to and synchronized with its linked roadmap item's start date.

The investment's **Finish** date is shifted according to its duration, both of which are not linked to the roadmap item.

Any associated team entries are shifted accordingly in the capacity scenario.

Shifting and resizing roadmap items linked to investments with hard allocations in this mode requires the **Resource – Hard Book** right for all associated resources.

- The **In Plan** value in the capacity scenario is equal to and synchronized with its linked roadmap item's **In Plan** value.
- Any changes made to allocations in the capacity scenario are synchronized back to Clarity PPM and show up under **Capacity**.

Please note that capacity changes made in Clarity PPM won't be synchronized back to the capacity scenario.

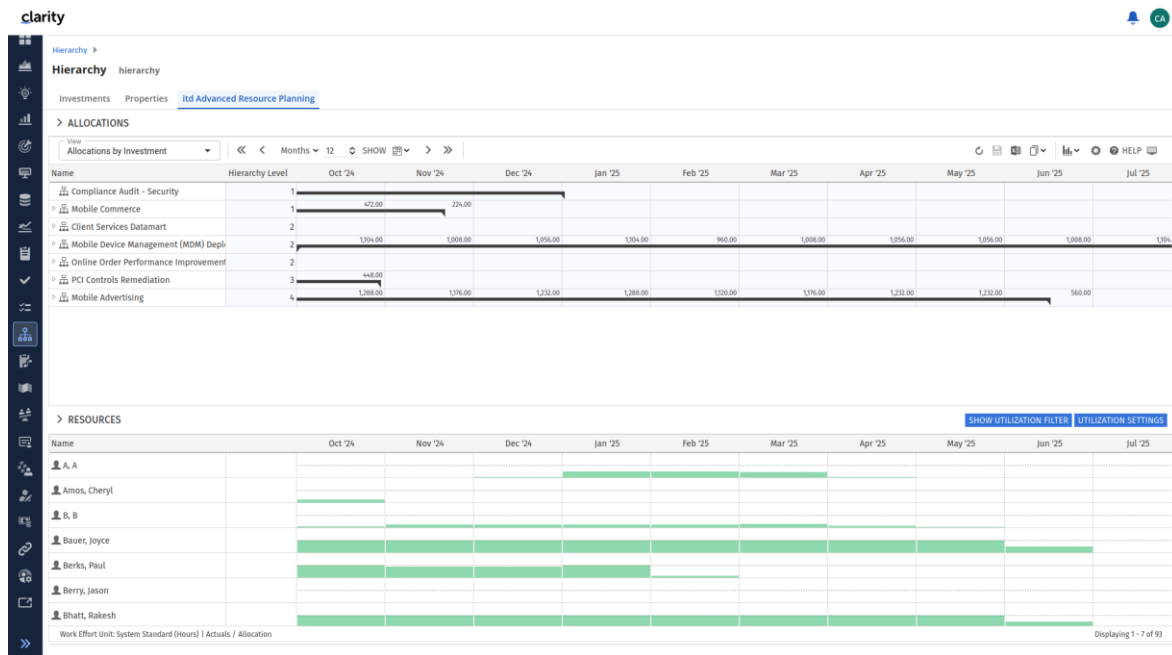
- > Any changes saved to the capacity scenario are restored when you or another user reopens the view for the same roadmap scenario, including changes not affecting linked roadmap items.

5.10 Hierarchy Mode

You can integrate itd Advanced Resource Planning in the **Hierarchies** module for hierarchies of the **Investment** type.

Please note that the hierarchy mode feature is only available after adding an itd Advanced Resource Planning channel to the hierarchy blueprint, see "8.7 Planning Modes" on page 154.

With the hierarchy mode, hierarchies offer an itd Advanced Resource Planning tab.



In this mode, the view is automatically filtered to show only investments included in the hierarchy.

The selection for the **Investments** filter field is also reduced to include only these investments.

You can display and sort by the **Hierarchy Level** field, which displays an investment's hierarchy level.

Please note: This mode is currently in the beta phase and is included as a preview. Further features are planned. We look forward to receiving feedback on this mode.

5.11 Main Toolbar

In **Allocations by Resource** mode, you have access to the following features in the main toolbar.

5.11.1 View



The **View** menu displays the active view and allows switching views, saving the current view under a new name and editing your favorites and view sharing settings under **Manage**. The **Save View** button lets you save changes to the current view if you have rights for it. Otherwise, you can still save a copy of the current view. For details, see chapter "3 Views" on page 13.

5.11.2 Plan



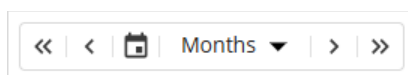
The **Plan** menu is available with the **Scenario – Navigate** right unless the **Scenario** button has been hidden by an **ARP Admin**, see "8.9 Global Settings in the Application" on page 155.

- > In the **Plan** menu, the **Plan of Record** is selected by default.
 - Alternatively, you can select any scenarios for which you have the **View** right.
 - You can edit data in any scenario for which you have the **Edit** right.
 - **Add New** adds a new scenario after naming it and clicking on **Add** to confirm.
 - **Manage** opens a dialog that lists your own scenarios and scenarios shared with you.
- > Selecting or adding a scenario in the **Plan** menu enables the scenario comparison mode.
 - By default, the selected **Plan** is compared to the **Plan of Record**.
 - Select **--None--** in the **Compare to** menu to disable the scenario comparison.
 - Select any other scenario to compare the selected **Plan** to that scenario.

The Excel export is only available for the **Plan of Record**. You can't export scenario data.

See section "5.8 Scenario Mode" on page 72 for details.

5.11.3 Timeline



Use the timeline menu to change the display period, or the **Slice Period**. The **Slice Period** is saved with the view and is synchronized with the **Timeslices** tab of the **Preferences**, where you can also edit the **Slice Count**, see "5.12.2 Timeslices" on page 79. The start date isn't saved with the view. The application starts with the current date and retains the selected start date when changing views.

⏪ **Previous Periods:** Here you switch back by the selected display period (e.g., 6 months).

⏴ **Previous Period:** Here you switch back by the selected slice period (e.g., 1 month).

📅 **Select Start Date:** Here you select the view's start date in a calendar view.

▼ **Slice Period:** e.g., **Months**. **ARP Admins** may disable periods via **Administration** in the main toolbar, see "8.9 Global Settings in the Application" on page 155.

➤ **Next Period:** Here you switch ahead by the selected slice period (e.g., 1 month).

➡ **Next Periods:** Here you switch ahead by the selected display period (e.g., 6 months).

5.11.4 Preferences

 **Preferences:** Here you configure general view settings, sum calculation and timeslice settings, visualization settings, utilization settings, grid value and visual value comparison settings, see "5.12 Preferences" on page 79. Preferences will be saved separately for each view.

5.11.5 Export to Excel

You can export all rows and columns of the **Allocations** view to Microsoft Excel.

 **Export to Excel:** Here you export the **Allocations** view to Microsoft Excel.

The data will be exported as displayed, with the same filter settings and with all rows and columns that are currently displayed. For list items with sub-elements, these sub-elements will only be exported if their parent item has been expanded, such that they are currently visible.

The Excel export is limited to a maximum of 15,000 rows and is only available for the **Plan of Record**. You can't export scenario data.

Clicking on the button in **Allocations by Resource** mode and confirming the export will open another dialog with an **Include Configured Resource Columns** option.

Select this before clicking on the **Export** button to include all resource columns currently displayed in the view, such as **Actuals**, **Allocation** and **Hard Allocation**.

5.11.6 Fullscreen

 **Fullscreen:** Turn fullscreen mode on or off. In fullscreen mode, the Clarity PPM navigation will be hidden, such that more items can be displayed in itd Advanced Resource Planning.

5.11.7 Refresh and Save

Use the **Refresh** and **Save** buttons to discard or save your changes.

 **Refresh:** This will reload all data. If there are unsaved changes, you will be asked if you want to save first. Answering no will discard your changes.

 **Save:** This will save all unsaved changes you have made in the current view.

5.11.8 Help

 **Help:** Here you can find information about itd Advanced Resource Planning and about asking for support. If you do, please always specify your version, which you can find under **About**.

Select **License** for license information and to obtain and enter licenses.

5.11.9 Administration

 **Administration:** **ARP Admins** may access administration settings here. All of these settings are global for all views. Some settings affect only specific view modes. This is indicated where it applies. See section "8.9 Global Settings in the Application" on page 155 for details.

5.12 Preferences

 Click on the **Preferences** button in the toolbar to edit view options.

5.12.1 General

Settings in the **General** tab control the display and behavior of the current view.

> Generic

- **Decimal Places:** Controls the number of decimal places for all numbers in the current view.
- **Load Data on Startup:** Load data directly when opening itd Advanced Resource Planning. Otherwise, data will only be loaded after clicking on the **Filter** button.

> Accessibility

- **Use Colors with Higher Contrast:** Select this for improved readability. This setting is saved in the web browser instead of the view and is therefore global per user when accessing the application with the same web browser on the same machine.

5.12.2 Timeslices

Settings in the **Timeslices** tab control the calculation of sums, timeline scale, display period and work effort unit.

- > **Calculate Sums:** Calculate and show totals of the **Allocation**, **Hard Allocation** and **Actuals** fields per resource, role and team. Team entry totals are always displayed.

- **On:** Calculate and show global sums. Slows down loading the view.
- **Filtered:** Apply allocation filter to global sums. Slower loading than with **On**.
- **Off:** Don't show any sums. Faster loading than with **On** or **Filtered**.

This applies to sum columns in the **Allocations** list and to the time-scaled allocation grid.

For sum columns, also see "Time-Scaled Value Total Column Calculation" below.

Please note that with **Show Utilization** selected in the **Visualization** tab, sums for **Allocation** and **Hard Allocation** are always calculated, even with **Calculate Sums** set to **Off**. See next page.

The **Team Has Allocation** filter, see page 67, is only available when you set this to **On** or **Filtered**, or, in **Allocations by Resource** mode only, with **Show Utilization** selected in the **Visualization** tab.

- > **Time-Scaled Value Total Column Calculation:** Defines the behavior of the **Allocation**, **Hard Allocation** and **Actuals** columns in the allocation list.

- **Grand Total:** Show the total for the full duration of all team entries displayed for a resource, role or team or for the full team entry duration.
- **Sum of Periods:** Sum up the figures only for the currently displayed periods.

- > **Slice Period:** Enter the planning period here. Possible settings are **Days**, **Weeks**, **Months**, **Quarters**, **Calendar Years** and, if configured, **Fiscal Period**.

The selection may be limited by **ARP Admins** via **Administration** in the main toolbar, see "8.9 Global Settings in the Application" on page 155. Only enabled options are available.

- > **Slice Count:** Enter the number of slices to be displayed.

- > **Work Effort Unit:** Specify the unit for efforts here. By default, the **System Standard** will be applied. Alternatively, you may select **Hours**, **Days** or **FTE** (full time equivalents).

The selection may be limited by **ARP Admins** via **Administration** in the main toolbar, see "8.9 Global Settings in the Application" on page 155. Disabled options aren't available.

- > **Fiscal Entity** and **Fiscal Period:** With the **Fiscal Period** setting, if multiple fiscal entities or periods have been defined in your Clarity PPM system, select the desired fiscal entity and period here.

5.12.3 Visualization

Settings in the **Visualization** tab control the visualization in the **Allocations** view.

- > **Gantt Bars:** See "5.6 Gantt Chart" on page 70.
 - **Show Gantt Bars for Team Members:** Display or hide Gantt bars for team entries. Without Gantt bars for team entries, the editable allocation grid is displayed.
- > **Utilization**
 - **Show Utilization:** Display the utilization, total and/or remaining capacity of resources, roles and teams per period in the **Allocations** view, see "Cell Configuration" on page 81. In **Allocations by Resource** mode only, with **Show Utilization**, even if **Calculate Sums** is set to **Off**, global sums are also always calculated for the **Allocation** and **Hard Allocation** columns, and the **Team Has Allocation** filter, see page 67, is available. With **Show Utilization** and **Calculate Sums** set to **On** or **Filtered**, sums are also displayed for the **Actuals** column. With **Filtered**, the allocation filter is also applied to column sums and the utilization, such that they only include displayed allocations. With **Calculate Sums** set to **On** or **Off**, the column sums and utilization are global. The remaining capacity is always global and includes any allocations in the associated period. The sum calculation generally slows down loading the view, which also applies to this setting.

5.12.4 Utilization

Settings in the **Utilization** tab control the display and calculation of the utilization. In **Allocations by Resource** mode, the utilization is based on **Allocation** or **Hard Allocation** values from team entries.

- > The **Utilization Rate** controls the visualization of low or high utilization.
 - **Low Utilization at and Below:** Upper boundary below which resources, roles and teams will be marked as underutilized with a white background in the respective period. Utilization between the thresholds for low utilization and utilization warning (e.g., between 80% and 100%) will be marked as optimal with a green background.
 - **Utilization Warning Above:** Lower boundary above which resources, roles and teams will be marked as slightly over-utilized with a yellow background in the respective period. This applies as long as the utilization stays at or below the lower boundary for high utilization.
 - **High Utilization Above:** Lower boundary above which resources, roles and teams will be marked as highly over-utilized with a red background in the respective period.
 - **Team Entry or Resource Highlighting:** With the default setting **Team**, signal colors are based on the editable value displayed in the right half of team entry cells, **Allocation** or **Hard Allocation**, as proportion of their total capacity. With the **Resource** setting, resource cells will be colored based on the second resource value instead. This highlighting only supports **Allocation** and **Hard Allocation** as well. No colors are available when the **Capacity** or **Remaining** values are selected. You can select all of the values considered here in the **Grid** tab of the **Preferences**.
- > The **Capacity Filter** by **Staff OBS Unit** is applied to the capacity displayed for resources, roles and teams, such that only resources and teams with selected **Department OBS** units or with children of selected units are displayed as available. This also affects the capacity displayed for roles. Additionally, you can filter the utilization by investment and team entry properties. See section "5.5 Utilization and Capacity Filters" on page 69 for details.

- > The **Role Capacity Calculation** option is available after activation by a Clarity PPM application administrator in the **itd AE Preferences** lookup, see "8.12.15 Include Sub-Roles in Role Capacity in Allocations Modes" on page 168. It controls the inclusion of sub-roles in role capacities.

Under **Calculate Capacity of Roles Based On**, select:

- **All Role Owners (Standard):** With the default setting, the capacity of a role is calculated based only on resources with that primary role.
- **All Role Owners and Sub-Roles:** Select this option to include the sub-role resources.

5.12.5 Grid

Settings in the **Grid** tab control the values that are displayed and can be edited in the allocation grid, the display values for resource utilization and capacity as well as the visual comparison of the left and right value via trend arrows.

- > **Cell Configuration:** Here you select the values displayed in the allocation and utilization grids. With **Show Utilization** in the **Visualization** tab, resources, roles and teams show the resource fields selected here. Without **Show Utilization**, resources, roles and teams show the values for the left and right part of the cell as well instead.

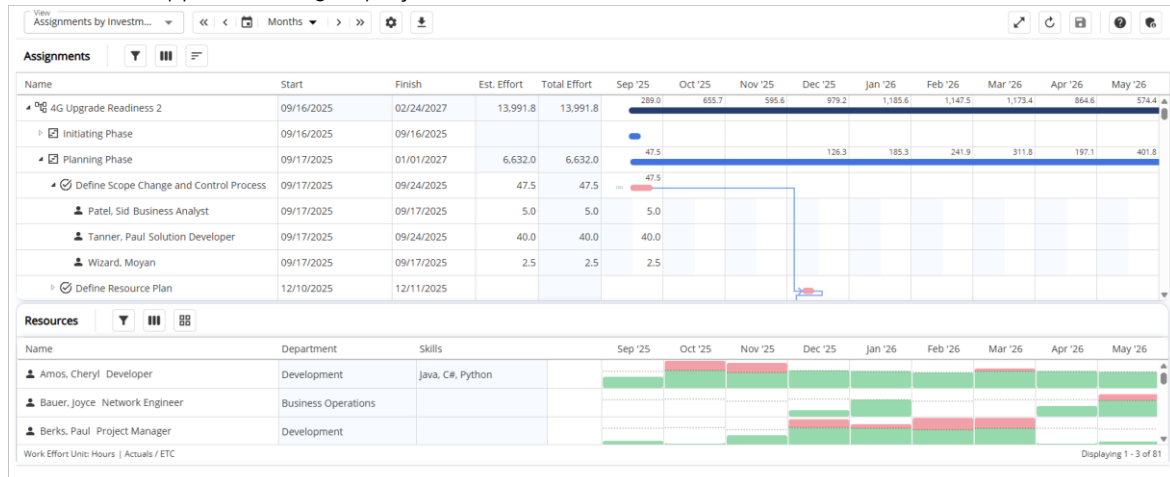
Please also note the specifics about combining **Show Utilization** and **Calculate Sums** in this mode, see "Show Utilization" on page 80.

- **Field to Display on the Left Part of the Cell (Read Only):** Empty, Allocation, Hard Allocation, ETC, Actuals, Actuals + ETC, Requested or Capacity
- **Field to Display on the Right Part of the Cell (Editable):** Allocation or Hard Allocation
The displayed utilization is always based on the editable value.
- **Resource Field to Display on the Left Part of the Cell:** Capacity, Remaining, Allocation or Hard Allocation
- **Resource Field to Display on the Right Part of the Cell:** Capacity, Remaining, Allocation or Hard Allocation
- > **Deviation Highlighting**
 - **Highlight Deviation (only when Gantt Bars are disabled):** Display trend arrows for deviations of the left cell value from the right one, see "5.7.3 Displaying Trend Arrows" on page 71.
 - **Tolerance of Deviation:** Threshold value for displaying trend arrows to indicate a deviation of the left cell value from the right one.
 - **Consider Zero Values in Deviation:** Display an arrow even if one of the two values is zero.

6 Assignments by Investment

The **Assignments by Investment** mode groups resource, role and team assignments by associated investments and investment sub-structures. The utilization and capacity of resources, roles and teams are displayed in a separate view as graphical histograms or in color-coded numbers.

This mode supports editing of project structures in an interactive Gantt chart.



6.1 View Sections

In **Assignments by Investment** mode, the following view sections are displayed.

6.1.1 Main Toolbar

Use the main toolbar at the top to switch to another **View** or save the current one, shift and scale the timeline, access **Preferences** for the current view, **Export to Excel**, toggle **Fullscreen**, refresh the view, revert or save changes, and open the **Help** screen.

ARP Admins also have access to global application **Administration** settings here.

6.1.2 Assignments View

The **Assignments** view shows:

- > Investments you have access to, including custom investment types.
- > Tasks of displayed investments.
- > Optionally investment hierarchies, phases and milestones. Displaying these can be turned on and off separately for each in the **Visualization** tab of the **Preferences**.
- > Displaying resource, role and team assignments is also optional and can be turned on and off in the **Visualization** tab of the **Preferences**. When assignments are visible, you can also toggle displaying assignments of inactive resources, roles and teams there.

Without assignments, the view loads faster and shows only investments and tasks. With the respective settings, investment hierarchies, phases and milestones are also displayed.

In this mode, the following features aren't available:

- Resource, role, team, assignment and team entry filters.
- Assignment data.
- Calculated sums of **Est. Effort**, **Actuals** and **Total Effort**.
- Editing the **Est. Effort** of tasks and assignments.
- **Resources** view.

The **Assignments** view is split into two sections:

- > The list on the left shows a tree view of investments, tasks, assignments and other items in the **Name** column and other columns for fields of all displayed items.
Expand an investment to see its sub-structure.
- > The timeline on the right is a combined Gantt chart and assignment grid.
 - Toggle Gantt bars for investments, tasks and phases as well as assignments in the **Visualization** tab of the **Preferences**.
 - Without Gantt bars for assignments, type the desired **ETC** values per period directly in the grid.
Additionally, you can edit custom time-scaled values in the grid, if configured.

Use the **Assignments** toolbar to filter the view, select columns for the list on the left as well as sorting fields for investments, tasks and assignments.

6.1.3 Resources View

The **Resources** view shows:

- > Resources, roles and teams you have access to.
- > Global resource, role and team utilization from assignments and capacity.
You can disable the utilization view to speed up loading by turning off both **Show Histogram** and **Show Utilization** in the **Visualization** tab of the **Preferences**.

The **Resources** view is split into two sections:

- > The list on the left shows resources and teams, in common alphabetic order, followed by roles, also in alphabetic order.
To staff, drag resource list items onto investments, tasks or assignments in the assignment list.
- > On the right, the global utilization and capacity of the listed resources, roles and teams are shown.
 - By default, the utilization is displayed as histogram charts stacked against a capacity line.
 - Alternatively, you can display a color-coded grid showing the same data as numeric ratios.
 - Disable both visualizations to speed up loading, see above.

Both visualizations share the time periods displayed in the **Assignments** view. The displayed utilization is global, based on the **ETC** values of all assignments in the respective periods.

Click on a utilization grid cell to show the utilization popup, which lists associated investments and assignments.

Use the **Resources** toolbar to filter the view and select **Resource** and **Utilization Popup Columns**.

6.2 Assignment List

Without an assignment filter, the assignment list shows any investments you have access to, associated tasks and assignments by resource, role and team. Displaying investment hierarchies, phases and milestones is optional, see "6.1.2 Assignments View" on page 82.

6.2.1 Expanding List Items

Click on the little arrow to the left of a list item's icon to expand it and display its sub-items. Click on the arrow again to hide the associated items.

6.2.2 Displaying Investment Descriptions

Hover over an investment to display its description. Clarity PPM administrators may deactivate this via the **itd AE Preferences** lookup, see "8.12.23 Hide Description Tooltips" on page 171.

6.2.3 Assignments and Team Entries

Displaying resource, role and team assignments is optional and can be turned on and off in the **Visualization** tab of the **Preferences**, see "6.1.2 Assignments View" on page 82.

In addition to assignment fields, you can display the **Staff OBS Unit** field of the associated team entry in an assignment row, see section "6.2.5 Columns" below.

Displaying other standard or custom team entry fields isn't supported in this mode.

6.2.4 Assignment Filter

Use the assignment filter to select investments, tasks and assignments.

 Click on the **Filter** button in the **Assignments** toolbar to access the assignment filter.

- Enter filter conditions and click on **Filter** to filter the view.
- Click on **Clear** to delete all entered filter conditions, then click on **Filter** to apply. All data records you have access to will be displayed.
- Click on **Configure** to select filter fields for the assignment filter.

See section "6.4 Assignment Filter" on page 93 for details.

6.2.5 Columns

The following fields are always displayed in the first list column, labeled **Name**:

- > **Name (investment, phase, task, milestone, resource/role/team of an assignment)**: Editable for investments, phases, tasks, milestones and role assignments (**Resource**).
- > **Primary Role (resource), Parent Role (role)**: A resource's primary role is displayed next to their name, if applicable. A role's parent role is displayed next to their name, if applicable. You can turn this off via a feature toggle, see "8.12.4 Hide Primary/Parent Role Name" on page 164.

 Click on the **Columns** button in the **Assignments** toolbar to select additional list columns:

- > **Start, Finish (investment, phase, task, milestone, assignment)**: Editable for phases, tasks, milestones and assignments.
- > **Duration (phase, task)**: Duration in base calendar work days; editable.
- > **Actuals, Est. Effort, Total Effort (investment, phase, task, assignment)**: Worked, remaining and total hours per investment, phase, task and assignment; the **Total Effort** is the sum of **Actuals** and **Est. Effort**. You can also add total columns for custom time-scaled values, see "6.6.9 Integrating a Custom Time-Scaled Value" on page 105.

Configurable via **Calculate Sums** and **Time-Scaled Value Total Column Calculation** in the **Timeslices** tab of the **Preferences**, see page 120.

Aggregated sums include only assignments of labor roles and resources as well as teams.

Material, equipment and expense roles and resources aren't included.

You can edit the **Est. Effort** per task and assignment, and you can edit total columns for time-scaled **Money** values per assignment, see "6.2.6 Editing List Fields" on page 85.

- > **ID (investment, phase, task, milestone, resource/role/team):** Editable for phases, tasks and milestones
- > **Investment Status (investment):** Editable.
- > **Investment Type (investment)**
- > **Predecessors, Successors (investment):** Investments connected via agreements.
- > **Effective Role (assignment):** Resource/role/team assignment role.
- > **Loading Pattern (assignment):** Editable.
- > **Staff OBS Unit (team entry of an assignment):** Editable.
- > **Display ETC Sums outside of Visible Time Range:** See page 104.

ARP Admins may add standard and custom fields available for any list object to the selection and enable editing for them. See "8.11 Configuring List and Filter Fields" on page 158.

6.2.6 Editing List Fields

In **Assignments by Investment** mode, you can edit the following list fields by default.

ARP Admins may enable editing for additional fields, see "Additional Fields" below.

> **Name of Investments, Phases, Tasks, Milestones and Role Assignments (Resource)**

- Click in the associated row in the **Name** column and press [F2] or [Return].
- Enter the desired name.
- Press [Return] to confirm or [Esc] to cancel.

Alternatively, you can rename these items via the context menu.

> **Start and Finish of Non-Project Investments, Phases, Tasks and Assignments:**

You can edit the **Start** and **Finish** of non-project investments, phases, tasks and assignments.

You can't edit the **Start** and **Finish** of projects and custom investment types directly, as they are derived from their total phase, task and milestone duration.

You can only change the **Start** and **Finish** of tasks and assignments while the status is **Not started** and no **Actuals** exist for them. The status check can be turned off, see "8.12.22 Edit Task and Assignment Start and Finish Regardless of Status" on page 171.

- Changes of the **Start** and **Finish** will also affect parent and sub-objects as well as the distribution of assignments, see below.

By default, changing the **Start** of a phase or task will keep the **Duration** by shifting the **Finish** for the same number of work days according to the base calendar. Clarity PPM application administrators may disable this via the **itd AE Preferences** lookup, see "8.12.24 Keep Task Duration" on page 171. In this case, changing the **Start** won't affect the **Finish**.

In any case, you can change the **Start** without the **Finish** by dragging the left edge of a phase or task bar in the Gantt chart, see "6.5 Gantt Chart" on page 100.

- Changing the duration of a phase will change its tasks proportionally (e.g., shrinking a phase from 8 to 6 weeks will reduce an associated task from 4 to 3 weeks).
- Likewise, changing the duration of a non-project investment or task (directly or indirectly via a phase) will change its assignments proportionally.

- Extending an assignment beyond the **Start** or **Finish** of the associated task or non-project investment will also extend the task or non-project investment to include the assignment. Likewise, extending a task will extend the associated phase, if required. Extending a phase will extend the associated project, if required. Shortening has no effect on associated objects.
- Changing the duration of an assignment will redistribute the remaining effort over the working hours during the new remaining duration between **Actuals Thru** and **Finish** with the same proportions as before the change. The effort per period can then no longer be edited until the changes are applied or rejected.

With **Update Allocation** in the **General** tab of the **Preferences**, the new assignment values will also be entered as allocation for the same periods.

- > **Duration of Phases and Tasks:** You can edit the **Duration** of a phase or task via the associated field. The duration is measured in work days according to the base calendar. The **Finish** date will be adjusted accordingly. Changing the duration affects associated tasks and assignments as described in the previous section.
- > **Est. Effort of Tasks and Assignments:** You can edit the **Est. Effort** of a task or assignment via the **Est. Effort** field in the associated row.
 - **Est. Effort** entered for a task will be distributed proportionally to assigned resources, roles and teams with respect to the previous **Est. Effort** values. For example, changing the effort for a task from 40 to 80 hours, with one resource booked for 30 hours and another one for 10 hours, will set the first one to 60 hours and the second one to 20 hours.
The effort per assignment and the effort per period can then no longer be edited until the changes are applied or reverted.
 - If you change the **Est. Effort** for an assignment, directly or via the associated task, the new value will be evenly distributed over the working hours during the assignment's new remaining duration (between **Actuals Thru** and **Finish**), overwriting the previous planning. The effort per period can then no longer be edited until the changes are applied or reverted.
 - With **Update Allocation** in the **General** tab of the **Preferences**, the new assignment values will also be entered as allocation for the same periods.
- > **Custom Time-Scaled Money Values for an Assignment:** You can edit any custom time-scaled **Money** value displayed as a visible column for an assignment in the same way as the **Est. Effort**: click into the field in the associated row and enter the desired value. Changing a custom time-scaled **Money** value for an assignment will distribute that value over the working hours during the assignment considering the **Loading Pattern**, overwriting the previous planning.
- > **IDs of Phases, Tasks and Milestones:** If **Auto-numbering** is disabled for the **ID** field of tasks, you can edit the IDs of phases, tasks and milestones. To do this, click in the respective field and enter the desired ID. You can't edit the IDs of investments, resources, roles and teams that are also displayed in this view.
- > **Investment Status:** Click in the field to select a value.
- > **Loading Pattern of Project Task Assignments:** For project task assignments, you can edit the **Loading Pattern**. Click in the field to select a value.
- > **Staff OBS Unit of Team Entries:** Click in the field to select a value.



Click on the arrow to switch between filtering by selected unit and children (arrow down), selected unit and parents (arrow up) or only the exact unit (arrow right).



The lookup browse window lets you select the desired OBS top level, sub levels and units.



Click here to empty the field.

- > **Additional Fields:** You can also edit any additional list fields that have been made editable by **ARP Admins**, see "8.11 Configuring List and Filter Fields" on page 158.

To edit lookup fields, click in the field first. This gives you the following editing options.

- Type to open a list of suggestions and select the desired value.



Select the desired value or values from a filterable list in the lookup browse window.



Remove selected values or empty the field if it supports entering one value only.

- > **Copying List Fields:** You can copy editable field values up or down via drag-and-drop. This feature supports lookup fields and respects restrictions on column values.

Copying field values this way requires the start and target row to be of the same type, i.e., investment, phase/task, milestone, or assignment.

For investments, the investment type must also be the same, e.g., project or idea. All custom investment types are considered to be the same type for this feature.



Changes will only be applied when you save them via the toolbar. You can easily identify unsaved changes via the red triangle in a field.



Refresh the view without saving to revert your changes.



Projects will automatically be locked for editing by other users while unsaved changes exist. This is indicated by a padlock icon. Saving or reverting your changes will unlock the project. If your session is interrupted before a project is unlocked, you or any **ARP Admin** can unlock it via the context menu. Please note that this is only possible for projects that were locked due to changes made in itd Advanced Resource Planning or the itd Portfolio Optimizer.

6.2.7 Sort

Use the **Sort** dialog to select sorting fields for investments, tasks and assignments.



Click on the **Sort** button in the **Assignments** toolbar and select:

- > **Sort Investments By: Name (Default) or Investment Type.**
- > **Sort Tasks By: WBS Sort (Default), Finish Date, Name or Start Date.**
Moving, indenting and outdenting tasks is only possible with **WBS Sort**.
- > **Sort Assignments By: Name (Default), Effective Role, Finish Date or Start Date.**

In addition to the fields listed here, any custom fields without lookups are available.

The button next to the sort field selection determines the sort order, ascending or descending.

If you don't select the default field, items will be sorted by it on the second level in ascending order.

6.2.8 Investment Actions

Right-click on an investment in the **Name** column to open the associated context menu with the following standard investment actions.

ARP Admins can reorder, restrict or remove the standard actions listed here and add custom actions, see "8.10 Defining Actions" on page 156.

- > **Open Properties:** Open the detail view for the selected investment in a new browser tab.
- > **Create Task:** Available for projects. For details about this feature, see the "6.3.1 Creating Phases, Tasks and Milestones" section on page 90.
- > **Autoschedule:** Available for projects. Applies the Clarity PPM standard process for autoscheduling a project. To do this, proceed as follows.
 - Right-click on the desired project in the **Name** column.
 - Select the **Autoschedule** action to open the associated overlay window.

- This offers exactly the same options as the autoscheduler for the **PPM Gantt** view, except for the **Publish after Scheduling** option, which is not available in itd Advanced Resource Planning. When you confirm by clicking OK, autoscheduling of the project will instantly be initiated. Please refer to the Clarity PPM documentation for information about the autoscheduler.
- > **Allocate From Estimates:** Enter the **Est. Effort** of all associated assignments as **Allocation** for each team entry of the selected investment.
This action will be directly applied without further confirmation.
- > **Remove Lock:** Unlock projects locked due to changes made in itd Advanced Resource Planning or the itd Portfolio Optimizer. Available to every user for projects locked due to their own changes. Available to **ARP Admins** for any project locked due to changes made by any user. Projects locked due to changes that weren't made in itd Advanced Resource Planning or the itd Portfolio Optimizer can only be unlocked via the associated button in the project's properties.
- > **Expand All:** Expand the selected investment to reveal its full sub-structure.
- > **Jump to Start Date:** Shift the timeline such that it starts with the investment's start date.
- > **Rename:** Rename the selected investment. [Return] confirms, [Esc] cancels.
The change is only applied when saving via the toolbar. Refresh without saving to undo.
- > **Show Investment Team:** Filter the resource list by the selected investment, such that only that investment's team members are displayed.

6.2.9 Phase, Task and Milestone Actions

Right-click on a phase, task or milestone in the **Name** column to open the associated context menu with the following standard phase, task and milestone actions.

ARP Admins can reorder, restrict or remove the default actions listed here and add custom actions, see "8.10 Defining Actions" on page 156.

- > **Open Properties:** Open the detail view for the selected phase, task or milestone in an overlay within the same browser tab.
- > **Create Task:** Available for phases and tasks without assignments. The latter will become phases when a task is created for them.
For details about this feature, see "6.3.1 Creating Phases, Tasks and Milestones" on page 90.
- > **Indent Task** and **Outdent Task:** Available for phases, tasks and milestones. Here you include them in a preceding task or phase or remove them from one. See section "6.3.3 Indenting and Outdenting Phases, Tasks and Milestones" on page 90 for details about this.
- > **Delete:** Available for tasks without **Actuals** and for milestones.
You will be asked to confirm before anything is deleted.
You can only delete phases after outdenting or deleting any included tasks and milestones.
- > **Task Dependencies:** Available for tasks and milestones of projects.
This will open a window where you can see and edit dependencies between tasks and milestones.
See section "6.3.5 Creating and Editing Task and Milestone Dependencies" on page 91.
- > **Expand All:** Available for phases. Expand the selected phase and reveal its full sub-structure.
- > **Jump to Start Date:** Shift the timeline such that it starts with the phase's or task's start date or with the milestone date.
- > **Rename:** Rename the selected phase, task or milestone. [Return] confirms, [Esc] cancels.
The change is only applied when saving via the toolbar. Refresh without saving to undo.

6.2.10 Assignment Actions

Right-click on an assignment (resource, role or team) in the **Name** column to open the associated context menu with the following standard assignment actions.

ARP Admins can reorder, restrict or remove the standard actions listed here and add custom actions, see "8.10 Defining Actions" on page 156.

- > **Open Properties:** Open the detail view for the selected assignment in an overlay within the same browser tab.
Depending on the investment type, the associated team entry is opened in the same browser tab, or a list of all associated assignments is opened in a new browser tab instead, if applicable.
- > **Allocate From Estimates:** Enter the **Est. Effort** of all associated assignments as **Allocation** for the associated team entry. This action will be directly applied without further confirmation.
- > **Delete:** Available for assignments without actuals.
You will be asked to confirm before anything is deleted.
- > **Jump to Start Date:** Shift the timeline such that it starts with the assignment's start date.
- > **Unassign to Effective Role:** Available for assignments of resources and teams without actuals.
The assignment will be reset to its effective role. If that role already has a team entry in the investment, a new team entry will be created for a copy of the role.
The change will only be applied when saving via the toolbar. Refresh without saving to undo.
- > **Rename:** Available for role assignments.
Enter the selected assignment's new **Resource** name. [Return] confirms, [Esc] cancels.
The change will only be applied when saving via the toolbar. Refresh without saving to undo.
- > **Show candidates (by Role, OBS and Skills):** Available for role assignments.
This sets the following resource filter conditions, adding missing filter fields automatically:
 - **Primary Role** is the selected role.
 - **Resource OBS Unit** is the **Staff OBS Unit** of the associated team entry, if it has any.
 - **Skills** are the skills selected for the associated team entry, if it has any.
 - **Skill Matching** is set to require all skills to match. Alternatively, you can set this to require at least one skill to match.

Please note: The **Skills** filter and matching aren't available by default due to a switch from the **Skills Hierarchy** to the flat MUX skill system in Clarity 16.2.3. However, you can either enable the old **Skills Hierarchy** or add a **Skills** field to role team entries to use MUX skills:

- 8.12.1 Use Old Skills Hierarchy, see page 163.
- 8.12.2 Use MUX Skills on Role Team Entries, see page 163.

6.3 Working with Phases, Tasks and Milestones

The following sections describe creating and editing phases, tasks and milestones for a project or custom investment type.

6.3.1 Creating Phases, Tasks and Milestones

Create a task for an investment, phase or task as follows. Creating a task for another task makes the latter a phase. Please note that only tasks without assignments can be turned into phases.

- > Right-click on the desired investment or phase.
- > Select the **Create Task** action to insert a new row for the new task.
- > In the menu at the left edge of the new task row, select the desired task type: **Task**, **Key task**, **Milestone** or **Key Milestone**.
- > Enter the desired **Name**, **Start**, **Finish** and/or **Duration**.
- > If **Auto-numbering** is disabled for the **ID** field of tasks, you can enter the desired ID.
- > Click on the **Save** button in the toolbar to confirm. To cancel, click on the **Refresh** button in the toolbar and select **No** when asked whether pending changes should be saved.

6.3.2 Working with Phases

Convert a task without assignments into a phase as follows:

- > Create associated task, see previous section.
- > Indent following phase, task or milestone, see following section.

You can then create other tasks and milestones for the new phase, see previous section.

Add existing phases, tasks and milestones to a phase as follows:

- > Indent following phase, task or milestone, see following section.
- > Drag phase, task or milestone on the phase, see section "6.3.4 Moving and Copying Phases, Tasks and Milestones" on page 91.

The depth of phases and sub-phases is unlimited.

Outdenting or deleting all associated phases, tasks and milestones will turn a phase back into a task.

6.3.3 Indenting and Outdenting Phases, Tasks and Milestones

You can indent a phase, task or milestone under a phase or under another task without assignments, making the latter a phase. Outdent or delete all phases, tasks and milestones under a phase to make it a task again. Indent or outdent via the context menu in the assignment list on the left.

- > Right-click on the desired task or milestone.
- > Then select the desired action:
 - **Indent Task** following a phase or another task.
 - **Outdent Task** moves an indented phase, task or milestone up one level. Outdent all phases, tasks and milestones belonging to a phase to make it a task again.

You can also change the structure level of a phase, task or milestone by adding it onto an existing phase or by removing it from a phase via drag-and-drop, see the following section "6.3.4 Moving and Copying Phases, Tasks and Milestones" on page 91.

The indenting and outdenting of tasks will be directly applied without confirmation.

6.3.4 Moving and Copying Phases, Tasks and Milestones

You can modify the order and hierarchy of phases, tasks and milestones via drag-and-drop.

Changes will instantly be applied without confirmation.

Hold the [Ctrl] key while executing the listed steps to copy the selected object instead of moving it.

This is only possible for objects whose ID doesn't already exist in the target project or is empty.

Phases will be copied with their full sub-structure.

Assignments will also be copied. Please note that this may require creating team entries for assigned resources, roles and teams. In this case, you will need the **Resource – Soft Book** right in addition to the **Project – Edit** right to perform this operation.

- > To this end, click on the icon of the object you want to move, hold the mouse button and drag the object to its target position.
- > Drag up to insert before or down to insert after the target object.
- > Release the mouse button to perform the action.

6.3.5 Creating and Editing Task and Milestone Dependencies

Task and Milestone Dependencies are only supported in projects.

Satisfied dependencies between tasks and milestones will be displayed in the Gantt chart as blue arrows. Violated dependencies will be displayed as red arrows. You can open a list view of a task's or milestone's dependencies, in which you can also create new dependencies, as follows.

- > Double-click on a dependency in the Gantt chart OR
- > Right-click on a task or milestone in the **Name** column of the assignment list and select the **Task Dependencies** action.

Either of these actions will open the **Task Dependencies** view for the selected task or milestone:

TASK DEPENDENCIES - RISK RESPONSE AND MITIGATION PLAN ✕

CREATE NEW DEPENDENCY

DEPENDENT TASK: ▼

RELATIONSHIP: ▼

Predecessor

TYPE: ▼

Finish-Start

LAG: 0.00

LAG TYPE: ▼

Daily

📄 SAVE ➕ ADD ✕ DELETE ☰ DEPENDENCY LIST

Dependent Task	Dependent Project	Relationship	Type	Lag	Lag Type
Define Resource Plan	Office Upgrade	Predecessor	Start-Start	0.00	Daily
Identify Infrastructure Requ...	Office Upgrade	Successor	Finish-Start	0.00	Daily
Complete Project Plan	Office Upgrade	Successor	Finish-Start	0.00	Daily

OK
CANCEL

- > To create a new dependency, enter parameters in the upper half of the view under **Create New Dependency**. Enter a daily or percentage **Lag** to require a delay between the predecessor and its successor. If you enter a percentage lag, specify the duration of the required delay as a percentage of the predecessor's duration. Click on **Add** in the toolbar in the middle to create the dependency.

With **Move Successors on Dependency Creation** in the **General** tab of the **Preferences**, new dependencies that are initially violated will automatically be satisfied by moving the selected successor and any of its own successors ahead. Please note that existing violated dependencies between the successor and its own successors won't be satisfied in this process.

Also, if the selected successor or any of its successors has actuals or the **Exclude from Autoscheduling** property, that task or milestone and its successors won't be moved.

- > Select fields in the list in the lower half of the view to edit them.
- > Select a dependency in the list in the lower half of the view and click **Delete** to delete it.
- > Select a dependency in the list in the lower half of the view and click **Open** to open its detail view.

6.4 Assignment Filter

The following section describes the assignment filter in **Assignments by Investment** mode.

6.4.1 Displayed Data

The following data will be loaded and displayed in the **Assignments** view without a filter:

- > Any investments to which you have access (custom types included).
- > Associated tasks and optionally phases, milestones and investment hierarchies, see "6.1.2 Assignments View" on page 82.
- > Optionally assignments under tasks and assigned resources, roles and teams, see "6.1.2 Assignments View" on page 82.

6.4.2 Access Rights and Query Limits

The amount of data that will actually be loaded is limited by your access rights and by the query limits entered for itd Advanced Resource Planning by an administrator via the governors lookup:

- > **Access Rights:** Data records to which you have no access in Clarity PPM will not be displayed in itd Advanced Resource Planning either, see "8.5 User Access Rights" on page 150.
- > **Query Limits:** Limits for the number of resources/roles/teams, investments and assignments to load at the same time, entered by an administrator via the governors lookup, see "8.15.1 Query Limits" on page 178. If data records aren't displayed due to query limits, this will be indicated.

6.4.3 Filtering the Assignments View

Use the assignment filter to select investments, tasks and assignments.

-  Click on the **Filter** button in the **Assignments** toolbar to access the assignment filter.
 - Enter filter conditions and click on **Filter** to filter the view.
 - Click on **Clear** to delete all entered filter conditions, then click on **Filter** to apply. All data records you have access to will be displayed.
 - Click on **Configure** to select filter fields for the assignment filter.

6.4.4 Selecting Filter Fields

Click on the **Configure** button in the assignment filter settings to select available filter fields for the left and right filter column. The selection and order of filter fields is stored per view.

- > You can add filter fields to either column as well as determine their order via drag-and-drop:
 - Drag filter fields from the **Available Filters** list to either column to add them.
 - Drag filter fields from either column to the **Available Filters** list to remove them.
 - Drag filter fields between columns or within a column to change their position.
- > Alternatively, you can use the buttons to the left of a column list in order to...
 - ... add fields selected in its left neighbor list (right arrow).
 - ... remove fields selected in the list and add these fields to its left neighbor list (left arrow).
 - ... change the field order by moving selected fields up or down in the list (up/down arrow).

By default, the filter fields listed in the following sections are available for selection:

- > 6.4.8 Default Filter Fields for Investments, page 95
- > 6.4.9 Default Filter Fields for Resources, Roles and Teams, page 97
- > 6.4.10 Default Filter Fields for Team Entries, page 99
- > 6.4.11 Default Filter Fields for Tasks, page 99
- > 6.4.12 Default Filter Fields for Assignments, page 99

ARP Admins may add other standard and custom fields available for investments, investment sub-types, resources, roles, teams, team entries, tasks and assignments to the selection of filter fields, see "8.11 Configuring List and Filter Fields" on page 158.

This includes most Clarity PPM standard fields and most custom fields defined for these objects.

6.4.5 Clarity PPM Lookups

Some filter fields are backed by a Clarity PPM lookup.



This icon is available for fields that support entering a Clarity PPM user.

Click on this to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user when the filter is applied.



This icon is available for OBS unit filter fields.

Click on the arrow to switch between filtering by selected unit and children (arrow down), selected unit and parents (arrow up) or only the exact unit (arrow right).



Click on the magnifier icon to access the lookup browse window for a field and select values.



Click on the trashcan icon to empty a field. If you only want to delete some items, click on the field first, select the items to remove and then click on the trashcan icon.

All lookup filters are multi-valued and will display a second empty list box when selected. This is where selected values go. Multiple selected values will always be connected with a logical "or", i.e., all investments or resources, roles and teams matching any selected value will be displayed.

As with all lookups, a list of suggested values will be displayed when typing in the text box.

Select a suggestion by clicking on it or via the arrow keys and [RETURN].

6.4.6 Default Investment Filters

By default, the following kinds of investments will be filtered out in all view modes except for the Hierarchy mode:

- > Investments from the past.
- > Inactive investments (never displayed in **Assignments** modes).
- > Project templates.

This applies when the associated filter fields are not displayed and is indicated in the filter panel.

Hover over the "?" icon to display the active default filters that apply.

Please note: these default filters don't apply to the Hierarchy mode, which displays all included investments by default, even if they are completely in the past, inactive or project templates.

Also, in **Assignments** modes, inactive investments are never displayed. As these modes don't support an **Inactive Investments** filter field, this isn't indicated in the default filter hint.

6.4.7 Selecting Investment Hierarchies

With **Show Investment Hierarchy** in the **Visualization** tab of the **Preferences**, parent hierarchies of any investments selected via filters are always displayed.

In **Assignments by Investment** mode, **Show Investment Hierarchy** also displays the full sub-structures of all displayed investments if you use no other investment filters but **Investments**, **Investment Name** and **Investment ID**.

6.4.8 Default Filter Fields for Investments

In **Assignments by Investment** mode, the following investment filter fields are available by default for the assignment filter. If you enter any investment filters, only investments selected via filters are displayed in the assignment list.

Sub-Types: You can also filter investments by fields of investment sub-types. In this case, only investments of that sub-type which match the filter are displayed.

Hierarchies: If applicable, investment hierarchies are also displayed.

- > **Investment – Investments:** Show only selected investments. Depending on your settings, associated investment hierarchies may also be displayed.

The Roadmap and Hierarchy modes reduce this selection to included investments.

 The lookup browse window lets you filter the selection of available investments by name, investment ID, investment type and status ("active?").

 Click here to remove selected values or to clear the field, if no value is selected.

- > **Investment – Investment Name:** Enter a search term which occurs in the investment name. Use the asterisk character "*" as a placeholder for an arbitrary number of characters. Search terms will be treated as if ending with "*" (e.g., "*CRM" will find investment names containing "CRM", while "CRM", without the asterisk, will find only investment names starting with "CRM").

- > **Investment – Investment ID:** Enter a search term which occurs in the investment ID. Use the asterisk ("*") as a placeholder for an arbitrary number of characters. Search terms will be treated as if ending with "*" (e.g., "*007" will find any investment whose ID contains "007", while "007", without the asterisk, will find only investments whose IDs begin with "007").

- > **Investment – Investment Manager:** Show only investments of selected investment managers.

 Click on this icon to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user when the filter is applied.

 The lookup browse window lets you filter the selection of available investment managers by last name, first name, user name, resource ID, type and status.

 Click here to remove selected values or to clear the field, if no value is selected.

- > **Investment – Investment OBS Unit:** Show only investments with selected OBS units.

 Click on the arrow to switch between filtering by selected unit and children (arrow down), selected unit and parents (arrow up) or only the exact unit (arrow right).

 The lookup browse window lets you select the desired OBS top level, sub levels and units.

 Click here to remove selected values or to clear the field, if no value is selected.

- > **Investment – Investment Type:** Show only investments of selected types (Application, Asset, Idea, Other Work, Product, Project, Service or custom investment types).

 The lookup browse window lets you filter the selection of investment types.

 Click here to remove selected values or to clear the field, if no value is selected.

- > **Investment – Investment Status:** Show only investments with a selected status.
 -  The lookup browse window lets you filter the selection of investment status values.
 -  Click here to remove selected values or to clear the field, if no value is selected.
- > **Investment – Hierarchy:** Show only investments of selected hierarchies.
 -  The lookup browse window lets you filter the hierarchy selection by name and ID.
 -  Click here to remove selected items or to clear the field, if no value is selected.
- > **Investment – Roadmap:** Show only investments of selected roadmaps.
 -  The lookup browse window lets you filter the roadmap selection by name and ID.
 -  Click here to remove selected items or to clear the field, if no value is selected.
- > **Investment – Hide Investments from the Past:** Hide investments ending before the start of the previous month.

Without this, a default filter may apply, see "6.4.6 Default Investment Filters" on page 94.
- > **Project – Project Templates:** Display or hide project templates, i.e., projects for which **Properties – Settings – General – Template** has been selected.
 - With the default setting **Hide Project Templates**, project templates aren't displayed.
 - Select **Show All** to display any investments, including project templates.
 - Select **Show Only Project Templates** to display no investments but project templates.

Without this, a default filter may apply, see "6.4.6 Default Investment Filters" on page 94.

6.4.9 Default Filter Fields for Resources, Roles and Teams

In **Assignments by Investment** mode, the following resource, role and team filter fields are available by default for the assignment filter. If you enter any resource, role or team filters, only associated assignments and their parent structures are displayed in the assignment list.

If you select resources, roles and teams only via the **Role/Resource**, **Is Role** and **Is Team** filter fields, other phases, tasks and milestones of displayed investments as well as other resources, roles and teams assigned to displayed tasks are also available in the view.

- > **Resource – Role/Resource:** Show only investments with assignments of selected resources, roles and teams.



The lookup browse window lets you filter the selection of available resources, roles and teams by last name, first name and resource ID.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Is Role:** Show only investments with role or resource and team assignments.
 - With the default setting **All**, this filter doesn't apply.
 - Select **Yes** to show only investments with role assignments.
 - Select **No** to show only investments with resource and team assignments.
- > **Resource – Is Team:** Show only investments with team or resource and role assignments.
 - With the default setting **All**, this filter doesn't apply.
 - Select **Yes** to show only investments with team assignments.
 - Select **No** to show only investments with resource and role assignments.
- > **Resource – In Task:** Show only tasks with assignments of resources, roles and teams selected via the **Role/Resource**, **Is Role** and **Is Team** filters.
- > **Resource – In Assignment:** Show only assignments of resources, roles and teams selected via the **Role/Resource**, **Is Role** and **Is Team** filters.
- > **Resource – Resource Name:** Filter by resource, role or team name. Use the asterisk ("*") to replace with any number of characters (e.g., "*son" will find "Harrison" and "Jackson"). Search terms will be treated as if ending with "*" (e.g., "Jack" will also find "Jackson").
- > **Resource – Resource Manager:** Show only resources and teams of selected resource managers. Roles have no resource manager and will therefore not be displayed with this filter.



Click on this icon to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user when the filter is applied.



The lookup browse window lets you filter the selection of available resource managers by last name, first name, full name, resource ID and employment type.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Booking Manager:** Show only resources and roles of selected booking managers. Teams have no booking manager and are therefore not displayed with this filter.



Click on this icon to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user when the filter is applied.



The lookup browse window lets you filter the selection of available booking managers by last name, first name and resource ID.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Resource OBS Unit:** Show only resources, roles and teams with selected OBS units.
 -  Click on the arrow to switch between filtering by selected unit and children (arrow down), selected unit and parents (arrow up) or only the exact unit (arrow right).
 -  The lookup browse window lets you select the desired OBS top level, sub levels and units.
 -  Click here to remove selected values or to clear the field, if no value is selected.
- > **Resource – Resource Type:** Show only resources, roles and teams of selected resource types (Equipment, Expense, Labor or Material).
 -  The lookup browse window lets you select the desired resource types.
 -  Click here to remove selected values or to clear the field, if no value is selected.
- > **Resource – Primary Role:** Select roles to show only the following resources and roles.
 - **Resource Primary Role:** All resources having any of the selected roles as their primary roles.
 - **Role:** All selected roles.
 - **Role Parent Role:** All roles having any of the selected roles as their parent roles.

Teams have no primary role and will therefore not be displayed with this filter.

 -  Click on this icon to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user's primary role when the filter is applied.
 -  The lookup browse window lets you filter the selection of available roles by role name.
 -  Click here to remove selected values or to clear the field, if no value is selected.
- > **Resource – Skills:** Filter resources, roles and teams by skills.
 This uses the new Modern UX skills by default, but also supports the legacy skills hierarchy. Refer to section "8.12.1 Use Old Skills Hierarchy" on page 163 for information about how administrators can activate the legacy mode.
 By default, all resources, roles and teams with at least one selected skill will be displayed. Alternatively, you can set the filter to require all skills to match via the **Skill Matching** field.
- > **Resource – Skill Matching:** Skill filter mode, **Match at least one skill** or **Match all skills**.
 Without this filter field, the **Match at least one skill** mode will be used, such that resources, roles and teams with any selected skill will be displayed.
- > **Resource – Is External:** Filter resources, roles and teams by the **External** property of resources (selected via **Properties – General – Resource Management – External**).
 - With the default setting **All**, this filter doesn't apply.
 - Select **Yes** to show only external resources. With this setting, roles and teams aren't displayed.
 - Select **No** to show only roles, internal resources and teams.

6.4.10 Default Filter Fields for Team Entries

In **Assignments by Investment** mode, the following team entry filter fields are available by default for the assignment filter. If you enter any team entry filters, only associated assignments and their parent structures are displayed in the assignment list.

- > **Team – Booking Status:** Show only team entries with a selected booking status.
 -  The lookup browse window lets you filter the selection by booking status name.
 -  Click here to remove selected values or to clear the field, if no value is selected.
- > **Team – Request Status:** Show only team entries with a selected request status.
 -  The lookup browse window lets you filter the selection by request status name.
 -  Click here to remove selected values or to clear the field, if no value is selected.
- > **Team – Staff OBS Unit:** Show only team entries with selected OBS units.
 -  Click on the arrow to switch between filtering by selected unit and children (arrow down), selected unit and parents (arrow up) or only the exact unit (arrow right).
 -  The lookup browse window lets you select the desired OBS top level, sub levels and units.
 -  Click here to remove selected values or to clear the field, if no value is selected.

6.4.11 Default Filter Fields for Tasks

In **Assignments by Investment** mode, the following task filter fields are available by default for the assignment filter. If you enter any task filters, only associated assignments and their parent structures are displayed in the assignment list.

- > **Task – Task Name:** Enter all or part of a task name to filter tasks. The asterisk character "*" may be used as a placeholder.
- > **Task – Task Status:** Show only tasks with a selected task status.
 -  The lookup browse window lets you filter the selection by task status name.
 -  Click here to remove selected values or to clear the field, if no value is selected.

6.4.12 Default Filter Fields for Assignments

In **Assignments by Investment** mode, the following assignment filter fields are available by default for the assignment filter. If you enter any assignment filters, only assignments selected via filters and their parent structures are displayed in the assignment list.

- > **Assignment – Assignment Role:** Show only assignments with selected assignment roles.
 -  The lookup browse window lets you filter the selection by assignment role name.
 -  Click here to remove selected values or to clear the field, if no value is selected.
 - Please note that a resource may be assigned to a task in another than its primary role.
- > **Assignment – Assignment Status:** Show only assignments with a selected assignment status.
 -  The lookup browse window lets you filter the selection by assignment status name.
 -  Click here to remove selected values or to clear the field, if no value is selected.
- > **Assignment – Assignment Has ETC:** Show only assignments that have remaining ETC (remaining hours of work to be done) in the selected time period.
- > **Assignment – Assignment Has Actuals:** Show only assignments for which actuals have been entered in the selected time period.

6.5 Gantt Chart

You can toggle the display of interactive Gantt bars separately for investments, tasks and phases (including milestones and dependencies between tasks and milestones) as well as for assignments via the **Visualization** tab of the **Preferences**. Additionally, you can toggle the display of critical paths for projects and of agreements as dependencies between investments there.

6.5.1 Timeline

The timeline is shared among the Gantt chart, assignment grid and utilization grid.

See "6.12.2 Timeline" on page 117 for details about timeline settings in the main toolbar.

6.5.2 Gantt Bars for Investments

Gantt bars for investments are displayed with **Show Gantt Bars for Investments** in the **Visualization** tab of the **Preferences**.

Via drag-and-drop, you can shift and resize Gantt bars for non-project investments, but not for projects and custom investment types.

Changes made to non-project investments will also be applied to all associated assignments, even if they aren't displayed. Shifting a non-project investment will shift all associated assignments accordingly. Resizing a non-project investment will resize all associated assignments proportionally (e.g., reducing an investment's duration from 8 to 6 weeks will reduce an associated assignment from 4 weeks to 3 weeks).

This will also redistribute the ETC values displayed per period for all affected assignments over the capacity of the respective resource, role or team during the assignment's new duration, with the same proportions as before the change.

The **Start** and **Finish** of projects and custom investment types depend on the associated phase, task and milestone dates and may not be modified directly.

6.5.3 Gantt Bars for Tasks and Phases

Gantt bars for tasks and phases, as well as diamond shapes for milestones and dependencies between tasks and milestones are displayed with **Show Gantt Bars for Tasks and Phases** in the **Visualization** tab of the **Preferences**.

In **Assignments by Investment** mode, you can shift and resize Gantt bars for tasks and phases via drag-and-drop. You can also shift milestones via drag-and-drop.

You can only change the **Start** and **Finish** of tasks while the status is **Not started** and no actuals exist for them. The status check can be turned off, see "8.12.22 Edit Task and Assignment Start and Finish Regardless of Status" on page 171.

Shifting or resizing a phase will shift or resize associated tasks and milestones accordingly (e.g., reducing a phase's duration from 8 to 6 weeks will reduce an associated task from 4 weeks to 3 weeks). In the same way, shifting or resizing a task directly or indirectly via a phase will affect associated assignments proportionally.

This will also redistribute the ETC values displayed per period for all affected assignments over the capacity of the respective resource, role or team during the assignment's new duration, with the same proportions as before the change.

Shifting or extending a task or milestone beyond the **Start** or **Finish** of the associated phase will also extend the phase, such that it includes the task or milestone. Likewise, extending a phase will extend the associated project, if required. Shortening a task or phase has no effect on its parent objects.

6.5.4 Creating and Editing Task Dependencies

You can create dependencies between tasks and milestones by clicking on the desired predecessor and, holding the mouse button, dragging the dependency onto the desired successor.

When you create a dependency like this, depending on the **Preferences** and the properties of the selected successor and any own successors it may have, those may be moved automatically in order to satisfy the new dependency, see "6.3.5 Creating and Editing Task and Milestone Dependencies" on page 91.

Double-click on an existing dependency's arrow to open that dependency for editing.

6.5.5 Dependencies on Tasks and Milestones Not Currently Displayed

A special icon indicates dependencies from tasks and milestones that aren't currently displayed.

-  This icon next to a task or milestone indicates it has at least one dependency connecting it with another task or milestone not currently displayed. The icon will be red when such a dependency is violated. Click on the icon to display the associated projects and tasks or milestones.

6.5.6 Gantt Bars for Assignments

Gantt bars for assignments are displayed with **Show Gantt Bars for Assignments** in the **Visualization** tab of the **Preferences**.

While Gantt bars for assignments are displayed, you can't edit the **ETC** values per period directly.

You can shift and resize assignments via drag-and-drop of their Gantt bars.

You can only change the **Start** and **Finish** of assignments while the status is **Not started** and no actuals exist for them. The status check can be turned off, see "8.12.22 Edit Task and Assignment Start and Finish Regardless of Status" on page 171.

Changing an assignment this way will redistribute the ETC displayed per period for the respective assignment over the capacity of the assigned resource, role or team during the new remaining duration (between **Actuals Thru** and **Finish**) with the same proportions as before the change.

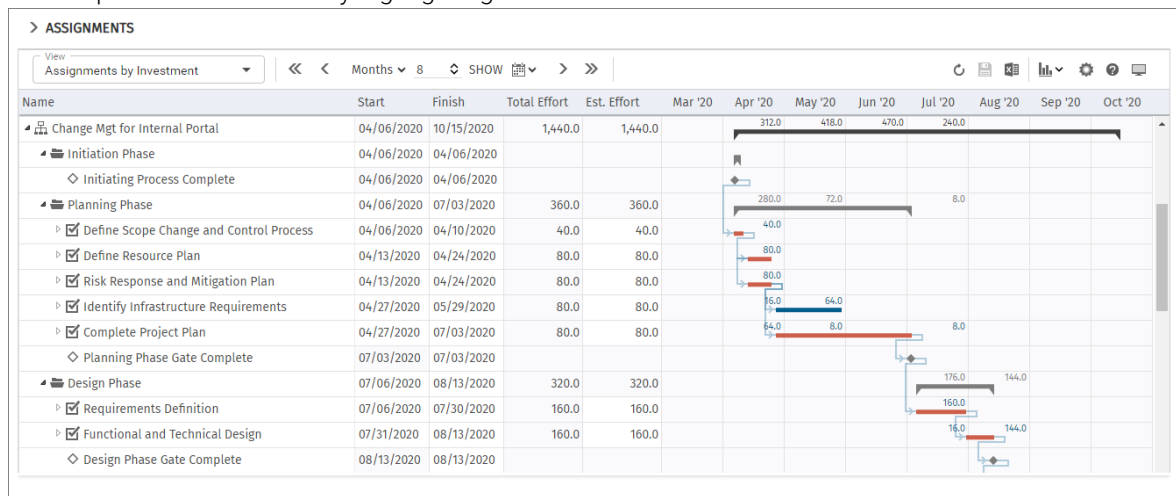
Shifting or extending an assignment beyond the **Start** or **Finish** of the associated task or non-project investment will also extend the task or investment, such that it includes the assignment. When a task is extended this way, the change will also be applied to the associated phase and project, if required to include the new task duration.

Reducing the durations of assignments won't reduce the duration of the associated task, phase or investment.

6.5.7 Displaying Critical Paths for Projects

In the **Visualization** tab of the **Preferences**, you can toggle display of critical paths for projects.

Critical paths are indicated by highlighting the associated tasks in red:



6.5.8 Displaying Agreements as Investment Dependencies

Select **Show Agreements** in the **Visualization** tab of the **Preferences** to display agreements as dependencies between investments.

When both investments connected via an agreement are visible in the Gantt chart, the dependency will be displayed as an arrow pointing from predecessor to successor.

Additionally, you can add the **Predecessors** and **Successors** columns to the upper list on the left via the **Columns** button in the upper toolbar. These columns always display connected investments, even when **Show Agreements** is disabled or no arrow is displayed because both investments aren't simultaneously visible in the Gantt chart.

6.5.9 Saving or Reverting Changes

New dependencies between tasks and milestones of projects will be directly created without confirmation.

Changes made to Gantt bars aren't saved directly.

 Your changes will only be applied when you save them via the toolbar. You can easily identify unsaved changes via the red triangle in a field.

 Refresh the view without saving to revert your changes.

 Projects will automatically be locked for editing by other users while unsaved changes exist. This is indicated by a padlock icon. Saving or reverting your changes will unlock the project. If your session is interrupted before a project is unlocked, you or any **ARP Admin** can unlock it via the context menu. Please note that this is only possible for projects that were locked due to changes made in itd Advanced Resource Planning or the itd Portfolio Optimizer.

6.6 Assignment Grid

Without Gantt bars for assignments, the timeline shows an editable grid of assignment values.

6.6.1 Timeline

The timeline is shared among the Gantt chart, assignment grid and utilization grid.

See "6.12.2 Timeline" on page 117 for details about timeline settings in the main toolbar.

6.6.2 Displayed and Editable Values per Period

In the **Grid** tab of the **Preferences**, you can select up to two values to display per period for assignments, see "Cell Configuration" on page 122.

- > **Left (read-only):** Empty (no field), ETC, Actuals, Capacity or any custom time-scaled value.
You can edit custom time-scaled **Money** values selected here, see "6.6.8 Editing Custom Time-Scaled Values" on page 104.
- > **Right (editable):** ETC or a custom time-scaled value.

The displayed utilization and capacity are always based on the **ETC** per period from assignments in this mode, see "6.10 Utilization and Capacity" on page 114.

The configured values are displayed when hovering over the assignment grid with the associated preferences setting, see "8.12.5 Show Grid Hints for by Investment Views" on page 164.

6.6.3 Displaying Trend Arrows

In the **Grid** tab of the **Preferences**, you can toggle and configure the display of trend arrows comparing the left and right cell values, see "Deviation Highlighting" on page 122.

For instance, this can help you to easily compare actuals with the originally planned values.

Wherever both values are different, a little arrow at the left cell edge visualizes a negative or positive deviation of the left cell value from the right cell value.

6.6.4 Editing Assignments

Without **Show Gantt Bars for Assignments** in the **Visualization** tab of the **Preferences**, you can edit the **ETC** per period that is displayed in the right half of each cell. Click on the right half of a cell to edit its value. The white background of a cell or its right half indicates that the value can be edited.

The left half of a cell displays **Actuals**, **Capacity** or any custom time-scaled value, see "Field to Display on the Left Part of the Cell" on page 122.

The configured values are displayed when hovering over the assignment grid with the associated preferences setting, see "8.12.5 Show Grid Hints for by Investment Views" on page 164.

The **Est. Effort** will automatically be updated with the sum of efforts per period you enter.

With **Calculate Sums** set to **On** or **Filtered**, see "Calculate Sums" on page 120, this will also update the associated task, phase (if any) and investment.

Entering workload outside the duration of an assignment will expand it accordingly. If required, parent objects will also be expanded, such that they include the assignment.

Alternatively, enter the total **Est. Effort** for a task or an assignment in the associated column, see "6.2.6 Editing List Fields" on page 85.

With **Update Allocation** in the **General** tab of the **Preferences**, the new assignment values will also be entered as allocation for the same periods.

6.6.5 Copying Grid Cells via Drag-and-Drop

Via drag-and-drop, you can copy the value of a grid cell to neighboring cells, either horizontally, on the timeline, or vertically, to other resources, roles and teams:

- > To do this, click in the cell you wish to copy, hold the mouse button and drag in the desired direction.
- > Release the mouse button when you're done to copy the selected assignment value to all grid cells you touched while dragging.
- > **Save** your changes via the toolbar or **Refresh** without saving to revert your changes.

6.6.6 Saving or Reverting Changes

Changes made to assignments aren't saved directly.

 Your changes will only be applied when you save them via the toolbar. You can easily identify unsaved changes via the red triangle in a field.

 Refresh the view without saving to revert your changes.

 Projects will automatically be locked for editing by other users while unsaved changes exist. This is indicated by a padlock icon. Saving or reverting your changes will unlock the project. If your session is interrupted before a project is unlocked, you or any **ARP Admin** can unlock it via the context menu. Please note that this is only possible for projects that were locked due to changes made in itd Advanced Resource Planning or the itd Portfolio Optimizer.

6.6.7 Display ETC Sums Outside of Visible Time Range

Via the **Columns** button in the **Assignments** toolbar, you can display **ETC** sums for assignments that are before or after the visible period. The **ETC before** and **ETC after** columns display the total hours before or after the visible period. Click on values in these columns to shift the visible period there.

6.6.8 Editing Custom Time-Scaled Values

In **Assignments by Investment** mode, you can select any custom time-scaled value as left or right value in the **Grid** tab of the **Preferences**, see "Cell Configuration" on page 122.

Without **Show Gantt Bars for Assignments** in the **Visualization** tab of the **Preferences**, you can edit the displayed assignment grid values.

You can edit custom time-scaled **Money** values even if they're displayed in the left half of a cell.

To do so, click on the left value to edit. This will replace the regular right value, and you can edit it in the right half of the cell. Confirming via the keyboard or clicking in another field will update the left value, and the regular right value will reappear.

If you have also selected the value as a column, that column will also be updated on all levels.

 Your changes will only be applied when you save them via the toolbar. You can easily identify unsaved changes via the red triangle in a field.

 Refresh the view without saving to revert your changes.

 Projects will automatically be locked for editing by other users while unsaved changes exist. This is indicated by a padlock icon. Saving or reverting your changes will unlock the project. If your session is interrupted before a project is unlocked, you or any **ARP Admin** can unlock it via the context menu. Please note that this is only possible for projects that were locked due to changes made in itd Advanced Resource Planning or the itd Portfolio Optimizer.

6.6.9 Integrating a Custom Time-Scaled Value

Displaying and editing custom time-scaled values in the field list and grid requires adding the field via the field configuration. All other steps are optional.

Administration

- > Add the field via the field configuration, see "8.11 Configuring List and Filter Fields" on page 158.
 - Optionally, disable the automatic conversion for the field by selecting **Ignore Conversion**.
 - Also optionally, select the desired resource types, e.g., **Material**, **Equipment** and **Expense**.
 - This step requires membership in the **ARP Admin** group.
- > Optionally, via the **itd AE Preferences** lookup, restrict editing the **ETC**, such that **ETC** can't be entered for resource types for which you wish to enter **Money** values only (e.g., **Material**, **Equipment** and **Expense**), see "8.12.21 Editable Resource Types" on page 170.
 - This step requires the global **Administration – Application Setup** right, which Clarity PPM application administrators have by default.

Configuration Options

- > Add the field as a sum column, see "6.2.5 Columns" on page 84.
- > Select it as a grid value, see "Cell Configuration" on page 122.

6.7 Resource List

Without a resource filter, the resource list shows all resources, roles and teams you have access to.

Resources and teams are listed first in common alphabetic order.

Roles are listed at the end, also in alphabetic order.

6.7.1 Resource Filter

Use the resource filter to control which resources, roles and teams are displayed in the list.

 Click on the **Filter** button in the **Resources** toolbar.

- Enter filter conditions and click on **Filter** to filter the view.
- Click on **Clear** to delete all entered filter conditions, then click on **Filter** to apply.
All data records you have access to will be displayed.
- Click on **Configure** to select filter fields for the resource filter.

See "6.9 Resource Filter" on page 110 for details about the resource filter.

6.7.2 Quick Filter by Investment

Via the context menu for an investment, you can also apply a quick filter to the list, such that it only displays team members of that investment. To do this, right-click on the investment in the assignment list to open the context menu, then select the **Show Investment Team** action.

 To undo this selection, click on the **Filter** button in the **Resources** toolbar. Then click on the **Filter** button in the filter dialog to reapply the selected filter settings.

6.7.3 Resource Columns

The following information is always displayed in the first resource list column, labeled **Name**:

- > **Icon (resource/role/team)**
- > **Name (resource/role/team)**
- > **Primary Role (resource), Parent Role (role):** A resource's primary role is displayed next to their name, if applicable. A role's parent role is displayed next to their name, if applicable. You can turn this off via a feature toggle, see "8.12.4 Hide Primary/Parent Role Name" on page 164.

 Click on the **Columns** button in the **Resources** toolbar and select **Resource Columns** to select additional resource list columns:

- > **Department (resource/team)**
- > **Department OBS, Location (resource/team)**
- > **Is External (resource/role/team)**
- > **Manager (resource/role/team)**
- > **Skills (resource/role/team)**

ARP Admins may add standard and custom resource, role and team fields to the selection and enable editing for them. See "8.11 Configuring List and Filter Fields" on page 158.

6.7.4 Opening Resource, Role or Team Properties

Click on the name of a resource, role or team in the list to open their properties in a new browser tab.

6.7.5 Selecting an Assignment's Resource, Role or Team

When you select an assignment in the assignment list, the assigned resource, role or team will be scrolled to and selected in the utilization view. Other than by clicking in resource list rows directly, this selection will not trigger the investment highlighting described in the following section.

6.7.6 Investment Highlighting

When you click in the row of a resource, role or team in the resource list:

- > ... all investments with associated team entries will be highlighted in the upper view section.
- > ... all other investments will be grayed out in the upper view section unless they're expanded.
- > ... clicking on another resource, role or team will highlight their investments instead.
- > ... clicking on a highlighted investment will preserve the highlighting.
- > ... clicking on another investment will remove the highlighting.

Please note: *This works only for one resource, role or team at a time. Multiple selections aren't supported. Only the resource, role or team you last clicked on will be regarded as selected.*

6.8 Staffing via Drag-and-Drop

You can create team entries and assignments as well as replace assigned resources, roles and teams in existing assignments by dragging resource list items on tasks, non-project investments or assignments in the upper view section.

All replacement operations are only available for assignments without existing **Actuals**.

See the following sections for details about the individual processes that are available in this way.

 Team entries and assignments will only be created when saving via the toolbar. You can easily identify unsaved assignments via the red triangle in a field.

 Refresh the view without saving to revert your changes.

 Projects will automatically be locked for editing by other users while unsaved changes exist. This is indicated by a padlock icon. Saving or reverting your changes will unlock the project. If your session is interrupted before a project is unlocked, you or any **ARP Admin** can unlock it via the context menu. Please note that this is only possible for projects that were locked due to changes made in itd Advanced Resource Planning or the itd Portfolio Optimizer.

6.8.1 Assigning a New Resource, Role or Team

Drag a resource, role or team from the resource list onto a task or non-project investment to create a new assignment.

For projects, the **Assignment Pool** setting is applied:

- > With the **Team only** setting, you can add only project members as resources, roles and teams.
- > With the **Resource Pool** setting, you can add any available resources, roles and teams.

6.8.2 Replacing an Assigned Resource, Role or Team

To replace the resource, role or team in an existing assignment, drag the replacement resource, role or team from the resource list onto that assignment.

For projects, the **Assignment Pool** setting is applied:

- > With the **Team only** setting, you can add only project members as resources, roles and teams.
- > With the **Resource Pool** setting, you can add any available resources, roles and teams.

You can deactivate the replacement of roles in assignments, see "8.12.26 Disable Role Replacement for Assignments" on page 172.

6.8.3 Quick Full Replacement of Assignments

To add the **ETC** value of an assignment to another existing assignment under the same task or non-project investment, drag the replacement assignment onto the assignment to replace.

The replaced assignment is then deleted and its **ETC** value is added to the assignment you have replaced it with.

6.8.4 Copying an Assignment for a New Resource, Role or Team

To duplicate an assignment in the same task or non-project investment for another resource, role or team, hold the [Ctrl] key while dragging the new resource, role or team onto the target assignment.

For projects, the **Assignment Pool** setting is applied:

- > With the **Team only** setting, you can add only project members as resources, roles and teams.
- > With the **Resource Pool** setting, you can add any available resources, roles and teams.

6.8.5 Copying an Assignment to Another Task or Investment

You can copy any assignment by dragging the resource, role or team representing it in the upper view section onto any other project task or non-project investment object.

This has the advantage that some information will be copied from the original assignment and associated team entry:

- > **Assignment:** Role, Loading Pattern
- > **Team Entry:** Requirement Name, Investment Role, Staff OBS Unit

Team entry fields will only be copied if a new team entry is created.

When you copy a resource assignment to an investment in which the selected resource already has a team entry, the existing team entry will be used.

When you copy a role assignment from one investment to another one in which the selected role already has a team entry, you will be asked whether to create a new team entry for the role or whether to use the existing team entry, see the following section. This is only possible for roles; resources may not have more than one team entry in any investment.

For projects, the **Assignment Pool** setting is applied:

- > With the **Team only** setting, you can add only project members as resources, roles and teams.
- > With the **Resource Pool** setting, you can add any available resources, roles and teams.

6.8.6 Creating Multiple Role Assignments

In **Assignments by Investment** mode, you can assign roles to tasks and non-project investments multiple times by creating an indexed copy of the role, e.g., "Architect" becomes "Architect (2)".

- > Drag the role from the resource list onto a task or non-project investment.
- > If the role already has an assignment in the task or investment, you will be prompted to create a new team entry for a copy of the role with a name of your choice, which will be the role's original name with an index by default.

You can deactivate this dialog, such that assigning a role multiple times to the same task or non-project investment will automatically create a new team entry for a copy of the role, see "8.12.25 Automatically Create New Team Entries for Roles" on page 171.

- > Team entries created this way will be retained even if all associated assignments are deleted.
- > Dragging a role onto an investment where it already has a team entry will prompt you to select an existing team entry for the new assignment or to create a new team entry for the role.
- > You may only select existing team entries if they don't have assignments for the target task or non-project investment yet.

6.9 Resource Filter

The following section describes the resource filter settings in **Assignments by Investment** mode.

6.9.1 Displayed Data

The following data will be loaded and displayed in the **Resources** view without a filter:

- > Any resources, roles and teams to which you have access.
- > Assignments from any associated team entries to which you have access.

6.9.2 Access Rights and Query Limits

The amount of data that will actually be loaded is limited by your access rights and by the query limits entered for itd Advanced Resource Planning by an administrator via the governors lookup:

- > **Access Rights:** data records to which you have no access in Clarity PPM will not be displayed in itd Advanced Resource Planning either, see "8.5 User Access Rights" on page 150.
- > **Query Limits:** limits for the number of resources/roles/teams, investments and assignments to load at the same time, entered by an administrator via the governors lookup, see "8.15.1 Query Limits" on page 178. If data records aren't displayed due to query limits, this will be indicated.

6.9.3 Filtering the Resources View

Use the resource filter to control which resources, roles and teams are displayed in the list.

-  Click on the **Filter** button in the **Resources** toolbar to open the resource filter.
 - Enter filter conditions and click on **Filter** to filter the view.
 - Click on **Clear** to delete all entered filter conditions, then click on **Filter** to apply. All data records you have access to will be displayed.
 - Click on **Configure** to select filter fields for the resource filter.

Please note that filters entered for the **Assignments** view have no effect on the **Resources** view. Likewise, filter conditions entered here have no effect on the main view.

6.9.4 Selecting Filter Fields

Click on the **Configure** button in the resource filter settings to select available filter fields for the left and right filter column. The selection and order of filter fields is stored per view.

- > You can add filter fields to either column as well as determine their order via drag-and-drop:
 - Drag filter fields from the **Available Filters** list to either column to add them.
 - Drag filter fields from either column to the **Available Filters** list to remove them.
 - Drag filter fields between columns or within a column to change their position.
- > Alternatively, you can use the buttons to the left of a column list in order to...
 - ... add fields selected in its left neighbor list (right arrow).
 - ... remove fields selected in the list and add these fields to its left neighbor list (left arrow).
 - ... change the field order by moving selected fields up or down in the list (up/down arrow).

By default, the filter fields listed here are available for selection:

- > 6.9.6 Default Filter Fields for Resources, Roles and Teams, page 112

ARP Admins may add other fields available for resources, roles and teams to the selection of filter fields, see "8.11 Configuring List and Filter Fields" on page 158.

This includes most Clarity PPM standard fields and most custom fields defined for these objects.

6.9.5 Clarity PPM Lookups

Some filter fields are backed by a Clarity PPM lookup.



This icon is available for fields that support entering a Clarity PPM user.

Click on this to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user when the filter is applied.



This icon is available for OBS unit filter fields.

Click on the arrow to switch between filtering by selected unit and children (arrow down), selected unit and parents (arrow up) or only the exact unit (arrow right).



Click on the magnifier icon to access the lookup browse window for a field and select values.



Click on the trashcan icon to empty a field. If you only want to delete some items, click on the field first, select the items to remove and then click on the trashcan icon.

All lookup filters are multi-valued and will display a second empty list box when selected. This is where selected values go. Multiple selected values will always be connected with a logical "or", i.e., all investments or resources, roles and teams matching any selected value will be displayed.

As with all lookups, a list of suggested values will be displayed when typing in the text box.

Select a suggestion by clicking on it or via the arrow keys and [RETURN].

6.9.6 Default Filter Fields for Resources, Roles and Teams

In **Assignments by Investment** mode, the following resource, role and team filter fields are available by default for the resource filter. If you enter any resource, role or team filters, only resources, roles and teams selected via filters are displayed in the resource list.

- > **Resource – Role/Resource:** Show only selected resources, roles and teams.



The lookup browse window lets you filter the selection of available resources, roles and teams by last name, first name and resource ID.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Is Role:** Show only roles or only resources and teams.

- With the default setting **All**, this filter doesn't apply.
- Select **Yes** to show only roles.
- Select **No** to show only resources and teams.

- > **Resource – Is Team:** Show only teams or only resources and roles.

- With the default setting **All**, this filter doesn't apply.
- Select **Yes** to show only teams.
- Select **No** to show only resources and roles.

- > **Resource – Resource Name:** Enter a search term occurring in the resource, role or team name.

Use the asterisk ("*") to replace with any number of characters (e.g., "*son" will find "Harrison" and "Jackson"). Search terms will be treated as if ending with "*" (e.g., "Jack" will also find "Jackson").

- > **Resource – Resource Manager:** Show only resources and teams of selected resource managers. Roles have no resource manager and will therefore not be displayed with this filter.



Click on this icon to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user when the filter is applied.



The lookup browse window lets you filter the selection of available resource managers by last name, first name, full name, resource ID and employment type.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Booking Manager:** Show only resources and roles of selected booking managers.

Teams have no booking manager and will therefore not be displayed with this filter.



Click on this icon to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user when the filter is applied.



The lookup browse window lets you filter the selection of available booking managers by last name, first name and resource ID.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Resource OBS Unit:** Show only resources, roles and teams with selected OBS units.



Click on the arrow to switch between filtering by selected unit and children (arrow down), selected unit and parents (arrow up) or only the exact unit (arrow right).



The lookup browse window lets you select the desired OBS top level, sub levels and units.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Resource Type:** Show only resources, roles and teams of selected resource types (Equipment, Expense, Labor or Material).



The lookup browse window lets you select the desired resource types.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Primary Role:** Select roles to show only the following resources and roles.
 - **Resource Primary Role:** All resources with any of the selected roles as their primary roles.
 - **Role:** All selected roles.
 - **Role Parent Role:** All roles having any of the selected roles as their parent roles.

Teams have no primary role and will therefore not be displayed with this filter.

 Click on this icon to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user's primary role when the filter is applied.

 The lookup browse window lets you filter the selection of available roles by role name.

 Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Skills:** Filter resources, roles and teams by skills.
This uses the new Modern UX skills by default, but also supports the legacy skills hierarchy. Refer to section "8.12.1 Use Old Skills Hierarchy" on page 163 for information about how administrators can activate the legacy mode.
By default, all resources, roles and teams with at least one selected skill will be displayed. Alternatively, you can set the filter to require all skills to match via the **Skill Matching** field.
- > **Resource – Skill Matching:** Skill filter mode, **Match at least one skill** or **Match all skills**.
Without this filter field, the **Match at least one skill** mode will be used, such that resources, roles and teams with any selected skill will be displayed.
- > **Resource – Is External:** Filter resources, roles and teams by the **External** resource property (selected via **Properties – General – Resource Management – External**).
 - The default setting **All** shows any resources, roles and teams selected via other filters.
 - Select **Yes** to show only external resources. With this setting, roles and teams aren't displayed.
 - Select **No** to show only internal resources, roles and teams.
- > **Team – Show Investment Team Only (single investment mode only):** Show only resources, roles and teams with team entries in the current investment.

6.10 Utilization and Capacity

The utilization grid optionally shows the global utilization and capacity of listed resources, roles and teams per period currently selected on the timeline.

These values consider all assignments in the displayed period, regardless of your assignment filter.

The utilization and remaining capacity displayed for resources, roles and teams are based on the total remaining estimated effort from all of these assignments.

6.10.1 Timeline

The timeline is shared among the Gantt chart, assignment grid and utilization grid.

See "6.12.2 Timeline" on page 117 for details about timeline settings in the main toolbar.

6.10.2 Visualization: Histogram or Color-Coded Grid

There are two display modes for the utilization, histogram or color-coded grid. You can edit coloring thresholds for both in the **Utilization** tab of the **Preferences**, see "6.13.4 Utilization" on page 122.

- > **Show Histogram** in the **Visualization** tab of the **Preferences** displays the global utilization and capacity of resources, roles and teams per period as a histogram chart. This shows the utilization from assignments as a colored stack matched against a dotted capacity line. Colors indicate optimal utilization or overload.

- The dotted horizontal line displays the resource, role or team capacity.
- Workload below the utilization warning threshold is colored green.
- Further workload is colored yellow if it is between the utilization warning and high utilization thresholds or red if it is above the high utilization threshold.
- The low utilization threshold has no effect here.

Please note that in single investment mode, the histogram can also be set up to compare the **Total Effort** and the **Allocation** or **Hard Allocation**. For details about using this feature, see section "6.10.8 Comparing Assignments with Allocations" on page 115.

- > Without the histogram, **Show Utilization** in the **Visualization** tab of the **Preferences** displays the global utilization and remaining capacity of listed resources, roles and teams per period in a grid. Cell colors indicate a low (white), optimal (green), high (yellow) or very high (red) utilization of a resource, role or team in a period, based on their total capacity and the total remaining estimated effort from assignments in that period.

6.10.3 Displaying Utilization Values

Hover over a grid cell or histogram segment to display the associated values.

6.10.4 Displaying the Utilization Popup

Click on a grid cell or histogram segment to display the utilization popup, which lists associated investments and assignments.

Click on a column header to sort this list.

6.10.5 Utilization Popup Columns

The following information is always displayed in the utilization popup:

- > **Type Icon and Name (investment):** First column
- > **Segment Utilization (assignments):** Last column

Click on the **Columns** button in the **Resources** toolbar and select **Utilization Popup Columns** to select additional utilization popup columns:

- > **Start, Finish (team entry)**
- > **Staff OBS Unit (team entry)**
- > **Default Allocation (team entry)**
- > **Effective Role (team entry)**
- > **Skills (role team entry):** Only with additional configuration, see page 163.

ARP Admins may add standard and custom team entry fields to the selection and enable editing for them. See "8.11 Configuring List and Filter Fields" on page 158.

6.10.6 Displaying Actuals

Optionally, the workload and remaining capacity for the current period include **Actuals** already entered for that period, see "8.13.6 Consider Actuals for Remaining Capacity" on page 175.

When displayed in the grid view, actuals aren't included in the utilization but deducted from the remaining capacity. When displayed in the histogram, they are included in the utilization.

6.10.7 Role Capacities

The total capacity of a role is the total capacity of all resources with that primary role.

The free capacity of a role is its total capacity less the **ETC** from all assignments of these resources.

The remaining capacity of a role is its free capacity less the **ETC** from its own assignments.

6.10.8 Comparing Assignments with Allocations

In **Assignments by Investment** views in single investment mode, you can graphically compare associated assignments and allocations in the histogram.

There are two modes for comparing the total estimated effort (**Actuals + ETC**) of assignments to either the **Allocation** or the **Hard Allocation** of associated team entries.

Please note: As opposed to the default mode of the histogram, which shows the global utilization of all displayed resources, roles and teams, when comparing assignments with the **Allocation** or **Hard Allocation**, only values entered for the current investment will be displayed.

- > Select the value to compare in the **Utilization** tab of the **Preferences**, see "Histogram Comparison" on page 122.
- > Hover over the histogram to display units and figures.
- > Use the **Team – Team only** filter to hide resources, roles and teams that have no team entries in the current investment
- > Use the context menu for the investment or for any assignment to **Allocate from Estimates**. This will enter the total estimated effort entered for all associated assignments as allocation:
 - For each team entry of the investment, or
 - for the team entry of the selected assignment only.

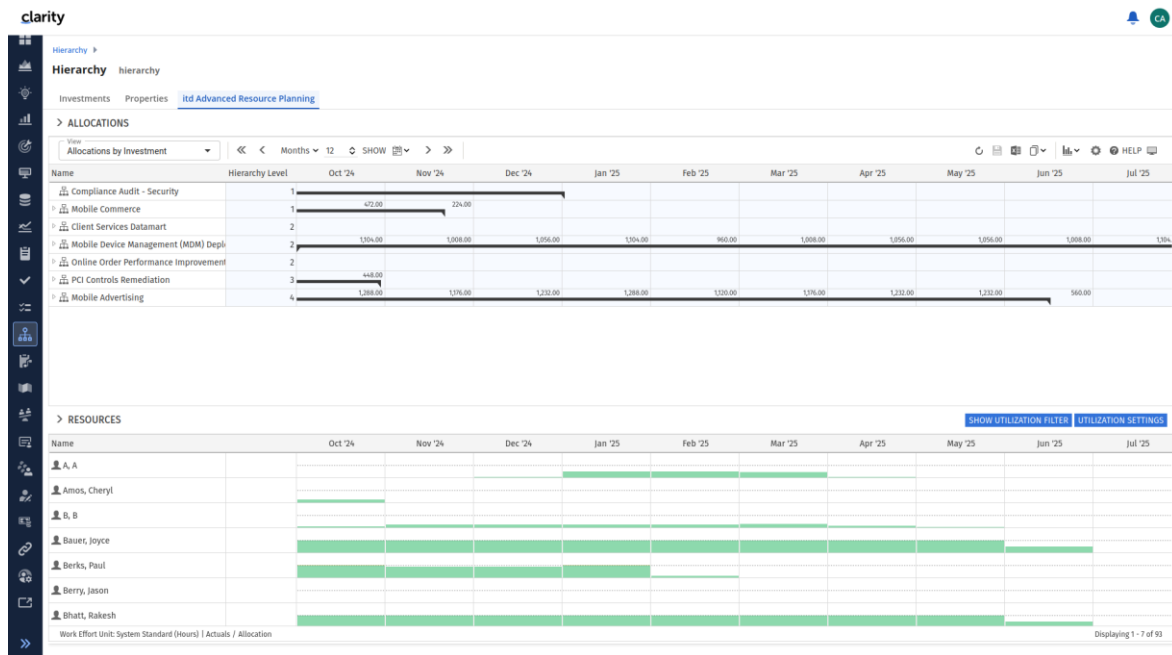
This action will be instantly applied without further confirmation.

6.11 Hierarchy Mode

You can integrate itd Advanced Resource Planning in the **Hierarchies** module for hierarchies of the **Investment** type.

Please note that the hierarchy mode feature is only available after adding an itd Advanced Resource Planning channel to the hierarchy blueprint, see "8.7 Planning Modes" on page 154.

With the hierarchy mode, hierarchies offer an itd Advanced Resource Planning tab.



In this mode, the view is automatically filtered to show only investments included in the hierarchy.

The selection for the **Investments** filter field is also reduced to include only these investments.

You can display and sort by the **Hierarchy Level** field, which displays an investment's hierarchy level.

Please note: This mode is currently in the beta phase and is included as a preview. Further features are planned. We look forward to receiving feedback on this mode.

6.12 Main Toolbar

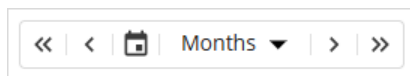
In **Assignments by Investment** mode, you have access to the following features in the main toolbar.

6.12.1 View



The **View** menu displays the active view and allows switching views, saving the current view under a new name and editing your favorites and view sharing settings under **Manage**. The **Save View** button lets you save changes to the current view if you have rights for it. Otherwise, you can still save a copy of the current view. For details, see chapter "3 Views" on page 13.

6.12.2 Timeline



Use the **Timeline** menu to change the display period, or the **Slice Period**. The **Slice Period** is saved with the view and is synchronized with the **Timeslices** tab of the **Preferences**, where you can also edit the **Slice Count**, see "6.13.2 Timeslices" on page 120. The start date isn't saved with the view. The application starts with the current date and retains the selected start date when changing views.

⏪ **Previous Periods:** Here you switch back by the selected display period (e.g., 6 months).

⏴ **Previous Period:** Here you switch back by the selected slice period (e.g., 1 month).

📅 **Select Start Date:** Here you select the view's start date in a calendar view.

▼ **Slice Period:** e.g., **Months**. The selection may be limited by **ARP Admins** via **Administration** in the main toolbar, see "8.9 Global Settings in the Application" on page 155.

➤ **Next Period:** Here you switch ahead by the selected slice period (e.g., 1 month).

⏩ **Next Periods:** Here you switch ahead by the selected display period (e.g., 6 months).

6.12.3 Preferences

⚙️ **Preferences:** Here you configure general view settings, sum calculation and timeslice settings, visualization settings, utilization settings, grid value and visual value comparison settings, see "6.13 Preferences" on page 119. Preferences will be saved separately for each view.

6.12.4 Export to Excel

You can export all rows and columns of the **Assignments** view to Microsoft Excel.

📄 **Export to Excel:** Here you export the **Assignments** view to Microsoft Excel.

The data will be exported as displayed, with the same filter settings and with all rows and columns that are currently displayed. For list items with sub-elements, these sub-elements will only be exported if their parent item has been expanded, such that they are currently visible.

The Excel export is limited to a maximum of 15,000 rows.

6.12.5 Fullscreen

⏏️ **Fullscreen:** Turn fullscreen mode on or off. In fullscreen mode, the Clarity PPM navigation will be hidden, such that more items can be displayed in itd Advanced Resource Planning.

6.12.6 Refresh and Save

Use the **Refresh** and **Save** buttons to discard or save your changes.

 **Refresh:** This will reload all data. If there are unsaved changes, you will be asked if you want to save first. Answering no will discard your changes.

 **Save:** This will save all unsaved changes you have made in the current view.

6.12.7 Help

 **Help:** Here you can find information about itd Advanced Resource Planning and about asking for support. If you do, please always specify your version, which you can find under **About**.

Select **License** for license information and to obtain and enter licenses.

6.12.8 Administration

 **Administration:** **ARP Admins** may access administration settings here. All of these settings are global for all views. Some settings affect only specific view modes. This is indicated where it applies. See section "8.9 Global Settings in the Application" on page 155 for details.

6.13 Preferences

 Click on the **Preferences** button in the toolbar to edit view options.

6.13.1 General

Settings in the **General** tab control the display and behavior of the current view.

> Generic

- **Decimal Places:** Controls the number of decimal places for all numbers in the current view.
- **Load Data on Startup:** Load data directly when opening itd Advanced Resource Planning. Otherwise, data will only be loaded after clicking on the **Filter** button.

> View Specific

- **Update Allocation:** When assignment **ETC** values are entered for a task, automatically enter the same amounts of **Allocation** in the associated team entry.
- **Use Clarity's Calculated Investment Sums:** when **Calculate Sums** is set to **On** or **Filtered** in the **Timeslices** tab, select this to show the investment sums calculated by Clarity, as displayed in investment lists, instead of letting itd Advanced Resource Planning calculate these sums.
- **Move Successors on Dependency Creation:** Automatically satisfy new dependencies when initially violated by moving the selected successor and any of its own successors ahead. This doesn't apply to existing dependencies of the selected successors that are already violated. Also, if the selected successor or any of its successors has actuals or the **Exclude from Autoscheduling** property, that task or milestone and its successors won't be moved.
- **Auto-Fill Assignments:** Preassign assignment hours during the task duration when adding a resource, role or team to a task. The **ETC** per period is defined by the associated team entry's **Allocation** values in the respective periods.
When adding a new resource, role or team to an investment, a new team entry will be created and the resource, role or team will be assigned with an **ETC** value of 1 **FTE** per period.

> Accessibility

- **Use Colors with Higher Contrast:** Select this for improved readability.
This setting is saved in the web browser instead of the view and is therefore global per user when accessing the application with the same web browser on the same machine.

6.13.2 Timeslices

Settings in the **Timeslices** tab control the calculation of sums, timeline scale, display period and work effort unit.

- > **Calculate Sums:** Calculate and show totals of the **Actuals**, **Est. Effort** and **Total Effort** fields per investment, phase and task. Assignment totals are always displayed.
Additionally, totals will be calculated and displayed for integrated custom time-scaled values, see "6.6.9 Integrating a Custom Time-Scaled Value" on page 105.

- **On:** Calculate and show global sums. Slows down loading the view.
- **Filtered:** Apply assignment filter to global sums. Slower loading than with **On**.
- **Off:** Don't show any sums. Faster loading than with **On** or **Filtered**.

This applies to sum columns in the assignment list and to the time-scaled assignment grid.

For sum columns, also see "Time-Scaled Value Total Column Calculation" on the following page.

For investment sum columns, you can disable the calculation and use Clarity's calculated sums instead, see "Use Clarity's Calculated Investment Sums" under "6.13.1 General" above.

- > **Time-Scaled Value Total Column Calculation:** Defines the behavior of the **Actuals**, **Est. Effort** and **Total Effort** columns in the assignment list. This also applies to integrated custom time-scaled values, see "6.6.9 Integrating a Custom Time-Scaled Value" on page 105.

- **Grand Total:** Show the total for the full investment, phase, task or assignment duration.
- **Sum of Periods:** Sum up the figures only for the currently displayed periods.

- > **Slice Period:** enter the planning period here. Possible settings are **Hours**, **Days**, **Weeks**, **Months**, **Quarters**, **Calendar Years** and, if configured, **Fiscal Period**.

The selection may be limited by **ARP Admins** via **Administration** in the main toolbar, see "8.9 Global Settings in the Application" on page 155. Only enabled options are available.

- Planning by **Hours** is only supported in **Assignments by Investment** mode, requires a separate module to be installed and needs to be activated by an **ARP Admin**, see "8.9 Global Settings in the Application" on page 155.

This mode lets you select the individual half-hours during which a resource is assigned to a task in the assignment grid.

With **Hours** as **Slice Period**, you select an **Hourly Period** instead of a **Slice Count**, see below.

The **Work Effort Unit** in this mode is also not selectable, as it is always half-hours.

- > **Hourly Period:** with the **Slice Period** set to **Hours**, select a **12h** (07:00 to 19:00) or **24h** schedule.
- > **Slice Count:** for all **Slice Period** settings except **Hours**, enter the number of slices to be displayed.
- > **Work Effort Unit:** for all **Slice Period** settings except **Hours**, specify the effort unit here. By default, the **System Standard** is used. You may also select **Hours**, **Days** or **FTE** (full time equivalents).
The selection may be limited by **ARP Admins** via **Administration** in the main toolbar, see "8.9 Global Settings in the Application" on page 155. Disabled options aren't available.
- > **Fiscal Entity** and **Fiscal Period:** with the **Slice Period** set to **Fiscal Period**, if multiple fiscal entities or periods exist in your Clarity PPM system, select the desired fiscal entity and period here.

6.13.3 Visualization

Settings in the **Visualization** tab control the visualization in the **Assignments** and **Resources** views.

> Tree View

- **Show Investment Hierarchy:** Display or hide parent and sub-investments of investments explicitly selected via your assignment filter, see "6.4.7 Selecting Investment Hierarchies" on page 95. Hiding investment hierarchies may speed up loading the view.
- **Show Phases:** Display or hide phases between investments and associated tasks. When phases aren't displayed, associated tasks appear directly under their respective investments.
- **Show Milestones:** Display or hide milestones.
- **Show Assignments:** Display or hide assignments. Without this, the view loads faster and only shows investments, phases, tasks and milestones. See "6.1.2 Assignments View" on page 82.
- **Show Assignments of Inactive Resources:** Display or hide assignments of inactive resources.

> Gantt Bars: See "6.5 Gantt Chart" on page 100.

- **Show Gantt Bars for Investments:** Display or hide investment Gantt bars.
- **Show Gantt Bars for Tasks and Phases:** Display or hide Gantt bars for tasks and phases, Gantt diamonds for milestones and arrows for dependencies between tasks and milestones.
- **Show Gantt Bars for Assignments:** Display or hide assignment Gantt bars. Without assignment Gantt bars, the editable assignment grid is displayed for assignments.
- **Show Critical Path:** Display or hide critical paths for projects in the Gantt chart. See section "6.5.7 Displaying Critical Paths for Projects" on page 102 for details.
- **Show Agreements:** Display or hide agreements as dependencies between investments.

> Utilization

- **Show Histogram:** This switches between the two modes for displaying resource, role and team utilization and capacity, see "6.10 Utilization and Capacity" on page 114.
- **Show Utilization:** Without the histogram, this controls whether the **Resources** view displays the utilization, total and/or remaining capacity of resources, roles and teams per period. Turning off both **Show Histogram** and **Show Utilization** will completely disable the calculation and display of utilization and capacities in the **Resources** view, speeding up loading the view.

6.13.4 Utilization

Settings in the **Utilization** tab control the display of the utilization.

In **Assignments by Investment** mode, the utilization is based on **ETC** values from assignments.

In single investment mode, you also select display values for the histogram here.

- > The **Utilization Rate** controls the visualization of low or high utilization.
 - **Low Utilization at and Below:** Upper boundary below which resources, roles and teams will be marked as underutilized with a white background in the respective period.
Utilization between the thresholds for low utilization and utilization warning (e.g., between 80% and 100%) will be marked as optimal with a green background.
This threshold value has no effect in the histogram.
 - **Utilization Warning Above:** Lower boundary above which resources, roles and teams will be marked as slightly over-utilized with a yellow background in the respective period. This applies as long as the utilization stays at or below the lower boundary for high utilization.
In the histogram, workload is colored green up to this threshold value.
 - **High Utilization Above:** Lower boundary above which resources, roles and teams will be marked as highly over-utilized with a red background in the respective period.
In the histogram, workload is colored yellow up to this threshold value and red above.
- > In **Single Investment Mode**, you can set the histogram to show the current investment's **Total Effort** vs. **Allocation** or **Hard Allocation** instead of the global utilization and capacity. For details about this feature, see section "6.10.8 Comparing Assignments with Allocations" on page 115.

Histogram Comparison

- **ETC vs. Capacity:** Column is global **ETC** from all assignments, horizontal line is **Capacity**.
- **Effort vs. Allocation (for This Investment):** Column is **Total Effort = Actuals + ETC** for the current investment, horizontal line is total **Allocation** for the current investment.
- **Effort vs. Hard Allocation (for This Investment):** Column is **Total Effort = Actuals + ETC** for the current investment, horizontal line is total **Hard Allocation** for the current investment.

6.13.5 Grid

Settings in the **Grid** tab control the values that are displayed and can be edited in the assignment grid as well as the visual comparison of the left and right value via trend arrows.

- > **Cell Configuration:** Here you select the values displayed in the assignment grid.
 - **Field to Display on the Left Part of the Cell:** Empty (no field), ETC, Actuals, Capacity or any custom time-scaled value. You can edit custom time-scaled **Money** values selected here, see "6.6.8 Editing Custom Time-Scaled Values" on page 104.
 - **Field to Display on the Right Part of the Cell (Editable):** ETC or any custom time-scaled value, see "6.6.8 Editing Custom Time-Scaled Values" on page 104.
- > **Deviation Highlighting**
 - **Highlight Deviation (only when Gantt Bars are disabled):** Display trend arrows for deviations of the left cell value from the right one, see "6.6.3 Displaying Trend Arrows" on page 103.
 - **Tolerance of Deviation:** Threshold value for displaying trend arrows to indicate a deviation of the left cell value from the right one.
 - **Consider Zero Values in Deviation:** Display an arrow even if one of the two values is zero.

7 Assignments by Resource

The **Assignments by Resource** mode groups investments and associated task assignments by the assigned resources, roles and teams.

Their utilization and capacity are displayed directly in the assignment grid on the right.

Name	Start	Finish	Total Effort	Est. Effort	Feb '26	Mar '26	Apr '26	May '26	Jun '26	Jul '26
AI Consultant Consultant	08/03/2026	12/31/2027	160.0	160.0	0.0 / 389.6	0.0 / 352.0	0.0 / 352.0	0.0 / 336.0	0.0 / 352.0	0.0 / 368.0
Amos, Cheryl Developer	05/08/2025	05/31/2027	3,398.0	3,330.0	170.0 / 0.0	217.0 / -30.0	187.0 / 0.0	178.5 / 0.0	187.0 / 0.0	195.5 / 0.0
Architect	03/01/2025	05/31/2027	26,315.2	26,315.2	1,072.7 / 279.3	1,177.6 / 309.6	1,228.5 / 250.7	1,225.3 / 194.3	1,189.4 / 297.8	1,381.6 / 173.2
4G Upgrade Readiness 2	09/16/2025	02/24/2027	13,991.8	13,991.8	1,147.5	1,173.4	864.6	574.4	1,431.5	1,160.8
BEA Weblogic 10.0 Application Server	04/01/2025	03/31/2027	4,176.0	4,176.0	160.0	176.0	176.0	168.0	176.0	184.0
BEA Weblogic 10.0 Application Server	04/01/2025	03/31/2027	4,176.0	4,176.0	160.0	176.0	176.0	168.0	176.0	184.0
Headquarters	06/01/2025	05/31/2027	8,336.0	8,336.0	320.0	352.0	352.0	336.0	352.0	368.0
Headquarters	06/01/2025	05/31/2027	4,168.0	4,168.0	160.0	176.0	176.0	168.0	176.0	184.0
LATAM Research and Development Center	03/01/2025	02/28/2027	12,480.0	12,480.0	480.0	528.0	528.0	504.0	528.0	552.0
LATAM Research and Development Center	03/01/2025	02/28/2027	4,160.0	4,160.0	160.0	176.0	176.0	168.0	176.0	184.0

Work Effort Unit: System Standard (Hours) | Actuals / ETC

7.1 View Sections

In **Assignments by Resource** mode, the following view sections are displayed.

7.1.1 Main Toolbar

Use the main toolbar at the top to switch to another **View** or save the current one, shift and scale the timeline, access **Preferences** for the current view, **Export to Excel**, toggle **Fullscreen**, refresh the view, revert or save changes, and open the **Help** screen.

ARP Admins also have access to global application **Administration** settings here.

7.1.2 Assignments View

The **Assignments** view shows:

- > Resources, roles and teams you have access to.
- > Investments (custom types included) with team entries of displayed resources, roles and teams.
- > Optionally parent investment hierarchies and phases. Displaying these can be turned on and off separately for each in the **Visualization** tab of the **Preferences**.
- > Associated assignments with fields of associated tasks and team entries.

The **Assignments** view is split into two sections:

- > The list on the left shows a tree view of resources, roles, teams, investments, phases and tasks in the **Name** column and other columns for fields of all displayed items. Expand an item to see its sub-structure.
- > The timeline on the right is a combined utilization view, Gantt chart and assignment grid.
 - With **Show Utilization** selected in the **Visualization** tab of the **Preferences**, resource, role and team rows show a color-coded grid view of their utilization and capacity.
 - Assignments are represented by Gantt bars or an assignment grid you can type into.
 - Turn off Gantt bars for assignments in the **Visualization** tab of the **Preferences** to access the assignment grid. You can then type the desired **ETC** values per period directly in the grid.

Use the **Assignments** toolbar to filter the view, select columns for the list on the left as well as sorting fields for resources, roles, teams, investments and tasks.

7.2 Assignment List

Without an assignment filter, the assignment list shows any resources, roles and teams you have access to, associated investments with team entries of these resources, roles and teams, and associated task assignments where they exist. Displaying parent investment hierarchies and phases is optional, see "7.1.2 Assignments View" on page 123.

7.2.1 Expanding List Items

Click on the little arrow to the left of a list item's icon to expand it and display its sub-items.

Click on the arrow again to hide the associated items.

7.2.2 Displaying Investment Descriptions

Hover over an investment to display its description. Clarity PPM administrators may deactivate this via the **itd AE Preferences** lookup, see "8.12.23 Hide Description Tooltips" on page 171.

7.2.3 Assignments, Tasks and Team Entries

Tasks in the **Name** column represent associated assignments. Other columns in the same row show assignment fields where available, such as **Start**, **Finish**, **Duration** and effort fields.

Fields that aren't available for assignments, but exist for tasks, such as the **ID**, come from the task.

In addition to assignment and task fields, you can display the **Staff OBS Unit** and **Requirement Name** fields of the respective associated team entry in an assignment row.

Displaying other standard or custom team entry fields isn't supported in this mode.

See section "7.2.5 Columns" below for details about where which field comes from.

Assignments to non-project investments are shown as tasks with the same name as the investment.

If a role has multiple assignments to the same task or non-project investment, a separate row with the same task name shows up for each of these assignments under that role.

7.2.4 Assignment Filter

Use the assignment filter to select resources, roles, teams, investments, tasks and assignments.



Click on the **Filter** button in the **Assignments** toolbar.

- Enter filter conditions and click on **Filter** to filter the view.
- Click on **Clear** to delete all entered filter conditions, then click on **Filter** to apply. All data records you have access to will be displayed.
- Click on **Configure** to select filter fields for the assignment filter.

See "7.3 Assignment Filter" on page 129 for details.

7.2.5 Columns

The following fields are always displayed in the first list column, labeled **Name**:

- > **Name (resource/role/team, investment, phase, task of an assignment)**
- > **Primary Role (resource), Parent Role (role)**: A resource's primary role is displayed next to their name, if applicable. A role's parent role is displayed next to their name, if applicable. You can turn this off via a feature toggle, see "8.12.4 Hide Primary/Parent Role Name" on page 164.



Click on the **Columns** button in the **Assignments** toolbar to select additional list columns:

- > **Start, Finish (resource/role/team, investment, phase, assignment)**: For resources, roles and teams, start of first to end of last displayed associated assignment. Editable for assignments.
- > **Duration (phase)**: Duration in base calendar work days.

- > **Actuals, Est. Effort, Total Effort (investment, phase, assignment):** Worked, remaining and total hours per resource, role or team, investment, phase and assignment. The **Total Effort** is the sum of **Est. Effort** and **Actuals**.

You can also add total columns for custom time-scaled values, see "7.6.9 Integrating a Custom Time-Scaled Value" on page 140.

Configurable via **Calculate Sums** and **Time-Scaled Value Total Column Calculation** in the **Timeslices** tab of the **Preferences**, see page 144.

Aggregated sums include only assignments of labor roles and resources as well as teams.

Material, equipment and expense roles and resources aren't included.

You can edit the **Est. Effort** and total columns for time-scaled **Money** values per assignment, see "7.2.6 Editing List Fields" below.

- > **ID (resource/role/team, investment, phase, task):** Editable for phases.
- > **Skills (resource/role/team):** Editable.
- > **Department OBS, Location (resource/team)**
- > **Effective Role (resource):** Primary role.
- > **Effective Role (role):** Parent role.
- > **Effective Role (assignment):** Resource, role or team assignment role.
- > **Investment Status (investment)**
- > **Investment Type (investment)**
- > **Loading Pattern (assignment):** Editable.
- > **Staff OBS Unit (team entry of an assignment):** Editable.
- > **Requirement Name (team entry of a resource assignment):** Resource name.
- > **Requirement Name (team entry of a role assignment):** Requested role name.
- > **Display ETC Sums outside of Visible Time Range:** See page 139.

ARP Admins may add standard and custom fields available for any list object to the selection and enable editing for them. See "8.11 Configuring List and Filter Fields" on page 158.

7.2.6 Editing List Fields

In **Assignments by Resource** mode, you can edit the following list fields by default.

ARP Admins may enable editing for additional fields, see "Additional Fields" below.

- > **Start and Finish of Assignments:** You can edit the **Start** and **Finish** of assignments while the status is **Not started** and no actuals exist for them. The status check can be turned off, see "8.12.22 Edit Task and Assignment Start and Finish Regardless of Status" on page 171.
Any change will redistribute the **ETC** over the working hours during the assignment's new remaining duration, between **Actuals Thru** and **Finish**, in the same proportions as before the change. You can then no longer edit the **ETC** per period until you save or revert the change.
With **Update Allocation** in the **General** tab of the **Preferences**, the updated assignment values will also be entered as allocation for the same periods.
Shifting or extending an assignment beyond the **Start** or **Finish** of the associated task or non-project investment also extends the task or investment to include the assignment. Extending a task this way also extends the associated phase and project, if required to include the new task. Shortening assignments doesn't shorten associated tasks, phases or investments.
- > **Estimated Effort of Assignments:** The new value is distributed evenly over the assignment's new remaining duration (between **Actuals Thru** and **Finish**), overwriting any previous planning. The associated effort per period can then no longer be edited until changes are saved or rejected.

With **Update Allocation** in the **General** tab of the **Preferences**, the new assignment values will also be entered as allocation for the same periods.

- > **Custom Time-Scaled Money Values of Assignments:** You can edit any custom time-scaled **Money** value displayed as a visible assignment column in the same fashion as for editing the **Estimated Effort**. Click into the field in the associated row and enter the desired value.
When you do, this will automatically distribute the new value over the working hours during the assignment, overwriting the previous planning, considering the **Loading Pattern**.
- > **Phase IDs:** When **Auto-numbering** is disabled for the **ID** field of tasks, you can edit phase IDs. You cannot edit resource, role, team, investment or task IDs displayed in this view.
- > **Skills of Resources, Roles and Teams:** Click in the field to edit.
 - Type to open a list of suggestions and select the desired value.
 -  Select the desired value or values from a filterable list in the lookup browse window.
 -  Click here to remove selected values.
- > **Loading Pattern of Project Task Assignments:** You can edit the **Loading Pattern** of project task assignments. Click in the field to select a value.
- > **Staff OBS Unit of Team Entries:** Click in the field to edit.
 -  Click on the arrow to switch between filtering by selected unit and children (arrow down), selected unit and parents (arrow up) or only the exact unit (arrow right).
 -  The lookup browse window lets you select the desired OBS top level, sub levels and units.
 -  Click here to empty the field.
- > **Editing Additional Fields:** You can also edit any additional list fields that have been made editable by **ARP Admins**, see "8.11 Configuring List and Filter Fields" on page 158.
To edit lookup fields, click in the field first. This gives you the following editing options.
 - Type to open a list of suggestions and select the desired value.
 -  Select the desired value or values from a filterable list in the lookup browse window.
 -  Remove selected values or empty the field if it supports entering one value only.
- > **Copying List Fields:** You can copy editable field values up or down via drag-and-drop. This feature supports lookup fields and respects restrictions on column values.
Copying field values this way requires the start and target row to be of the same type, i.e., resource/role/team, investment, phase or assignment.
For investments, the investment type must also be the same, e.g., project or idea. All custom investment types are considered to be the same type for this feature.
-  Changes will only be applied when you save them via the toolbar. You can easily identify unsaved changes via the red triangle in a field.
-  Refresh the view without saving to revert your changes.
-  Projects will automatically be locked for editing by other users while unsaved changes exist. This is indicated by a padlock icon. Saving or reverting your changes will unlock the project. If your session is interrupted before a project is unlocked, you or any **ARP Admin** can unlock it via the context menu. Please note that this is only possible for projects that were locked due to changes made in itd Advanced Resource Planning or the itd Portfolio Optimizer.

7.2.7 Sort

Use the **Sort** dialog to select sorting fields for resources, roles, teams, investments and tasks.

☰ Click on the **Sort** button in the **Assignments** toolbar and select:

- > **Sort Resources By: Name (Default) or Primary Role.**
- > **Sort Investments By: Name (Default) or Investment Type.**
- > **Sort Tasks By: WBS Sort (Default), Finish Date, Name or Start Date.**

In addition to the fields listed here, any custom fields without lookups are available.

The button next to the sort field selection determines the sort order, ascending or descending.

If you don't select the default field, items will be sorted by it on the second level in ascending order.

7.2.8 Resource, Role and Team Actions

Right-click on a resource, role or team in the **Name** column to open the context menu.

ARP Admins can reorder, restrict or remove the standard actions listed here and add custom actions, see "8.10 Defining Actions" on page 156.

- > **Open Properties:** Open the selected resource, role or team's detail view in a new browser tab.
- > **Add Assignment:** Open a selection of available project tasks. Select any number of tasks and click on **Add** to confirm. Assignments for the selected tasks will be directly created and displayed.
- > **Expand All:** Expand the selected resource, role or team to reveal their full sub-structure.
- > **Jump to Start Date:** Shift the timeline such that it starts with the earliest investment for which an assignment is displayed for the selected resource, role or team.

7.2.9 Investment Actions

Right-click on an investment in the **Name** column to open the context menu.

ARP Admins can reorder, restrict or remove the standard actions listed here and add custom actions, see "8.10 Defining Actions" on page 156.

- > **Open Properties:** Open the detail view for the selected investment in a new browser tab.
- > **Remove Lock:** Unlock projects locked due to changes made in itd Advanced Resource Planning or the itd Portfolio Optimizer. Available to every user for projects locked due to their own changes. Available to **ARP Admins** for any project locked due to changes made by any user. Projects locked due to changes that weren't made in itd Advanced Resource Planning or the itd Portfolio Optimizer can only be unlocked via the associated button in the project's properties.
- > **Expand All:** Expand the selected investment to reveal its full sub-structure.
- > **Jump to Start Date:** Shift the timeline such that it starts with the investment's start date.

7.2.10 Phase Actions

Right-click on a phase or task in the **Name** column to open the context menu.

ARP Admins can reorder, restrict or remove the standard actions listed here and add custom actions, see "8.10 Defining Actions" on page 156.

- > **Open Properties:** Open the detail view for the selected phase in an overlay within the same browser tab.
- > **Expand All:** Expand the phase to reveal its full sub-structure.
- > **Jump to Start Date:** Shift the timeline such that it starts with the phase's start date.

7.2.11 Task Assignment Actions

Right-click on a task assignment in the **Name** column to open the context menu.

ARP Admins can reorder, restrict or remove the standard actions listed here and add custom actions, see "8.10 Defining Actions" on page 156.

- > **Open Properties:** Open the detail view for the selected assignment's task in an overlay within the same browser tab.
- > **Allocate From Estimates:** Enter the **Est. Effort** of all associated assignments as **Allocation** for the associated team entry. This action will be directly applied without further confirmation.
- > **Delete:** Available for assignments without **Actuals**.
This deletes the associated assignment. Before it's deleted, you will be asked to confirm.
- > **Jump to Start Date:** Shift the timeline such that it starts with the assignment's start date.

7.3 Assignment Filter

The following section describes the assignment filter in **Assignments by Resource** mode.

7.3.1 Displayed Data

The following data will be loaded and displayed in the **Assignments** view without a filter:

- > Any resources, roles and teams with team entries for investments to which you have access (custom types included), optionally only resources, roles and teams to which you have access instead, still requiring access rights for associated investments, see page 168.
- > Associated investments, tasks and assignments.
- > Optionally parent investment hierarchies and phases, see "7.1.2 Assignments View" on page 123.

7.3.2 Access Rights and Query Limits

The amount of data that will actually be loaded is limited by your access rights and by the query limits entered for itd Advanced Resource Planning by an administrator via the governors lookup:

- > **Access Rights:** Data records to which you have no access in Clarity PPM will not be displayed in itd Advanced Resource Planning either, see "8.5 User Access Rights" on page 150.
- > **Query Limits:** Limits for the number of resources/roles/teams, investments and assignments to load at the same time, entered by an administrator via the governors lookup, see "8.15.1 Query Limits" on page 178. If data records aren't displayed due to query limits, this will be indicated.

7.3.3 Filtering the Assignments View

Use the assignment filter to select resources, roles, teams, investments, tasks and assignments.

-  Click on the **Filter** button in the **Assignments** toolbar to open the assignment filter.
- Enter filter conditions and click on **Filter** to filter the view.
 - Click on **Clear** to delete all entered filter conditions, then click on **Filter** to apply. All data records you have access to will be displayed.
 - Click on **Configure** to select filter fields for the assignment filter.

7.3.4 Selecting Filter Fields

Click on the **Configure** button in the assignment filter settings to select available filter fields for the left and right filter column. The selection and order of filter fields is stored per view.

- > You can add filter fields to either column as well as determine their order via drag-and-drop:
 - Drag filter fields from the **Available Filters** list to either column to add them.
 - Drag filter fields from either column to the **Available Filters** list to remove them.
 - Drag filter fields between columns or within a column to change their position.
- > Alternatively, you can use the buttons to the left of a column list in order to...
 - ... add fields selected in its left neighbor list (right arrow).
 - ... remove fields selected in the list and add these fields to its left neighbor list (left arrow).
 - ... change the field order by moving selected fields up or down in the list (up/down arrow).

By default, the filter fields listed in the following sections are available for selection:

- > 7.3.7 Default Filter Fields for Resources, Roles and Teams, page 131.
- > 7.3.8 Default Filter Fields for Investments, page 133.
- > 7.3.9 Default Filter Fields for Team Entries, page 134.
- > 7.3.10 Default Filter Fields for Tasks, page 134.
- > 7.3.11 Default Filter Fields for Assignments, page 135.

ARP Admins may add other fields available for resources, roles, teams, investments, investment sub-types, team entries, tasks and assignments to the selection of filter fields, see "8.11 Configuring List and Filter Fields" on page 158.

This includes most Clarity PPM standard fields and most custom fields defined for these objects.

7.3.5 Clarity PPM Lookups

Some filter fields are backed by a Clarity PPM lookup.



This icon is available for fields that support entering a Clarity PPM user.

Click on this to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user when the filter is applied.



This icon is available for OBS unit filter fields.

Click on the arrow to switch between filtering by selected unit and children (arrow down), selected unit and parents (arrow up) or only the exact unit (arrow right).



Click on the magnifier icon to access the lookup browse window for a field and select values.



Click on the trashcan icon to empty a field. If you only want to delete some items, click on the field first, select the items to remove and then click on the trashcan icon.

All lookup filters are multi-valued and will display a second empty list box when selected. This is where selected values go. Multiple selected values will always be connected with a logical "or", i.e., all investments or resources, roles and teams matching any selected value will be displayed.

As with all lookups, a list of suggested values will be displayed when typing in the text box.

Select a suggestion by clicking on it or via the arrow keys and [RETURN].

7.3.6 Default Investment Filters

By default, the following kinds of investments will be filtered out in all view modes except for the Hierarchy mode:

- > Investments from the past.
- > Inactive investments (never displayed in **Assignments** modes).
- > Project templates.

This applies when the associated filter fields are not displayed and is indicated in the filter panel.

Hover over the "?" icon to display the active default filters that apply.

Please note: these default filters don't apply to the Hierarchy mode, which displays all included investments by default, even if they are completely in the past, inactive or project templates.

Also, in **Assignments** modes, inactive investments are never displayed. As these modes don't support an **Inactive Investments** filter field, this isn't indicated in the default filter hint.

7.3.7 Default Filter Fields for Resources, Roles and Teams

In **Assignments by Resource** mode, the following resource, role and team filter fields are available by default for the assignment filter. If you enter any resource, role or team filters, only resources, roles and teams selected via filters are displayed in the assignment list.

- > **Resource – Role/Resource:** Show only selected resources, roles and teams.



The lookup browse window lets you filter the selection of available resources, roles and teams by last name, first name and resource ID.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Is Role:** Show only roles or only resources and teams.

- With the default setting **All**, this filter doesn't apply.
- Select **Yes** to show only roles.
- Select **No** to show only resources and teams.

- > **Resource – Is Team:** Show only teams or only resources and roles.

- With the default setting **All**, this filter doesn't apply.
- Select **Yes** to show only teams.
- Select **No** to show only resources and roles.

- > **Resource – Resource Name:** Filter by resource, role or team name. Use the asterisk ("*") to replace with any number of characters (e.g., "*son" will find "Harrison" and "Jackson"). Search terms will be treated as if ending with "*" (e.g., "Jack" will also find "Jackson").

- > **Resource – Resource Manager:** Show only resources and teams of selected resource managers. Roles have no resource manager and will therefore not be displayed with this filter.



Click on this icon to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user when the filter is applied.



The lookup browse window lets you filter the selection of available resource managers by last name, first name, full name, resource ID and employment type.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Booking Manager:** Show only resources and roles of selected booking managers.

Teams have no booking manager and will therefore not be displayed with this filter.



Click on this icon to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user when the filter is applied.



The lookup browse window lets you filter the selection of available booking managers by last name, first name and resource ID.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Resource OBS Unit:** Show only resources, roles and teams with selected OBS units.



Click on the arrow to switch between filtering by selected unit and children (arrow down), selected unit and parents (arrow up) or only the exact unit (arrow right).



The lookup browse window lets you select the desired OBS top level, sub levels and units.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Resource Type:** Show only resources, roles and teams of selected resource types (Equipment, Expense, Labor or Material).



The lookup browse window lets you select the desired resource types.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Primary Role:** Select roles to show only the following resources and roles.
 - **Resource Primary Role:** all resources with any of the selected roles as their primary roles.
 - **Role:** all selected roles.
 - **Role Parent Role:** all roles having any of the selected roles as their parent roles.

Teams have no primary role and will therefore not be displayed with this filter.

 Click on this icon to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user's primary role when the filter is applied.

 The lookup browse window lets you filter the selection of available roles by role name.

 Click here to remove selected values or to clear the field, if no value is selected.

- > **Resource – Skills:** Filter resources, roles and teams by skills.
This uses the new Modern UX skills by default, but also supports the legacy skills hierarchy. Refer to section "8.12.1 Use Old Skills Hierarchy" on page 163 for information about how administrators can activate the legacy mode.
By default, all resources, roles and teams with at least one selected skill will be displayed. Alternatively, you can set the filter to require all skills to match via the **Skill Matching** field.
- > **Resource – Skill Matching:** Skill filter mode, **Match at least one skill** or **Match all skills**.
Without this filter field, the **Match at least one skill** mode will be used, such that resources, roles and teams with any selected skill will be displayed.
- > **Resource – Is External:** Filter resources, roles and teams by the **External** resource property (selected via **Properties – General – Resource Management – External**).
 - The default setting **All** shows any resources, roles and teams selected via other filters.
 - Select **Yes** to show only external resources. With this setting, roles and teams aren't displayed.
 - Select **No** to show only internal resources, roles and teams.

7.3.8 Default Filter Fields for Investments

In **Assignments by Resource** mode, the following investment filter fields are available by default for the assignment filter. If you enter any investment filters, only associated assignments, their parent structures and their resources, roles and teams are displayed in the assignment list.

Sub-Types: You can also filter investments by fields of investment sub-types. If you do, only investments of that sub-type which match the filter are displayed.

Hierarchies: If applicable, parent investment hierarchies are also displayed.

- > **Investment – Investments:** Show only selected investments. Depending on your settings, associated investment hierarchies may also be displayed.

The Roadmap and Hierarchy modes reduce this selection to included investments.

 The lookup browse window lets you filter the selection of available investments by name, investment ID, investment type and status ("active?").

 Click here to remove selected values or to clear the field, if no value is selected.

- > **Investment – Investment Name:** Enter a search term which occurs in the investment name. Use the asterisk character "*" as a placeholder for an arbitrary number of characters. Search terms will be treated as if ending with "*" (e.g., "*CRM" will find investment names containing "CRM", while "CRM", without the asterisk, will find only investment names starting with "CRM").

- > **Investment – Investment ID:** Enter a search term which occurs in the investment ID. Use the asterisk "*" as a placeholder for an arbitrary number of characters. Search terms will be treated as if ending with "*" (e.g., "*007" will find any investment whose ID contains "007", while "007", without the asterisk, will find only investments whose IDs begin with "007").

- > **Investment – Investment Manager:** Show only investments of selected investment managers.

 Click on this icon to enter the "Current User" placeholder. It will be replaced by the currently logged-on Clarity PPM user when the filter is applied.

 The lookup browse window lets you filter the selection of available investment managers by last name, first name, user name, resource ID, type and status.

 Click here to remove selected values or to clear the field, if no value is selected.

- > **Investment – Investment OBS Unit:** Show only investments with selected OBS units.

 Click on the arrow to switch between filtering by selected unit and children (arrow down), selected unit and parents (arrow up) or only the exact unit (arrow right).

 The lookup browse window lets you select the desired OBS top level, sub levels and units.

 Click here to remove selected values or to clear the field, if no value is selected.

- > **Investment – Investment Type:** Show only investments of selected types (Application, Asset, Idea, Other Work, Product, Project, Service or custom investment types).

 The lookup browse window lets you filter the selection of investment types.

 Click here to remove selected values or to clear the field, if no value is selected.

- > **Investment – Investment Status:** Show only investments with a selected status.

 The lookup browse window lets you filter the selection of investment status values.

 Click here to remove selected values or to clear the field, if no value is selected.

- > **Investment – Hierarchy:** Show only investments of selected hierarchies.

 The lookup browse window lets you filter the hierarchy selection by name and ID.

 Click here to remove selected items or to clear the field, if no value is selected.

- > **Investment – Roadmap:** Show only investments of selected roadmaps.
 -  The lookup browse window lets you filter the roadmap selection by name and ID.
 -  Click here to remove selected items or to clear the field, if no value is selected.
- > **Investment – Hide Investments from the Past:** Hide investments ending before the start of the previous month.
Without this, a default filter may apply, see "7.3.6 Default Investment Filters" on page 130.
- > **Project – Project Templates:** Display or hide project templates, i.e., projects for which **Properties – Settings – General – Template** has been selected.
 - With the default setting **Hide Project Templates**, project templates won't be displayed.
 - Select **Show All** to display any investments, including project templates.
 - Select **Show Only Project Templates** to display no investments but project templates.
 Without this, a default filter may apply, see "7.3.6 Default Investment Filters" on page 130.

7.3.9 Default Filter Fields for Team Entries

In **Assignments by Resource** mode, the following team entry filter fields are available by default for the assignment filter. If you enter any team entry filters, only associated assignments, their parent structures and their resources, roles and teams are displayed in the assignment list.

- > **Team – Booking Status:** Show only team entries with a selected booking status.
 -  The lookup browse window lets you filter the selection by booking status name.
 -  Click here to remove selected values or to clear the field, if no value is selected.
- > **Team – Request Status:** Show only team entries with a selected request status.
 -  The lookup browse window lets you filter the selection by request status name.
 -  Click here to remove selected values or to clear the field, if no value is selected.
- > **Team – Staff OBS Unit:** Show only team entries with selected OBS units.
 -  Click on the arrow to switch between filtering by selected unit and children (arrow down), selected unit and parents (arrow up) or only the exact unit (arrow right).
 -  The lookup browse window lets you select the desired OBS top level, sub levels and units.
 -  Click here to remove selected values or to clear the field, if no value is selected.

7.3.10 Default Filter Fields for Tasks

In **Assignments by Resource** mode, the following task filter fields are available by default for the assignment filter. If you enter any task filters, only associated assignments, their parent structures and their resources, roles and teams are displayed in the assignment list.

- > **Task – Task Name:** Enter all or part of a task name to filter tasks. The asterisk character "*" may be used as a placeholder.
- > **Task – Task Status:** Show only tasks with a selected task status.
 -  The lookup browse window lets you filter the selection by task status name.
 -  Click here to remove selected values or to clear the field, if no value is selected.

7.3.11 Default Filter Fields for Assignments

In **Assignments by Resource** mode, the following assignment filter fields are available by default for the assignment filter. If you enter any assignment filters, only assignments selected via filters, their parent structures and their resources, roles and teams are displayed in the assignment list.

- > **Assignment – Assignment Role:** Show only assignments with selected assignment roles.



The lookup browse window lets you filter the selection by assignment role name.



Click here to remove selected values or to clear the field, if no value is selected.

Please note that a resource may be assigned to a task in another than its primary role.

- > **Assignment – Assignment Status:** Show only assignments with a selected assignment status.



The lookup browse window lets you filter the selection by assignment status name.



Click here to remove selected values or to clear the field, if no value is selected.

- > **Assignment – Assignment Has ETC:** Show only assignments that have remaining ETC (remaining hours of work to be done) in the selected time period.

- > **Assignment – Assignment Has Actuals:** Show only assignments for which actuals have been entered in the selected time period.

7.4 Utilization and Capacity

With **Show Utilization** in the **Visualization** tab of the **Preferences**, the utilization and remaining capacity of resources, roles and teams, based on assignments, are displayed per period in a grid. The values are based on the **ETC** values per period from assignments.

7.4.1 Timeline

The timeline is shared among the utilization grid, Gantt chart and assignment grid.
See "7.8.2 Timeline" on page 142 for details about timeline settings in the main toolbar.

7.4.2 Visualization of Low, Optimal, High and Very High Utilization

Cell colors indicate a low (white), optimal (green), high (yellow) or very high (red) utilization of a resource, role or team in a period, based on their associated total capacity and remaining estimated effort from assignments. You can edit the thresholds for each color in the **Utilization** tab of your **Preferences**, see "7.9.4 Utilization" on page 145.

Utilization histogram charts are not available in this mode.

7.4.3 Filtering the View

With **Calculate Sums** set to **Filtered** in the **Timeslices** tab of the **Preferences**, the assignment filter is also applied to the utilization. In this case, the displayed utilization values only include **ETC** values of assignments currently displayed in the assignment list.

With **Calculate Sums** set to **On** or **Off**, the global utilization is displayed instead. In this case, the utilization values sum up the **ETC** values of all associated assignments in the corresponding period, regardless of whether they're currently displayed in the assignment list.

The displayed remaining capacity is always based on the global utilization. It is never affected by the assignment filter, regardless of the **Calculate Sums** setting.

7.4.4 Displaying Utilization and Capacity Details

Hover over a cell to display the filter mode (**Filtered Assignments** or **All Assignments**).

For roles, the values included in the calculation of the remaining capacity are also displayed.

7.4.5 Displaying Actuals

Optionally, the remaining capacity displayed for the current period will consider actuals entered for that period, see "8.13.6 Consider Actuals for Remaining Capacity" on page 175.

7.4.6 Role Capacities

The total capacity of a role is the total capacity of all resources with that primary role.

The remaining capacity of a role is its total capacity less the **ETC** from all assignments of itself and its resources.

7.5 Gantt Chart

In **Assignments by Resource** mode, you can toggle the display of interactive Gantt bars separately for investments, phases and assignments via the **Visualization** tab of the **Preferences**.

7.5.1 Timeline

The timeline is shared among the utilization grid, Gantt chart and assignment grid.

See "7.8.2 Timeline" on page 142 for details about timeline settings in the main toolbar.

7.5.2 Gantt Bars for Investments

Gantt bars for investments are displayed via **Show Gantt Bars for Investments** in the **Visualization** tab of the **Preferences**. In this mode, you can't edit Gantt bars for investments via drag-and-drop.

7.5.3 Gantt Bars for Phases

Gantt bars for phases are displayed via **Show Gantt Bars for Tasks and Phases** in the **Visualization** tab of the **Preferences**. In this mode, you can't edit Gantt bars for phases via drag-and-drop.

7.5.4 Gantt Bars for Assignments

Gantt bars for assignments are displayed via **Show Gantt Bars for Assignments** in the **Visualization** tab of the **Preferences**.

While Gantt bars are displayed for assignments, you can't edit the ETC values per period directly.

You can shift and resize assignments via drag-and-drop of their Gantt bars.

You can only change the **Start** and **Finish** of assignments while the status is **Not started** and no actuals exist for them. The status check can be turned off, see "8.12.22 Edit Task and Assignment Start and Finish Regardless of Status" on page 171.

Changing an assignment this way will redistribute the ETC displayed per period for the respective assignment over the capacity of the assigned resource, role or team during the new remaining duration (between **Actuals Thru** and **Finish**) with the same proportions as before the change.

With **Update Allocation** in the **General** tab of the **Preferences**, the updated assignment values will also be entered as allocation for the same periods.

Shifting or extending an assignment beyond the **Start** or **Finish** of the associated task or non-project investment will also extend the task or investment, such that it includes the assignment. When a task is extended this way, the change will also be applied to the associated phase and project, if required to include the new task duration. Reducing the durations of assignments won't reduce the duration of the associated task, phase or investment.

7.5.5 Saving or Reverting Changes

Changes made to Gantt bars aren't saved directly.

 Your changes will only be applied when you save them via the toolbar. You can easily identify unsaved changes via the red triangle in a field.

 Refresh the view without saving to revert your changes.

 Projects will automatically be locked for editing by other users while unsaved changes exist. This is indicated by a padlock icon. Saving or reverting your changes will unlock the project. If your session is interrupted before a project is unlocked, you or any **ARP Admin** can unlock it via the context menu. Please note that this is only possible for projects that were locked due to changes made in itd Advanced Resource Planning or the itd Portfolio Optimizer.

7.6 Assignment Grid

Without Gantt bars for assignments, the timeline shows an editable grid of assignment values.

7.6.1 Timeline

The timeline is shared among the utilization grid, Gantt chart and assignment grid.

See "7.8.2 Timeline" on page 142 for details about timeline settings in the main toolbar.

7.6.2 Displayed and Editable Values per Period

In the **Grid** tab of the **Preferences**, you can select an optional display value for assignments per period, see "Cell Configuration" on page 146.

- > **Left (read-only):** Empty (no field), ETC, Actuals, Capacity or any custom time-scaled value.
You can edit custom time-scaled **Money** values selected here, see "7.6.8 Editing Custom Time-Scaled Money Values" on page 139.
- > **Right (editable):** In this mode, the right editable value is always **ETC**.

The displayed utilization and capacity are always based on the ETC per period from assignments in this mode, see "7.4 Utilization and Capacity" on page 136.

The configured values are displayed when hovering over the assignment grid with the associated preferences setting, see "8.12.6 Show Grid Hints for by Resource Views" on page 164.

7.6.3 Displaying Trend Arrows

In the **Grid** tab of the **Preferences**, you can toggle and configure the display of trend arrows comparing the left and right cell values, see "Deviation Highlighting" on page 146.

For instance, this can help you to easily compare actuals with the originally planned values.

Wherever both values are different, a little arrow at the left cell edge visualizes a negative or positive deviation of the left cell value from the right cell value.

7.6.4 Editing Assignments

Without **Show Gantt Bars for Assignments** in the **Visualization** tab of the **Preferences**, you can edit the **ETC** per period that is displayed in the right half of each cell. Click on the right half of a cell to edit its value. The white background of a cell or its right half indicates that the value can be edited.

The left half of a cell displays **Actuals**, **Capacity** or any custom time-scaled value, see "Field to Display on the Left Part of the Cell" on page 146.

The configured values are displayed when hovering over the assignment grid with the associated preferences setting, see "8.12.6 Show Grid Hints for by Resource Views" on page 164.

The **Est. Effort** will automatically be updated with the sum of efforts per period you enter.

Entering workload outside the duration of an assignment will expand it accordingly. If required, parent objects will also be expanded, such that they include the assignment.

Alternatively, enter the total **Est. Effort** for an assignment in the associated column, see "7.2.6 Editing List Fields" on page 125.

With **Update Allocation** in the **General** tab of the **Preferences**, the new assignment values will also be entered as allocation for the same periods.

7.6.5 Copying Grid Cells via Drag-and-Drop

Via drag-and-drop, you can copy the value of a grid cell to neighboring cells, either horizontally, on the timeline, or vertically, to other tasks:

- > Click in the cell you wish to copy, hold the mouse button and drag in the desired direction.
- > Release the mouse button when you're done to copy the selected assignment value to all grid cells you touched while dragging.
- > **Save** your changes via the toolbar or **Refresh** without saving to revert your changes.

7.6.6 Saving or Reverting Changes

Changes made to assignments aren't saved directly.

 Your changes will only be applied when you save them via the toolbar. You can easily identify unsaved changes via the red triangle in a field.

 Refresh the view without saving to revert your changes.

 Projects will automatically be locked for editing by other users while unsaved changes exist. This is indicated by a padlock icon. Saving or reverting your changes will unlock the project. If your session is interrupted before a project is unlocked, you or any **ARP Admin** can unlock it via the context menu. Please note that this is only possible for projects that were locked due to changes made in itd Advanced Resource Planning or the itd Portfolio Optimizer.

7.6.7 Display ETC Sums Outside of Visible Time Range

Via the **Columns** button in the **Assignments** toolbar, you can display ETC sums for assignments that are before or after the visible period. The **ETC before** and **ETC after** columns display the total hours before or after the visible period. Click on values in these columns to shift the visible period there.

7.6.8 Editing Custom Time-Scaled Money Values

In **Assignments by Resource** mode, you can select any custom time-scaled value as left value in the **Grid** tab of the **Preferences**, see "Cell Configuration" on page 146.

Without **Show Gantt Bars for Assignments** in the **Visualization** tab of the **Preferences**, you can edit the displayed assignment grid values.

You can edit custom time-scaled **Money** values even if they're displayed in the left half of a cell.

To do so, click on the left value to edit. This will replace the regular right value, and you can edit it in the right half of the cell. Confirming via the keyboard or clicking in another field will update the left value, and the regular right value will reappear.

If you have also selected the value as a column, that column will also be updated on all levels.

 Your changes will only be applied when you save them via the toolbar. You can easily identify unsaved changes via the red triangle in a field.

 Refresh the view without saving to revert your changes.

 Projects will automatically be locked for editing by other users while unsaved changes exist. This is indicated by a padlock icon. Saving or reverting your changes will unlock the project. If your session is interrupted before a project is unlocked, you or any **ARP Admin** can unlock it via the context menu. Please note that this is only possible for projects that were locked due to changes made in itd Advanced Resource Planning or the itd Portfolio Optimizer.

7.6.9 Integrating a Custom Time-Scaled Value

Displaying and editing custom time-scaled values in the field list and grid requires adding the field via the field configuration. All other steps are optional.

Administration

- > Add the field via the field configuration, see "8.11 Configuring List and Filter Fields" on page 158.
 - Optionally, disable the automatic conversion for the field by selecting **Ignore Conversion**.
 - Also optionally, select the desired resource types, e.g., **Material**, **Equipment** and **Expense**.
 - This step requires membership in the **ARP Admin** group.
- > Optionally, via the **itd AE Preferences** lookup, restrict editing the **ETC**, such that **ETC** can't be entered for resource types for which you wish to enter **Money** values only (e.g., **Material**, **Equipment** and **Expense**), see "8.12.21 Editable Resource Types" on page 170.
 - This step requires the global **Administration – Application Setup** right, which Clarity PPM application administrators have by default.

Configuration Options

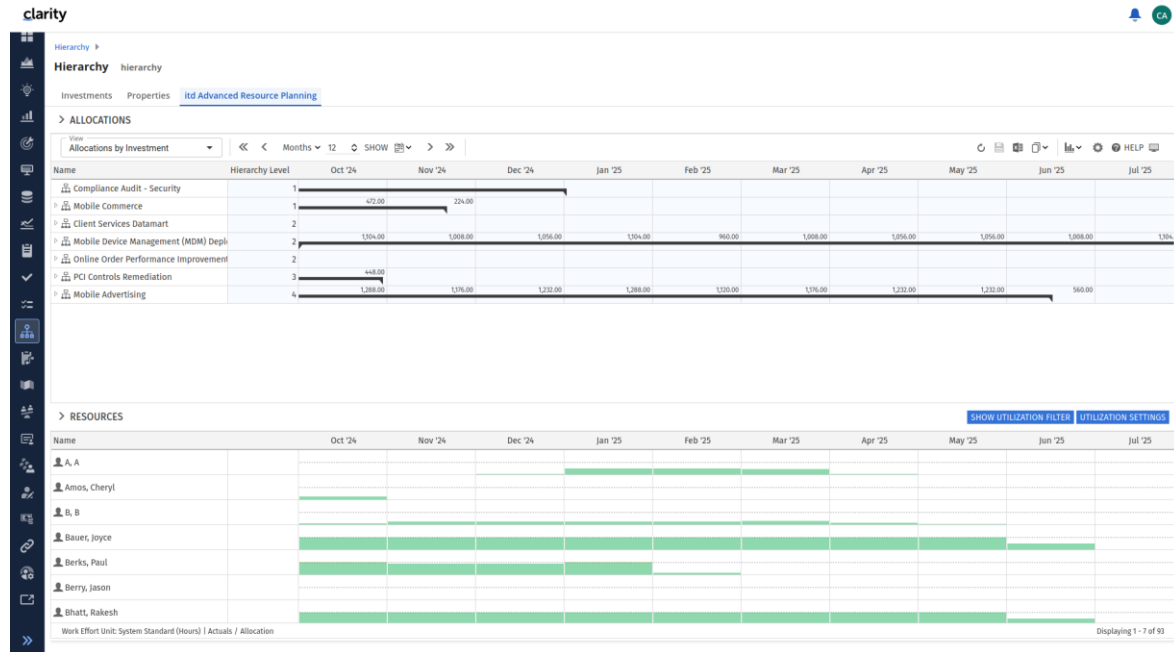
- > Add the field as a sum column, see "7.2.5 Columns" on page 124.
- > Select it as a grid value, see "Cell Configuration" on page 146.

7.7 Hierarchy Mode

You can integrate itd Advanced Resource Planning in the **Hierarchies** module for hierarchies of the **Investment** type.

Please note that the hierarchy mode feature is only available after adding an itd Advanced Resource Planning channel to the hierarchy blueprint, see "8.7 Planning Modes" on page 154.

With the hierarchy mode, hierarchies offer an itd Advanced Resource Planning tab.



In this mode, the view is automatically filtered to show only investments included in the hierarchy.

The selection for the **Investments** filter field is also reduced to include only these investments.

You can display and sort by the **Hierarchy Level** field, which displays an investment's hierarchy level.

Please note: This mode is currently in the beta phase and is included as a preview. Further features are planned. We look forward to receiving feedback on this mode.

7.8 Main Toolbar

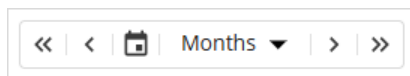
In **Assignments by Resource** mode, you have access to the following features in the main toolbar.

7.8.1 View



The **View** menu displays the active view and allows switching views, saving the current view under a new name and editing your favorites and view sharing settings under **Manage**. The **Save View** button lets you save changes to the current view if you have rights for it. Otherwise, you can still save a copy of the current view. For details, see chapter "3 Views" on page 13.

7.8.2 Timeline



Use the **Timeline** menu to change the display period, or the **Slice Period**. The **Slice Period** is saved with the view and is synchronized with the **Timeslices** tab of the **Preferences**, where you can also edit the **Slice Count**, see "7.9.2 Timeslices" on page 144. The start date isn't saved with the view. The application starts with the current date and retains the selected start date when changing views.

◀◀ **Previous Periods**: Here you switch back by the selected display period (e.g., 6 months).

◀ **Previous Period**: Here you switch back by the selected slice period (e.g., 1 month).

📅 **Select Start Date**: Here you select the view's start date in a calendar view.

▼ **Slice Period**: e.g., **Months**. The selection may be limited by **ARP Admins** via **Administration** in the main toolbar, see "8.9 Global Settings in the Application" on page 155.

▶ **Next Period**: Here you switch ahead by the selected slice period (e.g., 1 month).

▶▶ **Next Periods**: Here you switch ahead by the selected display period (e.g., 6 months).

7.8.3 Preferences

⚙️ **Preferences**: Here you configure general view settings, sum calculation and timeslice settings, visualization settings, utilization settings, grid value and visual value comparison settings, see "7.9 Preferences" on page 144. Preferences will be saved separately for each view.

7.8.4 Export to Excel

You can export all rows and columns of the **Assignments** view to Microsoft Excel.

📄 **Export to Excel**: Here you export the **Assignments** view to Microsoft Excel.

The data will be exported as displayed, with the same filter settings and with all rows and columns that are currently displayed. For list items with sub-elements, these sub-elements will only be exported if their parent item has been expanded, such that they are currently visible.

The Excel export is limited to a maximum of 15,000 rows.

7.8.5 Fullscreen

↗️ **Fullscreen**: Turn fullscreen mode on or off. In fullscreen mode, the Clarity PPM navigation will be hidden, such that more items can be displayed in itd Advanced Resource Planning.

7.8.6 Refresh and Save

Use the **Refresh** and **Save** buttons to discard or save your changes.

 **Refresh:** This will reload all data. If there are unsaved changes, you will be asked if you want to save first. Answering no will discard your changes.

 **Save:** This will save all unsaved changes you have made in the current view.

7.8.7 Help

 **Help:** Here you can find information about itd Advanced Resource Planning and about asking for support. If you do, please always specify your version, which you can find under **About**.

Select **License** for license information and to obtain and enter licenses.

7.8.8 Administration

 **Administration:** **ARP Admins** may access administration settings here. All of these settings are global for all views. Some settings affect only specific view modes. This is indicated where it applies. See section "8.9 Global Settings in the Application" on page 155 for details.

7.9 Preferences

 Click on the **Preferences** button in the toolbar to edit view options.

7.9.1 General

Settings in the **General** tab control the display and behavior of the current view.

> Generic

- **Decimal Places:** Controls the number of decimal places for all numbers in the current view.
- **Load Data on Startup:** Load data directly when opening itd Advanced Resource Planning. Otherwise, data will only be loaded after clicking on the **Filter** button.

> View Specific

- **Update Allocation:** When assignment **ETC** values are entered for a task, automatically enter the same amounts of **Allocation** in the associated team entry.

> Accessibility

- **Use Colors with Higher Contrast:** Select this for improved readability. This setting is saved in the web browser instead of the view and is therefore global per user when accessing the application with the same web browser on the same machine.

7.9.2 Timeslices

Settings in the **Timeslices** tab control the calculation of sums, timeline scale, display period and work effort unit.

- > **Calculate Sums:** Calculate and show totals of the **Actuals**, **Est. Effort** and **Total Effort** fields per resource, role or team, investment and phase. Assignment totals are always displayed. Additionally, totals will be calculated and displayed for integrated custom time-scaled values, see "7.6.9 Integrating a Custom Time-Scaled Value" on page 140.

- **On:** Calculate and show global sums. Slows down loading the view.
- **Filtered:** Apply assignment filter to global sums. Slower loading than with **On**.
- **Off:** Don't show any sums. Faster loading than with **On** or **Filtered**.

This applies to sum columns in the assignment list and to the time-scaled assignment grid.

For sum columns, also see "Time-Scaled Value Total Column Calculation" below.

With **Show Utilization**, **Filtered** also applies to the displayed utilization, but not the remaining capacity in this mode, see "Show Utilization" on next page.

- > **Time-Scaled Value Total Column Calculation:** Calculate sum columns for the **Actuals**, **Est. Effort** and **Total Effort** columns and integrated custom time-scaled value sums in the assignment list.

- **Grand Total:** Show the total for the full duration of all assignments displayed for a resource, role or team or for the full investment, phase or assignment duration.
- **Sum of Periods:** Sum up the figures only for the currently displayed periods.

- > **Slice Period:** enter the planning period here. Possible settings are **Days**, **Weeks**, **Months**, **Quarters**, **Calendar Years** and, if configured, **Fiscal Period**.

- > **Slice Count:** enter the number of slices to be displayed.

- > **Work Effort Unit:** specify the unit for efforts here. By default, the **System Standard** will be applied. Alternatively, you may select **Hours**, **Days** or **FTE** (full time equivalents).

- > **Fiscal Entity** and **Fiscal Period:** with the **Fiscal Period** setting, if multiple fiscal entities or periods have been defined in your Clarity PPM system, select the desired fiscal entity and period here.

ARP Admins may limit the selection of slice periods and work effort units via **Administration** in the main toolbar, see "8.9 Global Settings in the Application" on page 155.

7.9.3 Visualization

Settings in the **Visualization** tab control the visualization in the **Assignments** view.

> **Tree View**

- **Show Investment Hierarchy:** display parent investment hierarchies of displayed investments that you have explicitly selected via the assignment filter. Sub-investments aren't displayed in the **Assignments by Resource** mode.

Hiding investment hierarchies may speed up loading the view.

- **Show Phases:** display phases between investments and associated tasks. When phases aren't displayed, associated tasks appear directly under their respective investments.

> **Gantt Bars:** See "7.5 Gantt Chart" on page 137.

- **Show Gantt Bars for Investments:** Display or hide investment Gantt bars.
 - **Show Gantt Bars for Tasks and Phases:** Display or hide phase Gantt bars.
 - **Show Gantt Bars for Assignments:** Display or hide assignment Gantt bars.
- Without assignment Gantt bars, the editable assignment grid is displayed for assignments.

> **Utilization**

- **Show Utilization:** Display or hide the utilization and remaining capacity of roles, resources and teams per period.

In this mode, with **Calculate Sums** set to **Filtered**, the assignment filter will also be applied to the utilization, such that only assignments matching the filter (i.e., displayed assignments) will be included. The remaining capacity is always global and includes any assignments in the associated period. With **Calculate Sums** set to **On** or **Off**, the utilization is also global.

7.9.4 Utilization

Settings in the **Utilization** tab control the display of the utilization.

In **Assignments by Resource** mode, the utilization is based on **ETC** values from assignments.

> The **Utilization Rate** controls the visualization of low or high utilization.

- **Low Utilization at and Below:** Upper boundary below which resources, roles and teams will be marked as underutilized with a white background in the respective period.
Utilization between the thresholds for low utilization and utilization warning (e.g., between 80% and 100%) will be marked as optimal with a green background.
- **Utilization Warning Above:** Lower boundary above which resources, roles and teams will be marked as slightly over-utilized with a yellow background in the respective period. This applies as long as the utilization stays at or below the lower boundary for high utilization.
- **High Utilization Above:** Lower boundary above which resources, roles and teams will be marked as highly over-utilized with a red background in the respective period.

7.9.5 Grid

Settings in the **Grid** tab control the additional display value for the assignment grid as well as the visual comparison of the left and right value via trend arrows.

- > **Cell Configuration:** Here you select the values displayed in the assignment grid.
 - **Field to Display on the Left Part of the Cell:** Empty (no field), ETC, Actuals, Capacity or any custom time-scaled value. You can edit custom time-scaled **Money** values selected here, see "7.6.8 Editing Custom Time-Scaled Money Values" on page 139.
 - **Field to Display on the Right Part of the Cell (Editable):** In **Assignments by Resource** mode, the editable right cell value is always the assignment's **ETC** value.
- > **Deviation Highlighting**
 - **Highlight Deviation (only when Gantt Bars are disabled):** Display trend arrows for deviations of the left cell value from the right one, see "7.6.3 Displaying Trend Arrows" on page 138.
 - **Tolerance of Deviation:** Threshold value for displaying trend arrows to indicate a deviation of the left cell value from the right one.
 - **Consider Zero Values in Deviation:** Display an arrow even if one of the two values is zero.

8 Administration

This chapter describes the administration of itd Advanced Resource Planning:

- > 8.1 Requirements, page 147.
- > 8.2 Supported Locales, page 147.
- > 8.3 User and Administrator Groups, page 148.
- > 8.4 Lookup Access, page 149.
- > 8.5 User Access Rights, page 150.
- > 8.6 Integration and Invocation, page 154.
- > 8.7 Planning Modes, page 154.
- > 8.8 Changing Text Labels, page 154.
- > 8.9 Global Settings in the Application, page 155.
- > 8.10 Defining Actions, page 156.
- > 8.11 Configuring List and Filter Fields, page 158.
- > 8.12 itd AE Preferences Lookup, page 162.
- > 8.13 Deprecated itd AE Preferences Keys, page 173.
- > 8.14 itd AE Included Investment Types Lookup, page 176.
- > 8.15 Governors Lookup (Limits and Caches), page 178.
- > 8.16 Troubleshooting, page 180.

8.1 Requirements

itd Advanced Resource Planning 13.0.0 requires Clarity PPM 16.2.2 or newer.

8.2 Supported Locales

The following locales are currently supported:

- > Danish, Danish(Denmark)
- > Dutch, Dutch(Netherlands), Dutch(Belgium)
- > English, English(United Kingdom), English(United States)
- > Finnish, Finnish(Finland)
- > French, French(Belgium), French(France)
- > German(Germany), German(Switzerland)
- > Italian(Switzerland)
- > Norwegian, Norwegian(Norway)
- > Spanish, Spanish(Spain)
- > Swedish, Swedish(Sweden)

8.3 User and Administrator Groups

This section describes groups for users and administrators of itd Advanced Resource Planning.

8.3.1 ARP Users Group

Add users to this group to grant them access to the itd Advanced Resource Planning application.

Please note that users may also be able to use the application if they have general page and portlet access rights. In this case, these users will be added to the **ARP Users** group when accessing the application in order to keep track of who is using the application in your organization.

Please also note that, in order to access individual itd Advanced Resource Planning features, users also need the required resource, investment and scenario rights listed in section "8.5 User Access Rights" on page 150.

The **ARP Users** group grants users the following rights:

- > **Instance Access Rights**
 - Access itd Advanced Resource Planning pages and portlets.

8.3.2 ARP Admin Group

The **ARP Admin** group grants users the following administrative rights:

- > **Instance Access Rights**
 - Access itd Advanced Resource Planning pages and portlets.
 - Edit and define itd Advanced Resource Planning pages and portlets.
- > **Global Access Rights**
 - Full rights for **itd AE Actions**: Define menu actions, see "8.10 Defining Actions" on page 156.
 - Full rights for **itd AE Attribute Configuration**: Add list fields, editable fields and filter fields, see "8.11 Configuring List and Filter Fields" on page 158.
 - Full rights for **itd AE Attribute Source**: Add additional Clarity PPM standard fields to the list of available fields, please contact us if you wish to do this.
- > **Other Administrative Features in itd Advanced Resource Planning**
 - **Application**: Global administration settings in toolbar, see "8.9 Global Settings in the Application" on page 155.
 - **Application**: Unlock projects locked due to changes made in itd Advanced Resource Planning by other users. Any user may unlock projects that were locked due to their own changes in itd Advanced Resource Planning.
 - **Application**: Full support for **Impersonate a User**.
 - **&flushCaches=true URL Parameter**: Apply newly added fields and changed settings.
 - 8.11 Configuring List and Filter Fields, page 158.
 - 8.12 itd AE Preferences Lookup, page 162.
 - 8.14 itd AE Included Investment Types Lookup, page 176.
 - 8.15 Governors Lookup (Limits and Caches), page 178.

8.4 Lookup Access

Some settings are managed via lookups. Editing them requires the global **Administration – Application Setup** right, which Clarity PPM application administrators have by default.

8.4.1 itd AE Preferences Lookup

Some application settings are managed via the **itd AE Preferences** lookup.

The **ID (code)** of this lookup is **PL.ITD.AE.LKP.PREFERENCES**.

It is used for both itd Advanced Resource Planning and the itd Portfolio Optimizer.

See "8.12 itd AE Preferences Lookup" on page 162 for details.

8.4.2 itd AE Included Investment Types Lookup

Use the **itd AE Included Investment Types** lookup to filter selected view modes by investment type. Modes for which you define no filters won't be filtered by investment type.

The **ID (code)** of this lookup is **PL_ITD_AE_LKP_INCLUDED_INV_TYPES**.

It is used for both itd Advanced Resource Planning and the itd Portfolio Optimizer.

Please note: *This configuration is only valid for the global mode which shows all investments. It is ignored in the single investment, roadmap and hierarchy modes.*

See "8.14 itd AE Included Investment Types Lookup" on page 176 for details.

8.4.3 Governors Lookup (Limits and Caches)

Some database access and memory usage settings may be managed by creating a lookup with the **ID (code) = PL_ITD_AE_LKP_GOVERNORS**.

It is used for both itd Advanced Resource Planning and the itd Portfolio Optimizer.

The governors lookup can be used to control the amount of results returned by database queries, the amount of data contained in the applications' caches as well as load batch sizes with **Calculate Sums** set to **On** or **Filtered**.

See "8.15 Governors Lookup (Limits and Caches)" on page 178 for details.

8.5 User Access Rights

This section lists access rights required for application features by view mode.

8.5.1 Allocations by Investment Access Rights

Features	Resource Access Rights	Investment Access Rights
View team entries of investments and associated allocations	None, all team entries for all visible investments and associated allocations will be displayed.	View¹
View resources, roles and teams with total utilization and total capacity	Resource - Soft Book OR Resource – View²	None
Show team entries (investments) when clicking on histogram segments	Resource - Soft Book OR Resource – View OR Investment – View²	
- Add new resources, roles and teams³ - Replace allocation via drag-and-drop from the resource list³	Resource – Soft Book	Edit
	Resource – Hard Book⁴	View
- Edit Allocation Allocate from Estimates Accept Hard Allocation	Resource – Hard Book⁵	View (no resource right required with Edit)⁵
Move team entry without Hard Allocation (change Start or Finish)	Resource – Hard Book⁵	View (no resource right required with Edit)⁵
- Move team entry with Hard Allocation (change Start or Finish) - Edit Hard Allocation Commit Allocation	Resource – Hard Book⁵	View⁵
Create Requisition	None	Project – Create/Edit Requisition

¹ Viewing team entries and associated allocations requires the respective investment type's **View** right (e.g., **Project – View**).

² Required rights may be configured via feature toggles, see items 8.12.8, 8.12.9 and 8.12.10 in section "8.12 itd AE Preferences Lookup" on pages 162ff.

Role capacities include all associated resources regardless of access rights for these resources.

³ These actions are available with both combinations of access rights listed here.

⁴ **Resource – Hard Book** includes **Resource – Soft Book**.

⁵ With the **Edit** right for an investment type (e.g., **Project – Edit**), no resource right is required for editing team entries (except for editing the **Hard Allocation**, which requires **Resource – Hard Book**).

8.5.2 Allocations by Resource Access Rights

Features	Resource Access Rights	Investment Access Rights
- View resources, roles and teams with team entries and associated allocations - View total utilization and total capacity of resources, roles and teams	None, all resources, roles and teams with team entries for visible investments will be displayed¹	View¹
- Edit Allocation Allocate from Estimates Accept Hard Allocation	Resource – Hard Book²	View (with Edit, only Resource – View is required)²
Move team entry without Hard Allocation (change Start or Finish)	Resource – Hard Book²	View (with Edit, only Resource – View is required)²
- Move team entry with Hard Allocation (change Start or Finish) - Edit Hard Allocation Commit Allocation	Resource – Hard Book²	View²
Create Requisition	None³	Project – Create/Edit Requisition

¹ Viewing team entries and associated allocations requires the respective investment type's **View** right (e.g., **Project – View**).

Optionally, all resources, roles and teams for which the user has the **Resource – View** right will be displayed instead. In this case, no investment right is required for viewing associated team entries and allocations, see item 8.12.11 under "8.12 itd AE Preferences Lookup" on pages 162ff.

Role capacities include all associated resources regardless of access rights for these resources.

² With the **Edit** right for an investment type (e.g., **Project – Edit**), only **Resource – View** is required for editing team entries (except for editing the **Hard Allocation**, which requires **Resource – Hard Book**).

³ **Resource – View** right optionally required, see ¹.

8.5.3 Assignments by Investment Access Rights

Features	Resource Access Rights	Investment Access Rights
View assignments including investments, phases, tasks, milestones, dependencies and assigned resources, roles and teams	None, all assignments for all visible investments will be displayed	View¹
View resources, roles and teams with total utilization and total capacity	Resource - Soft Book OR Resource – View²	None
Show team entries (investments) when clicking on histogram segments	Resource - Soft Book OR Resource – View OR Investment – View²	
- Edit ETC of assignments - Edit investments (project name, project structure with phases, tasks and milestones, start and finish of NPIOs)	None	Edit³
Create assignments for team members (assign resources, roles and teams with existing team entries in the investment via drag-and-drop from the resource list onto tasks)	Resource – View	Edit³
Create new team entries with assignments (assign resources, roles and teams without team entries in the investment via drag-and-drop from the resource list onto tasks or NPIOs) & multiple role assignments	Resource - Soft Book	Edit³
Allocate from Estimates	Resource – Hard Book⁴	View (no resource right required with Edit)⁴

¹ Viewing assignments requires the respective investment type's **View** right (e.g., **Project – View**).

² Required rights may be configured via feature toggles, see items 8.12.8, 8.12.9 and 8.12.12 in section "8.12 itd AE Preferences Lookup" on pages 162ff.
Role capacities include all associated resources regardless of access rights for these resources.

³ Editing assignments and investments and creating team entries and assignments requires the respective investment type's **Edit** right (e.g., **Project – Edit**).

⁴ With the **Edit** right for an investment type (e.g., **Project – Edit**), no resource right is required for the **Allocate from Estimates** action.

8.5.4 Assignments by Resource Access Rights

Features	Resource Access Rights	Investment Access Rights
View resources, roles and teams with total utilization and total capacity	None, all resources, roles and teams with team entries for visible investments will be displayed.¹	View²
View task assignments and associated investments as well as team entries without assignments	None¹	View²
Edit ETC of assignments	None¹	Edit³
Create assignments for resources, roles and teams with existing team entries in a project for associated tasks	None¹	Edit³
Create new team entries with assignments (create assignments for resources, roles and teams in tasks belonging to a project without team entries for those resources, roles and teams)	Resource – Soft Book	Edit³
Allocate from Estimates	Resource – Hard Book⁴	View (no resource right required with Edit)⁴

8.5.5 Access Rights for Resource Managers

Please note that while **Resource Managers** always have the **Hard Book** and **View/View Financial** resource rights, they still require the listed access rights for viewing and editing investments.

8.5.6 Access Rights for Scenarios

In the allocations modes, you can edit scenario data instead of the plan of record with edit rights for the respective scenario. Investment rights are not required. Shifting and resizing investments with hard allocations in this mode requires the **Resource – Hard Book** right for all associated resources. For details about required access rights for generally accessing scenarios as well as viewing and editing specific scenarios, see section "4.12 Scenario Mode" on page 46.

¹ Optionally, the view will only display resources, roles and teams for which the user has the **Resource – View** right. In this case, **View** rights for associated investments are still required as well, see item 8.12.13 in section "8.12 itd AE Preferences Lookup" on pages 162ff.

Role capacities include all associated resources regardless of access rights for these resources.

² Viewing assignments requires the investment type's **View** right (e.g., **Project – View**).

³ Editing and creating assignments requires the investment type's **Edit** right (e.g., **Project – Edit**).

⁴ With the **Edit** right for an investment type (e.g., **Project – Edit**), no resource right is required for the **Allocate from Estimates** action. Please note that the **Resource – View** right may be required to display roles, resources and their assignments, see ¹.

8.6 Integration and Invocation

itd Advanced Resource Planning is implemented as a standard Clarity PPM HTML portlet.

- > **Name:** itd Advanced Resource Planning, **ID:** pl.itd.ae.prt.assignment.editor
- > The portlet can be added to any portlet page.
- > The portlet is accessible to users with appropriate access rights, similar to any other Clarity PPM portlet. Add users to the **ARP Users** group to grant them access to the itd Advanced Resource Planning application, see "8.3.1 ARP Users Group" on page 148.

8.7 Planning Modes

itd Advanced Resource Planning supports four planning modes, depending on how it is integrated:

- > The **multiple investment mode** is invoked when itd Advanced Resource Planning is opened from any portlet page that is not an investment portlet page. In this mode, multiple investments and associated data are displayed, depending on your filter settings.
- > The **single investment mode** is invoked when itd Advanced Resource Planning is opened from the portlet page of an investment. This mode displays a single investment and associated data. In the single investment mode, in the **Assignments by Investment** view mode only, users may graphically compare assignments with the **Allocation** or **Hard Allocation** of associated team entries in the histogram instead of ETC and capacity. For details about using this feature, see section "6.10.8 Comparing Assignments with Allocations" on page 115. For details about the **Preferences** for this feature, see "Histogram Comparison" on page 122.
- > To invoke the **roadmap scenario mode**, integrate itd Advanced Resource Planning as a channel in a roadmap blueprint in the Modern UX as follows, replacing **[clarity_url]** by your Clarity URL:
`https://[clarity_url]/niku/nu#action:pl.itd.ae.page.assignment.editor&puiFullScreen=on&puiHidePPMTabs=on&roadmapId=${_internalId}`
 This mode links roadmap scenarios to capacity scenarios in the **Allocations** modes. Roadmap item dates and the **In Plan** field are automatically applied to the linked investments in the capacity scenario.
- > Changes made to these investment properties and allocations in itd Advanced Resource Planning are automatically synchronized back to the associated roadmap items in the linked roadmap scenario. Each roadmap scenario's capacity scenario is automatically created when the view is first opened for that roadmap scenario. When the view is reopened for the same roadmap scenario, no matter by which user, the stored capacity scenario will be loaded. This way, multiple users may work together on the same roadmap scenario. Any saved changes will be restored. See "4.13 Roadmap Scenario Mode" on page 49 for details.
- > To invoke the **hierarchy mode**, integrate itd Advanced Resource Planning as a channel in a hierarchy blueprint in the Modern UX as follows, replacing **[clarity_url]** by your Clarity URL:
`https://[clarity_url]/niku/nu#action:pl.itd.ae.page.assignment.editor&puiFullScreen=on&puiHidePPMTabs=on&hierarchyId=${_internalId}`

8.8 Changing Text Labels

Any text labels displayed in itd Advanced Resource Planning and the itd Portfolio Optimizer can be changed via a custom lookup. Please contact us if you wish to do so.

8.9 Global Settings in the Application

ARP Admins may access administration settings via the **Administration** button at the rightmost position in the main toolbar. All of these settings are global for all views. Some settings affect only specific view modes. This is indicated where it applies.

 Click on the **Administration** button in the main toolbar to access administration settings.

8.9.1 Views

The following settings are available in the **Views** tab.

- > **Auto-Expand Previously Expanded Investments When Opening the View:** Deselect this to skip restoring the expand state of investments when opening the view, which may result in shorter loading time.
- > **Restrict 'Share with Everyone' Functionality:** This lets you restrict sharing views with everyone to selected groups. If you don't select any group, all users may share views with everyone.

8.9.2 Staffing

The following settings are available in the **Staffing** tab.

- > **Consider Actuals for Remaining Capacity:** This subtracts **Actuals** recorded in a period from the associated resource's **Remaining Capacity** displayed for that period in the **Assignments by Investment** and **Assignments by Resource** modes. When histogram charts are displayed in **Assignments by Investment** mode, the **Actuals** are also included in the displayed **Effort**. All other view modes are not affected by this setting.
- > **Activate Half Hourly Planning:** This enables setting the **Slice Period** to **Hours** in **Assignments by Investment** mode to enter the exact daily working hours with half-hourly precision. Please note that this requires installation of the associated package to work properly. All other view modes are not affected by this setting.
- > **Disable Replacement Options:** This lets you hide unused replacement options for the **Allocations by Investment** mode to make staffing easier for users. All other view modes are not affected by this setting.
- > **Hidden Work Effort Units:** This lets you hide unused **Work Effort Unit** items in the **Timeslices** tab of the **Preferences** for all view modes. The **System Standard** can't be hidden and is automatically selected for views that were previously using a now hidden item.
- > **Adjust Custom TSV Values When Assignment Dates Change:** Redistributes values in custom assignment TSV attributes when assignment dates change through editing, task shifts, or autoscheduling.
This setting only affects the **Assignments by Investment** and **Assignments by Resource** modes.

8.9.3 General

The following settings are available in the **General** tab.

- > **Hidden Toolbar Buttons:** Hide main toolbar buttons for all view modes.
- > **Hide Tabs From Preferences Dialog:** Hide **Preferences** tabs for all view modes.
- > **Available Time Slice Modes:** Hide **Time Slice Periods** for all view modes.

8.10 Defining Actions

ARP Admins may reorder, remove or restrict standard context menu actions and add custom actions for itd Advanced Resource Planning and the itd Portfolio Optimizer.

8.10.1 Accessing the Action Configuration

In the Classic UI, select **Home – Custom Objects – itd AE Actions List**.

8.10.2 Action Overview

The action list provides an overview of defined actions.

Order ID	Process ID	Standard Action	Objects	Views	Tool Mode	Active
		Autoschedule Project	Project	Advanced Resource Planning - Assignments by Investment	All Modes	☐
		Allocate From Estimates	All Custom Investments; Application; Asset; Idea; Other; Product; Project; Service; Task	All	All Modes	☐

- > **Order ID:** Determines the order of the actions. The lowest ID will be placed first. To reorder standard actions, add them and order them via this field.
- > **Process ID** and **Standard Action:** These columns define the type of the action.
- > **Objects:** Object types for which the action will be available.
- > **Views:** This column shows in which applications and view modes the action will appear.
- > **Tool Mode:** This column shows in which tool mode the action will be available: **All Modes**, **All Investments Mode**, **Single Investment Mode**, **Roadmap Mode** or **Hierarchy Mode**. Each action can only be enabled for either all modes or for exactly one mode.
- > **Active:** Deselect to deactivate actions altogether, regardless of selected filters.

8.10.3 Adding an Action Object

Click **New itd AE Actions** to create a new action object.

Create itd AE Actions

General

PROCESS ID

STANDARD ACTION

☒ PAGE LAYOUT
itd AE Actions Default Layout

AUTHORIZED USERS

AUTHORIZED GROUPS

☒ TOOL MODE
All Modes

☒ VIEWS
All

☒ OBJECTS
Application
Asset
Assignment
Idea
Other

ORDER ID

ACTIVE
☒

SAVE SAVE AND RETURN RETURN

☒ = Required

- > Select a **Process ID** to add a process action or select a **Standard Action** to configure.
- > **Process Action:** invokes a Clarity PPM process when the user invokes the action.
 - The data of the current model is transferred to the process as parameters.

- To support processes covering different object types, we transfer the **OBJECT_TYPE** and **OBJECT_ID** of the objects for which the process should be called.
 - Select for which **Users, Groups, Tool Mode, Objects** and **Views** the action should be visible.
If you select neither **Users** nor **Groups**, the action will be available to all users and groups.
For all other filters, you need to select the **All** option or select all items to disable them.
- > **Standard Action:** select an existing standard action to ...
- ... reorder actions via the **Order ID** column. The lowest ID will be placed first.
 - ... remove a standard action altogether by deselecting **Active**.
 - ... restrict it to selected **Users, Groups, Tool Mode** (All Investments, Single Investment, Roadmap or Hierarchy), **Objects** and **Views** (applications and view modes).
If you select neither **Users** nor **Groups**, the action will be available to all users and groups.
For all other filters, you need to select the **All** option or select all items to disable them.
- Please note:** although all tool modes, objects and views will initially be selected when adding a standard action, most standard actions are only available for some objects (listed under **Description** in the lookup browse window for selecting a standard action) and views.
You can't add an action for an object or view for which it isn't available by default.
Deleting a Standard Action item will reset to the default for that action.

8.10.4 Examples of Deactivating Standard Actions

The following examples deactivate these standard actions:

- > **Autoschedule Project** for **Projects** in **Assignments by Investment** mode and all tool modes.
- > **Allocate from Estimates** for all investment types in all view and tool modes.

Clarity PPM

itd AE Actions List

Filter: None	Order ID	Process ID	Standard Action	Objects	Views	Tool Mode	Active
☐			Autoschedule Project	Project	Advanced Resource Planning - Assignments by Investment	All Modes	
☐			Allocate From Estimates	All Custom Investments;Application;Asset;Idea;Other;Product;Project;Service;Task	All	All Modes	

Displaying 1 - 2 of 2

SAVE NEW ITD AE ACTIONS DELETE

Please note that you don't have to specify exactly where to disable standard actions as has been done in the screenshot with the autoschedule feature for the sake of clarity. Additional filters, as preselected by default, have no effect if an action isn't available for the respective object or mode.

8.10.5 Updating itd Advanced Resource Planning

To update itd Advanced Resource Planning after changing the action configuration, simply refresh your browser by pressing [F5].

Resetting the cache for itd Advanced Resource Planning is not required.

8.11 Configuring List and Filter Fields

ARP Admins may add list and filter fields to itd Advanced Resource Planning and to the itd Portfolio Optimizer in the attribute configuration list.

- > For list fields, you can also determine whether they are editable.
- > Use the `&flushCaches=true` URL parameter to update the applications with newly added fields, see section "8.11.11 Updating itd Advanced Resource Planning" on page 161.

8.11.1 Accessing the Attribute Configuration List

In the Classic UI, select **Home – Custom Objects – itd AE Attribute Configuration List**.

8.11.2 Attribute Configuration List View

The attribute configuration list displays additional list and filter fields.

Here, you can edit, deactivate or remove fields and add new fields.

itd AE Attribute Configuration List									
Filter: None									
☐	Attribute Title	Attribute Label	Sources	Include in Grids	Is Editable	Include in Filters	Include in Utilization Filter	Resource Type	Active
☐			resource.resource_type	✓	✓	✓			✓
☐		team.prstatus	team.prstatus	✓	✓		✓		✓
Displaying 1 - 2 of 2									
SAVE NEW ITD AE ATTRIBUTE CONFIGURATION ✓ DELETE									

The following properties control where each field is available in itd Advanced Resource Planning:

- > **Include in Grids:** field may be added to displayed **Columns** or **Utilization – Columns**. Exactly where a field will be available as a column depends on the objects of the associated view. For example, only resource fields will be available under **Utilization – Columns**.
- > **Is Editable:** field may be edited in the list. This is only relevant when **Include in Grid** is selected. Attributes configured as **Read-Only** in the **Studio** will never be editable, even if selected here. Some attribute types don't support editing and will never be editable, even if selected here, see "8.11.5 Supported Attribute Types" on page 160. This also applies to a small number of Clarity PPM default attributes.
- > **Include in Filters:** field may be selected as a filter field. Some attribute types don't support filtering and will never be available as filter fields even if selected here, see "8.11.5 Supported Attribute Types" on page 160. This also applies to a small number of Clarity PPM default attributes.
- > **Include in Utilization Filter:** field is included in the utilization filter. This is currently supported for **Lookup** and **Boolean** fields of the **Investment** and **Team** objects.
- > **Active:** deselect this to remove a field from the selection of columns and filter fields without deleting the associated configuration.

The following properties only apply to custom time-scaled **Money** values of the **time-varying** attribute type, see "6.6.9 Integrating a Custom Time-Scaled Value" on page 105:

- > **Ignore Conversion:** Disables automatic conversion of values.
- > **Resource Type:** Defines for which resource types the value will be displayed and editable.

8.11.3 Adding Fields

Click on **New itd AE Attribute Configuration** to add a new field.

Create itd AE Attribute Configuration

General

ATTRIBUTE TITLE

ATTRIBUTE LABEL

■ SOURCE

RESOURCE TYPE

INCLUDE IN FILTERS ☒

INCLUDE IN UTILIZATION FILTER ☐

INCLUDE IN GRIDS ☒

IS EDITABLE ☒

SAVE SAVE AND RETURN RETURN

■ = Required

> **Attribute Title:** field name to display. This is only required if you don't wish to display the name of the field specified as **Attribute Label** or **Source** field.

> **Attribute Label:** field whose name to display. This is only required if you don't wish to display the name of the field specified as **Source** field, or if you are defining a field with multiple sources.

Please note: for merged fields (fields with multiple sources), the **Attribute Label** also determines the views in which the field may be added as a **Visible Column**. See the following section.

> **Source:** field or fields to display. You can merge fields by selecting more than one field here to display fields for multiple objects in the associated rows or to filter by multiple objects at once. In this case, consider the following:

- Use no more than one field from each object.
Additional fields from the same object will be ignored.
- Use the same data type for all source fields (e.g., String or Number).
Merged fields with multiple data types won't be selectable as columns or filter fields.
- Select a field as **Attribute Label** to display as column header in the list. If you don't specify a label field, the first available source field will be selected as label field.

Please note: The label field not only determines the displayed column header but also the views in which the merged field will be available for selection under **Columns**.

The label field's object must be generally available in the respective view:

- **Allocations by Investment:** investments, team entries
- **Allocations by Resource:** resources, team entries
- **Assignments by Investment:** investments, tasks, assignments
- **Assignments by Resource:** resources, investments, tasks, assignments

Examples:

- A field with label `Project.field` will only be available in the **Allocations by Investment**, **Assignments by Investment** and **Assignments by Resource** views.
- A field with label `Resource.field` will only be available in the **by Resource** views.

Merged fields will always be available as filter fields for all view modes regardless of the selected label field.

- If you also specify an **Attribute Title**, that will be displayed as column header in the list instead of the **Attribute Label**. In this case, the **Attribute Label** will still determine the views in which the merged field will be available.

See section "8.11.2 Attribute Configuration List View" on page 158 for all other properties you can configure in this view.

8.11.4 Supported Object Types

The following object types are currently supported:

- > Application
- > Asset
- > Assignment
- > Idea
- > Investment
- > Other
- > Product
- > Project
- > Resource
- > Service
- > Task
- > Team

8.11.5 Supported Attribute Types

The following attribute types are currently supported:

- > String
- > Large String
- > Number
- > Percent
- > Calculated, see "8.11.6 Restrictions for Calculated and Formula Attributes" on page 161.**
- > Formula, see "8.11.6 Restrictions for Calculated and Formula Attributes" on page 161.**
- > Money
- > Boolean
- > Date
- > Static Lists:
 - Single Value Number, String
 - Multi Value Number, String
- > Static Dependent Lists:
 - Single Value Number, String
 - Multi Value Number, String
- > Dynamic SQL (also with parameters)
 - Single Value Number, String
 - Multi Value Number, String
- > URL*
- > Time-varying, for assignments only, see "6.6.9 Integrating a Custom Time-Scaled Value" on page 105.

* This type doesn't support editing.

** This type doesn't support editing or filtering.

8.11.6 Restrictions for Calculated and Formula Attributes

Most of the attributes which can be used in a **Calculated** or **Formula** attribute are supported.

Attributes which the custom calculated/formula columns do not support:

- > All Lookup attributes
- > Assignment – Has Guidelines
- > Investments – Business Alignment
- > Investments – Include Sub-Departments
- > Project – Schedule to Baseline
- > Project – Schedule Variance %
- > Resource – Capacity Rate
- > Resource – Show Resources in Sub-departments

8.11.7 Restrictions for Virtual Attributes

Virtual attributes are generally supported.

The following restrictions currently apply:

- > Virtual attributes on custom investments are not yet supported.
- > Virtual attributes on other virtual attributes are not yet supported.

8.11.8 Custom Investment Types

You can't directly add attributes for custom investment types. However, custom investment types automatically inherit any attributes you add on the **Investment** object level.

8.11.9 Supported Attributes

You can add most Clarity PPM standard attributes and any custom attributes of supported objects and types, see "8.11.4 Supported Object Types" and "8.11.5 Supported Attribute Types" on page 160.

8.11.10 Adding Additional Clarity PPM Standard Attributes

Please contact us if you wish to add a Clarity PPM standard attribute that isn't currently supported.

8.11.11 Updating itd Advanced Resource Planning

After adding new attributes, you need to reset the cache for itd Advanced Resource Planning to make them available in the application.

This requires membership in the **ARP Admin** group.

To do so, call the portlet with **&flushCaches=true**, replacing **[clarity_url]** by your Clarity URL:

[https://\[clarity_url\]/niku/nu#action:pl.itd.ae.page.assignment.editor&flushCaches=true](https://[clarity_url]/niku/nu#action:pl.itd.ae.page.assignment.editor&flushCaches=true)

Please note that the parameter won't be passed to an embedded page in the Modern UX.

You need to open the portlet in the Classic UI with **&flushCaches=true to reset the cache.**

8.12 itd AE Preferences Lookup

Some application settings are managed via the **itd AE Preferences** lookup:

- > The **ID (code)** of this lookup is **PL.ITD.AE.LKP.PREFERENCES**.
- > Creating and editing lookups requires the global **Administration – Application Setup** right, which Clarity PPM application administrators have by default.
- > This lookup is used for both itd Advanced Resource Planning and the itd Portfolio Optimizer. Please note that not all settings apply to all view modes in both applications, see **Scope**.
- > Use the **&flushCaches=true** URL parameter to update the applications with changed settings, see section "8.12.27 Updating itd Advanced Resource Planning" on page 172.

The following options are available. Options are sorted by scope, from largest to smallest impact.

- > 8.12.1 Use Old Skills Hierarchy, page 163.
- > 8.12.2 Use MUX Skills on Role Team Entries, page 163.
- > 8.12.3 Prevent Editing by Work Effort Unit, page 163.
- > 8.12.4 Hide Primary/Parent Role Name, page 164.
- > 8.12.5 Show Grid Hints for by Investment Views, page 164.
- > 8.12.6 Show Grid Hints for by Resource Views, page 164.
- > 8.12.7 Initially Load Investment Structure in Investment Modes, page 165.
- > 8.12.8 Configure by Investment Resource View Rights, page 165.
- > 8.12.9 Configure by Investment Resource View Popup Rights, page 166.
- > 8.12.10 Configure Allocations by Investment View Resource Rights, page 166.
- > 8.12.11 Configure Allocations by Resource View Rights, page 167.
- > 8.12.12 Configure Assignments by Investment View Resource Rights, page 167.
- > 8.12.13 Configure Assignments by Resource View Rights, page 168.
- > 8.12.14 Disable Resource List Links in Investment Modes, page 168.
- > 8.12.15 Include Sub-Roles in Role Capacity in Allocations Modes, page 168.
- > 8.12.16 Role Capacities in Allocations by Investment Mode, page 169.
- > 8.12.17 Disable Role Allocation Replacement, page 169.
- > 8.12.18 Remaining Capacity: Don't Remove Team Role Entry, page 169.
- > 8.12.19 Remaining Capacity: Only Shift Editable Value, page 170.
- > 8.12.20 Filter Utilization by Custom Assignment Field, page 170.
- > 8.12.21 Editable Resource Types, page 170.
- > 8.12.22 Edit Task and Assignment Start and Finish Regardless of Status, page 171.
- > 8.12.23 Hide Description Tooltips, page 171.
- > 8.12.24 Keep Task Duration, page 171.
- > 8.12.25 Automatically Create New Team Entries for Roles, page 171.
- > 8.12.26 Disable Role Replacement for Assignments, page 172.
- > 8.12.27 Updating itd Advanced Resource Planning, page 172.

Some options are no longer supported as the associated settings can now be made directly in the application. See section "8.13 Deprecated itd AE Preferences Keys" on page 173 for details.

8.12.1 Use Old Skills Hierarchy

Scope: itd Advanced Resource Planning and itd Portfolio Optimizer

ID (LOOKUP_CODE): use_old_skills_hierarchy

Initial Setting: inactive (lookup value doesn't exist)

Activate: create lookup value with **Lookup Value Name = 1 AND Active = true**

Deactivate: **Lookup Value Name = 0 OR Active = false**

Effect:

- > By default, Clarity 16.2.3 and up uses the new skills defined in the modern UX.
- > As the new skills, unlike the **Skills Hierarchy**, are not supported on team entries by default, you can switch back to the old **Skills Hierarchy** with this feature toggle.
- > Alternatively, you can enable MUX skills on team entries, as described in the following section.

8.12.2 Use MUX Skills on Role Team Entries

Scope: itd Advanced Resource Planning and itd Portfolio Optimizer

ID (LOOKUP_CODE): team_attr_id_mux_skills

Initial Setting: inactive (lookup value doesn't exist)

Activate:

- > Create a **Skills** attribute for the **Team** object. In the following example, we will use **Name = Skills** and **ID = z_skills**. Use **Data Type = Multi Valued Lookup** with **Lookup ID = LOOKUP_SKILLS**.
- > Create a preferences lookup value with **Lookup Value Name = [Skills ID] AND Active = true**. If you are using the values from our example, set **Lookup Value Name = z_skills**.

Deactivate: **Active = false**

Effect:

- > This configuration enables MUX skills on role team entries via the newly created **Skills** attribute. This includes displaying skills in the **Skills** column, using the lookup UI to enter, edit or remove skills and matching role team entry skills against resource skills via **Show candidates**.

8.12.3 Prevent Editing by Work Effort Unit

Scope: itd Advanced Resource Planning and itd Portfolio Optimizer

ID (LOOKUP_CODE): read_only_work_effort_units

Initial Setting: inactive (lookup value doesn't exist)

Activate: create lookup value with **Lookup Value Name = 1 AND Active = true** AND add elements to **Description**, separated by commas ","

Deactivate: **Lookup Value Name = 0 OR Active = false** OR remove elements from **Description**

Possible Elements: (default: none)

- > UNIT_SYSTEM: **System Standard** (configurable)
- > UNIT_HOURS: **Hours**
- > UNIT_DAYS: **Days**
- > UNIT_FTE: **FTE** (full time equivalents)

Effect:

- > When an entered unit is selected for itd Advanced Resource Planning, it is no longer possible to enter, delete or modify workloads. Additionally, it is no longer possible to change the start or finish of any object in the list or Gantt view or rename investments or tasks.
- > It is still possible to add, replace or copy assignments and team entries.

8.12.4 Hide Primary/Parent Role Name

Scope: itd Advanced Resource Planning and itd Portfolio Optimizer

ID (LOOKUP_CODE): hide_primary_role_name

Initial Setting: inactive (lookup value doesn't exist)

Activate: create lookup value with **Lookup Value Name = 1 AND Active = true**

Deactivate: **Lookup Value Name = 0 OR Active = false**

Effect:

- > By default, the **Name** column displays a resource's primary role or a role's parent role, if applicable, next to their name in all modes.
- > With this setting, primary roles for resources and parent roles for roles won't be displayed.

8.12.5 Show Grid Hints for by Investment Views

Scope:

- > itd Advanced Resource Planning, Allocations/Assignments by Investment
- > itd Portfolio Optimizer

ID (LOOKUP_CODE): layout_option_tooltip_invest

Initial Setting: inactive (lookup value doesn't exist)

Activate: create lookup value with **Lookup Value Name = 1 AND Active = true**

Deactivate: **Lookup Value Name = 0 OR Active = false**

Effect:

- > With this setting, hovering over the allocation or assignment grid will show a hint listing the displayed values as configured in the **Grid** tab of the **Preferences**, such as **ETC / Capacity**. This doesn't affect the hints for the grid in the resource list, which are always displayed.

8.12.6 Show Grid Hints for by Resource Views

Scope: itd Advanced Resource Planning, Allocations/Assignments by Resource

ID (LOOKUP_CODE): layout_option_tooltip_resource

Initial Setting: inactive (lookup value doesn't exist)

Activate: create lookup value with **Lookup Value Name = 1 AND Active = true**

Deactivate: **Lookup Value Name = 0 OR Active = false**

Effect:

- > With this setting, hovering over the allocation or assignment grid will show a hint listing the displayed values as configured in the **Grid** tab of the **Preferences**, such as **ETC / Capacity**. This doesn't affect the hints for the grid in resource rows, which are always displayed.

8.12.7 Initially Load Investment Structure in Investment Modes

Scope:

- > itd Advanced Resource Planning, Allocations/Assignments by Investment
- > itd Portfolio Optimizer

ID (LOOKUP_CODE): calc_inv_has_children_flag

Initial Setting: active (lookup value doesn't exist)

Activate: Lookup Value Name = 1 OR Active = false

Deactivate: create lookup value with **Lookup Value Name = 0 AND Active = true**

Effect:

- > By default, in the investment modes, opening or refreshing the view will load the complete sub-structure of each displayed investment. In **Assignments by Investment** mode, this includes sub investments, phases, tasks and assignments. In **Allocations by Investment** mode, this includes sub investments and team entries.
The expand icon will then only be displayed for investments with a sub-structure.
Loading the complete sub-structure of each investment can take considerable time, depending on the exact data structure.
- > Create a lookup value with **Lookup Value Name = 0, ID = calc_inv_has_children_flag** and **Active = true** to prevent loading the full sub-structure of each investment when the view is opened or refreshed, saving some loading time.
The expand icon will then be displayed for all investments without checking whether they do have a sub-structure. Clicking this icon will load existing sub-structures or hide the icon where no sub-structure exists.

8.12.8 Configure by Investment Resource View Rights

Scope:

- > itd Advanced Resource Planning, Allocations/Assignments by Investment
- > itd Portfolio Optimizer

ID (LOOKUP_CODE): check_res_view_right_for_util

Initial Setting: inactive (lookup value doesn't exist)

Activate: create lookup value with **Lookup Value Name = 1 AND Active = true**

Deactivate: **Lookup Value Name = 0 OR Active = false**

Effect:

- > By default, the resource utilization histogram will display the utilization for any resource, role or team for which the user has at least the **Resource – Soft Book** right.
- > With this setting, the resource utilization histogram will only display the utilization for resources, roles and teams for which users have at least the **Resource – View** right.

8.12.9 Configure by Investment Resource View Popup Rights

Scope:

- > itd Advanced Resource Planning, Allocations/Assignments by Investment
- > itd Portfolio Optimizer

ID (LOOKUP_CODE): capacity_popup_with_soft_book

Initial Setting: inactive (lookup value doesn't exist)

Activate: create lookup value with **Lookup Value Name = 1 AND Active = true**

Deactivate: **Lookup Value Name = 0 OR Active = false**

Effect:

- > By default, clicking on utilization histogram slices will only display team entries and investments for resources, roles and teams for which the user has at least the **Resource – View** right.
- > With this setting, clicking on utilization histogram slices will display team entries and investments for resources, roles and teams for which the user has at least the **Resource – Soft Book** right.
- > Depending on the **resource_view_right_all_by_inv** and **resource_view_right_ass_by_inv** settings, investment rights may apply for team entries of resources, roles and teams for which users have no resource rights, see sections 8.12.10 below and 8.12.12 on page 167.

8.12.10 Configure Allocations by Investment View Resource Rights

Scope:

- > itd Advanced Resource Planning, Allocations by Investment
- > itd Portfolio Optimizer

ID (LOOKUP_CODE): resource_view_right_all_by_inv

Initial Setting: inactive (lookup value doesn't exist)

Activate: create lookup value with **Lookup Value Name = 1 AND Active = true** AND add elements to **Description**, separated by commas ","

Deactivate: **Lookup Value Name = 0 OR Active = false** OR remove elements from **Description**

Possible Elements: (add both to apply to both modes)

- > SINGLE_INV: apply setting to single investment mode
- > ALL_INV: apply setting to multiple investment mode

Effect:

- > By default, clicking on utilization histogram slices will display team entries for investments for which the user has at least the **Investment – View** right as well as team entries of any resource, role and team for which the user has at least the **Resource – View/Soft Book** right, see section 8.12.9 above.
- > With this setting, clicking on utilization histogram slices in the **Allocations by Investment** view will only consider resource rights and ignore any additional investment rights.
- > The setting may be activated for single investment mode and multiple investment mode independently by adding either or both of **SINGLE_INV** and **ALL_INV** to the **Description**.

8.12.11 Configure Allocations by Resource View Rights

Scope: itd Advanced Resource Planning, Allocations by Resource

ID (LOOKUP_CODE): resource_view_right_all_by_res

Initial Setting: inactive (lookup value doesn't exist)

Activate: create lookup value with **Lookup Value Name = 1** AND **Active = true** AND add elements to **Description**, separated by commas ","

Deactivate: **Lookup Value Name = 0** OR **Active = false** OR remove elements from **Description**

Possible Elements: (add both to apply to both modes)

- > SINGLE_INV: apply setting to single investment mode
- > ALL_INV: apply setting to multiple investment mode

Effect:

- > By default, the **Allocations by Resource** view will display any resources, roles and teams with team entries for investments for which the user has the respective **View** right.
- > With this setting, any resources, roles and teams for which the user has the **Resource – View** right and their team entries will be displayed instead, ignoring investment rights.
- > The setting may be activated for single investment mode and multiple investment mode independently by adding either or both of **SINGLE_INV** and **ALL_INV** to the **Description**.

8.12.12 Configure Assignments by Investment View Resource Rights

Scope: itd Advanced Resource Planning, Assignments by Investment

ID (LOOKUP_CODE): resource_view_right_ass_by_inv

Initial Setting: inactive (lookup value doesn't exist)

Activate: create lookup value with **Lookup Value Name = 1** AND **Active = true** AND add elements to **Description**, separated by commas ","

Deactivate: **Lookup Value Name = 0** OR **Active = false** OR remove elements from **Description**

Possible Elements: (add both to apply to both modes)

- > SINGLE_INV: apply setting to single investment mode
- > ALL_INV: apply setting to multiple investment mode

Effect:

- > By default, clicking on utilization histogram slices will display team entries for investments for which the user has at least the **Investment – View** right as well as team entries of any resource, role and team for which the user has at least the **Resource –View/Soft Book** right, see section 8.12.9 on page 166.
- > With this setting, clicking on utilization histogram slices in the **Assignments by Investment** view will only consider resource rights and ignore any additional investment rights.
- > The setting may be activated for single investment mode and multiple investment mode independently by adding either or both of **SINGLE_INV** and **ALL_INV** to the **Description**.

8.12.13 Configure Assignments by Resource View Rights

Scope: itd Advanced Resource Planning, Assignments by Resource

ID (LOOKUP_CODE): resource_view_right_ass_by_res

Initial Setting: inactive (lookup value doesn't exist)

Activate: create lookup value with **Lookup Value Name = 1** AND **Active = true** AND add elements to **Description**, separated by commas ","

Deactivate: **Lookup Value Name = 0** OR **Active = false** OR remove elements from **Description**

Possible Elements: (add both to apply to both modes)

- > SINGLE_INV: apply setting to single investment mode
- > ALL_INV: apply setting to multiple investment mode

Effect:

- > By default, the **Assignments by Resource** view will display any resources, roles and teams with team entries for investments for which the user has the respective **View** right.
- > With this setting, only resources, roles and teams for which the user has the **Resource – View** right will be displayed. In this case, the **View** right for associated investments is still required in addition to the **Resource – View** right.
- > The setting may be activated for single investment mode and multiple investment mode independently by adding either or both of **SINGLE_INV** and **ALL_INV** to the **Description**.

8.12.14 Disable Resource List Links in Investment Modes

Scope:

- > itd Advanced Resource Planning, Allocations/Assignments by Investment
- > itd Portfolio Optimizer

ID (LOOKUP_CODE): disable_link_in_util_panel

Initial Setting: inactive (lookup value doesn't exist)

Activate: create lookup value with **Lookup Value Name = 1** AND **Active = true**

Deactivate: **Lookup Value Name = 0** OR **Active = false**

Effect:

- > With this setting, it is no longer possible to open the associated properties by clicking on a resource, role or team in the resource list.

8.12.15 Include Sub-Roles in Role Capacity in Allocations Modes

Scope:

- > itd Advanced Resource Planning, Allocations by Investment/Resource
- > itd Portfolio Optimizer

ID (LOOKUP_CODE): calc_role_availability_option

Initial Setting: inactive (lookup value doesn't exist)

Activate: create lookup value with **Lookup Value Name = 1** AND **Active = true**

Deactivate: **Lookup Value Name = 0** OR **Active = false**

Effect:

- > By default, the capacity of a role is calculated based only on associated resources.
- > Activating this lookup value adds the **Role Capacity** setting to the **Utilization** tab of the user preferences for the **Allocations by Investment** and **Allocations by Resource** view modes.
- > Use this setting to enable the inclusion of sub-role resources in the role capacity calculation.
- > The setting will be saved per view.

8.12.16 Role Capacities in Allocations by Investment Mode

Scope:

- > itd Advanced Resource Planning, Allocations by Investment
- > itd Portfolio Optimizer

ID (LOOKUP_CODE): raw_avail_in_utilization

Initial Setting: activated with **Lookup Value Name = 1**

Activate: **Lookup Value Name = 1 AND Active = true**

Deactivate: **Lookup Value Name = 0 OR Active = false**

Effect:

- > When this lookup value is active, the utilization grid in **Allocations by Investment** views will show the non-histogram mode capacity value selected in the **Utilization** tab of the **Preferences** for both resources and roles, **Capacity** or **Remaining**.
- > When you deactivate this lookup value, either capacity value will show up as the remaining capacity for roles. Resources will still use the selected value.
 - **Capacity** will show the total capacity for resources and the remaining capacity for roles.
 - **Remaining** will show the remaining capacity for both resources and roles.
- > The histogram is not affected by this setting.

8.12.17 Disable Role Allocation Replacement

Scope:

- > itd Advanced Resource Planning, Allocations by Investment
- > itd Portfolio Optimizer

ID (LOOKUP_CODE): disable_role_replacement_alloc

Initial Setting: inactive (lookup value doesn't exist)

Activate: create lookup value with **Lookup Value Name = 1 AND Active = true**

Deactivate: **Lookup Value Name = 0 OR Active = false**

Effect:

- > In **Allocations by Investment** mode, roles can no longer be replaced in an allocation via drag-and-drop of other roles, resources or teams from the resource list.

8.12.18 Remaining Capacity: Don't Remove Team Role Entry

Scope:

- > itd Advanced Resource Planning, Allocations by Investment
- > itd Portfolio Optimizer

ID (LOOKUP_CODE): keep_role_with_remain_avail_op

Initial Setting: inactive (lookup value doesn't exist)

Activate: create lookup value with **Lookup Value Name = 1 AND Active = true**

Deactivate: **Lookup Value Name = 0 OR Active = false**

Effect:

- > In **Allocations by Investment** mode, completely replacing a role allocation via **Remaining Capacity**, such that there is no role allocation left, will no longer remove the role's team entry.

8.12.19 Remaining Capacity: Only Shift Editable Value

Scope:

- > itd Advanced Resource Planning, Allocations by Investment
- > itd Portfolio Optimizer

ID (LOOKUP_CODE): only_read_value_remain_avail

Initial Setting: inactive (lookup value doesn't exist)

Activate: create lookup value with **Lookup Value Name = 1 AND Active = true**

Deactivate: **Lookup Value Name = 0 OR Active = false**

Effect:

- > In **Allocations by Investment** mode, replacing a role via **Remaining Capacity** will only replace the editable value on the right of the cell, **Allocation** or **Hard Allocation**, not the respective other value.

8.12.20 Filter Utilization by Custom Assignment Field

Scope: itd Advanced Resource Planning, Assignments by Investment/Resource

ID (LOOKUP_CODE): util_ass_curve_filter

Initial Setting: inactive (lookup value doesn't exist)

Activate: create lookup value with **Lookup Value Name = 1 AND Active = true AND Description =**

Attribute_ID: Lookup Value IDs (**Attribute_ID** must be a custom static string lookup assignment field, separate **Lookup Value IDs** by commas ",")

Example: request_status: Approved, Booked

Deactivate: **Lookup Value Name = 0 OR Active = false OR remove Description**

Effects:

- > **Assignments by Investment:** the utilization displayed in the **Resources** list will be filtered.
- > **Assignments by Resource:** per resource, role and team, the total utilization will be displayed, but the utilization used to determine the remaining capacity displayed per resource will be filtered and a resource, role or team will be displayed as under- or overbooked based on the filtered utilization.

8.12.21 Editable Resource Types

Scope: itd Advanced Resource Planning, Assignments by Investment/Resource

ID (LOOKUP_CODE): editable_resource_types

Initial Setting: inactive (lookup value doesn't exist)

Activate: create lookup value with **Lookup Value Name = 1 AND Active = true** AND add elements to **Description**, separated by commas ","

Deactivate: **Lookup Value Name = 0 OR Active = false** (will apply default) OR remove elements from **Description**

Possible Elements: (default: all)

- > labor
- > equipment
- > material
- > expense

Effect:

- > The **ETC** column and **ETC** values in the assignment grid are editable only for resource types listed in the **Description**

8.12.22 Edit Task and Assignment Start and Finish Regardless of Status

Scope: itd Advanced Resource Planning, Assignments by Investment/Resource

ID (LOOKUP_CODE): disable_status_check_for_edit

Initial Setting: inactive (lookup value doesn't exist)

Activate: create lookup value with **Lookup Value Name = 1 AND Active = true**

Deactivate: **Lookup Value Name = 0 OR Active = false**

Effect:

- > By default, you can only change the **Start** and **Finish** of tasks and assignments with the **Not started** status.
- > With this setting, the status check will be disabled. The **Start** and **Finish** will still be locked for tasks and assignments with actuals.

8.12.23 Hide Description Tooltips

Scope: itd Advanced Resource Planning, Assignments by Investment/Resource

ID (LOOKUP_CODE): hide_description_tooltip

Initial Setting: inactive (lookup value doesn't exist)

Activate: create lookup value with **Lookup Value Name = 1 AND Active = true**

Deactivate: **Lookup Value Name = 0 OR Active = false**

Effect:

- > By default, when hovering over an investment name in **Assignments by Investment** or **Assignments by Resource** views, the associated description will be displayed in a tooltip.
- > With this setting, these tooltips may be deactivated.

8.12.24 Keep Task Duration

Scope: itd Advanced Resource Planning, Assignments by Investment

ID (LOOKUP_CODE): default_keep_task_duration

Initial Setting: active (lookup value doesn't exist)

Activate: **Lookup Value Name = 1 OR Active = false**

Deactivate: create lookup value with **Lookup Value Name = 0 AND Active = true**

Effect:

- > This setting is active by default. In this case, changing the start date of a task or phase via the **Start** column will also change the **Finish**, retaining the duration of the task or phase.
- > Create a lookup value with **Lookup Value Name = 0**, **ID = default_keep_task_duration** and **Active = true** to deactivate, such that changing the start date of a task or phase won't change the finish.

8.12.25 Automatically Create New Team Entries for Roles

Scope: itd Advanced Resource Planning, Assignments by Investment

ID (LOOKUP_CODE): auto_create_new_team_entry

Initial Setting: inactive (lookup value doesn't exist)

Activate: create lookup value with **Lookup Value Name = 1 AND Active = true**

Deactivate: **Lookup Value Name = 0 OR Active = false**

Effect:

- > By default (without this setting), dragging a role from the **Assignments by Investment** view's resource list onto a project task or an NPIO which already has a team entry for that role will open a dialog allowing users to select an existing team entry or create a new one.
- > With this setting, a new team entry will always be created automatically for the role instead.

8.12.26 Disable Role Replacement for Assignments

Scope: itd Advanced Resource Planning, Assignments by Investment

ID (LOOKUP_CODE): disable_role_replacement_ass

Initial Setting: inactive (lookup value doesn't exist)

Activate: create lookup value with **Lookup Value Name = 1 AND Active = true**

Deactivate: **Lookup Value Name = 0 OR Active = false**

Effect:

- > In **Assignments by Investment** mode, roles can no longer be replaced in an assignment via drag-and-drop of other roles, resources or teams from the resource list.

8.12.27 Updating itd Advanced Resource Planning

After changing settings for itd Advanced Resource Planning via the **itd AE Preferences** lookup, you need to reset the cache to apply the new settings.

This requires membership in the **ARP Admin** group.

To do so, call the portlet with **&flushCaches=true**, replacing **[clarity_url]** by your Clarity URL:

[https://\[clarity_url\]/niku/nu#action:pl.itd.ae.page.assignment.editor&flushCaches=true](https://[clarity_url]/niku/nu#action:pl.itd.ae.page.assignment.editor&flushCaches=true)

Please note that the parameter won't be passed to an embedded page in the Modern UX.

You need to open the portlet in the Classic UI with **&flushCaches=true to reset the cache.**

8.13 Deprecated itd AE Preferences Keys

The following keys are no longer supported.

 The associated settings are available to **ARP Admins** via the **Administration** button in the main toolbar in any view in the application, see "8.9 Global Settings in the Application" on page 155.

- > 8.13.1 Hide Preferences Tabs, page 173 (General).
- > 8.13.2 Hide Toolbar Buttons, page 173 (General).
- > 8.13.3 Restrict Time Slice Periods in the Preferences and in the Toolbar, page 174 (General).
- > 8.13.4 Hide Work Effort Units, page 174 (Staffing).
- > 8.13.5 Disable Replacement Options, page 175 (Staffing).
- > 8.13.6 Consider Actuals for Remaining Capacity, page 175 (Staffing).

8.13.1 Hide Preferences Tabs

Scope: itd Advanced Resource Planning and itd Portfolio Optimizer

ID (LOOKUP_CODE): hidden_preference_tabs

Initial Setting: active with **Description = query_limits**

Activate: set **Active = true** AND add elements to **Description**, separated by commas ","

Deactivate: set **Active = false** (will apply default) OR remove elements from **Description**

Possible Elements: (default: query_limits, deprecated)

- > general: **General**
- > time_slice: **Timeslices**
- > utilization: **Utilization**
- > layout: **Layout**

Effect:

- > Hide **Preferences** tabs listed in **Description**

8.13.2 Hide Toolbar Buttons

Scope: itd Advanced Resource Planning and itd Portfolio Optimizer

ID (LOOKUP_CODE): hidden_toolbar_buttons

Initial Setting: active with **Description = expand_all, collapse_all**

Activate: **Active = true** AND add elements to **Description**, separated by commas ","

Deactivate: **Active = false** (will apply default) OR remove elements from **Description**

Possible Elements: (default: expand_all, collapse_all)

- > preferences: **Preferences**
- > visualization: **Visualization**
- > export_to_excel: **Export to Excel**
- > scenario: **Scenario**
- > expand_all: **Expand All** (this may affect the performance when expanding many items)
- > collapse_all: **Collapse All** (this may affect the performance when collapsing many items)
- > detailed_view: **Detailed View** of assignments in **Assignments by Investment** mode.

Effect:

- > Hide toolbar buttons listed in **Description**

8.13.3 Restrict Time Slice Periods in the Preferences and in the Toolbar

Scope: itd Advanced Resource Planning and itd Portfolio Optimizer

ID (LOOKUP_CODE): preference_tab_time_slice

Initial Setting: deactivated with **Description = timeslice_mode: month, year, quarter**

Activate: Active = true AND add elements to **Description**, separated by commas ","

Deactivate: Active = false (will apply default) OR remove elements from **Description**

Possible Elements: (default: all)

- > day: **Days**
- > week: **Weeks**
- > month: **Months**
- > quarter: **Quarters**
- > year: **Calendar Years**
- > fiscal_period: **Fiscal Period**

Effect:

- > Only time slice periods listed in the **Description** will be available for selection in the **Preferences** and in the toolbar.

8.13.4 Hide Work Effort Units

Scope: itd Advanced Resource Planning and itd Portfolio Optimizer

ID (LOOKUP_CODE): hidden_work_effort_units

Initial Setting: inactive (lookup value doesn't exist)

Activate: create lookup value with **Lookup Value Name = 1** AND **Active = true** AND add elements to **Description**, separated by commas ","

Deactivate: Lookup Value Name = 0 OR **Active = false** OR remove elements from **Description**

Possible Elements: (default: none)

- > UNIT_HOURS: **Hours**
- > UNIT_DAYS: **Days**
- > UNIT_FTE: **FTE** (full time equivalents)

Effect:

- > Entered units aren't selectable in itd Advanced Resource Planning and itd Portfolio Optimizer.
- > The **System Standard** list item is never affected even if the associated unit is hidden.
- > When opening a view that was saved with a hidden unit, that view is automatically switched to the **System Standard** unit.

8.13.5 Disable Replacement Options

Scope:

- > itd Advanced Resource Planning, Allocations by Investment
- > itd Portfolio Optimizer

ID (LOOKUP_CODE): disable_replacement_option

Initial Setting: inactive (lookup value doesn't exist)

Activate: create lookup value with **Lookup Value Name = 1** AND **Active = true** AND add elements to **Description**, separated by commas ","

Deactivate: **Lookup Value Name = 0** OR **Active = false** (will apply default) OR remove elements from **Description**

Possible Elements: (default: none)

- > TotalAvailability: **Total Capacity**
- > RemainingAvailability: **Remaining Capacity**
- > Complete: **Full**

Effect:

- > Deactivated replacement options are disabled when replacing allocations in **Allocations by Investment** mode, with a hint stating they have been deactivated by an administrator.

8.13.6 Consider Actuals for Remaining Capacity

Scope: itd Advanced Resource Planning, Assignments by Investment/Resource

ID (LOOKUP_CODE): consider_actuals_for_remaining

Initial Setting: deactivated with **Lookup Value Name = 1**

Activate: **Lookup Value Name = 1** AND **Active = true**

Deactivate: **Lookup Value Name = 0** OR **Active = false**

Effect:

- > When the histogram is displayed, actuals entered for a period will be added to the total **Effort** and subtracted from the **Remaining** capacity displayed for that period.
- > When the histogram isn't displayed, actuals entered for a period will only be subtracted from the remaining capacity displayed for that period, and won't be included in the utilization.
- > **Example:** 20 hrs actuals and 80 hrs ETC entered for a month with total capacity 160 hrs.
 - With this setting, the displayed **Remaining** capacity will be 60 hours.
 - Without this setting, the displayed **Remaining** capacity will be 80 hours.

8.14 itd AE Included Investment Types Lookup

Use the **itd AE Included Investment Types** lookup to filter selected view modes by investment type. Modes for which you define no filters won't be filtered by investment type.

The **ID (code)** of this lookup is **PL_ITD_AE_LKP_INCLUDED_INV_TYPES**.

It is used for both itd Advanced Resource Planning and the itd Portfolio Optimizer.

Please note: This configuration is only valid for the global mode which shows all investments. It is ignored in the single investment, roadmap and hierarchy modes.

8.14.1 Configuring Included Investment Types

To configure an investment type filter, add a lookup value with the following field values:

- > **ID** equal to the Clarity **object code** of the investment type you want to include (usually the investment type name in lower case, e.g., "asset" for the **Asset** investment type).
- > **Name** has no effect other than being displayed in the lookup value list.
- > **Description** specifies all view modes to include the investment type and needs to be spelled exactly as follows, in capital letters:
 - ALLOCATION_BY_INVESTMENT_ASE
 - ALLOCATION_BY_RESOURCE_ASE
 - ASSIGNMENTS_BY_INVESTMENT
 - ASSIGNMENTS_BY_RESOURCE

If you are specifying multiple view modes, you may choose any separator, such as a space or comma, as long as all required view modes are present in the correct spelling.

- > **Active** can be removed to disable a lookup value, as if it wasn't there.

8.14.2 Example

GENERAL PARENT WINDOW VALUES AUTO SUGGEST							
Lookup: itd AE Included Investment Types - Values							
Partition: System ▼							
☐	Lookup Value	ID	Partition	Partition Association Mode	Description	Active	System Type
☐	Asset	asset	System	Partition, ancestors and descendants	ASSIGNMENTS_BY_INVESTMENT, ASSIGNMENTS_BY_RESOURCE	✓	User-defined
☐	Other Work	other	System	Partition, ancestors and descendants	ASSIGNMENTS_BY_INVESTMENT	✓	User-defined
NEW ACTIVATE DEACTIVATE RETURN							

This configuration has the following effects on itd Advanced Resource Planning:

- > **Allocations by Investment:** No investment type filter.
- > **Allocations by Resource:** No investment type filter.
- > **Assignments by Investment:** Only **Other Work** and **Asset** investments included.
- > **Assignments by Resource:** Only **Asset** investments included.

8.14.3 Filtering in Views

If an investment type is configured for a specific view mode, the **Investment Type** filter is effectively prefilled with the configured investment types. However, this is not visualized in the **Investment Type** filter control, which can still be used to filter by the configured investment types.

8.14.4 Utilization

The utilization that is calculated and displayed on the resource level isn't affected by the filter. Therefore, filtered out investments will still be displayed in the flyout when hovering over associated utilization segments in **by Investment** views.

8.14.5 Updating itd Advanced Resource Planning

After changing settings for itd Advanced Resource Planning via the **itd AE Included Investment Types** lookup, you need to reset the cache to apply the new settings.

This requires membership in the **ARP Admin** group.

To do so, call the portlet with **&flushCaches=true**, replacing **[clarity_url]** by your Clarity URL:

[https://\[clarity_url\]/niku/nu#action:pl.itd.ae.page.assignment.editor&flushCaches=true](https://[clarity_url]/niku/nu#action:pl.itd.ae.page.assignment.editor&flushCaches=true)

Please note that the parameter won't be passed to an embedded page in the Modern UX.

You need to open the portlet in the Classic UI with **&flushCaches=true to reset the cache.**

8.15 Governors Lookup (Limits and Caches)

Some database access and memory usage settings may be managed via the governors lookup:

- > The governors lookup doesn't exist by default. To change associated settings, create a new lookup with **ID (code) = PL_ITD_AE_LKP_GOVERNORS**.
- > Creating and editing lookups requires the global **Administration – Application Setup** right, which Clarity PPM application administrators have by default.
- > This lookup is used for both itd Advanced Resource Planning and the itd Portfolio Optimizer. Please note that not all lookup values apply to both applications.
- > Use the **&flushCaches=true** URL parameter to update the applications with changed settings, see section "8.15.4 Updating itd Advanced Resource Planning" on page 179.

The governors lookup can be used to control the amount of results returned by database queries, the amount of data contained in the applications' caches as well as load batch sizes with **Calculate Sums** set to **On** or **Filtered**.

Similar to the preferences lookup, the settings controlled via the governors lookup need to be created as lookup values with the **ID (code)** set to the property name and the **name** set to the desired value (e.g., the resource limit can be shifted from the default value of 250 to 500 by creating a lookup value with **ID (code) = query.limit.resources** and **name = 500**).

This section lists all settings controllable via the governors lookup and their defaults.

8.15.1 Query Limits

When Investments, Resources and Assignments are retrieved from the database, the query limits parameters can limit the number of records held in memory and returned to the client.

These values may be controlled via the **query.limit.*** properties:

query.limit.resources=250

query.limit.investments=150

query.limit.assignments=500

8.15.2 Cache Sizing

The server-side caching mechanism we use ([Guava Caches](#)) allows for the definition of the [Cache's maximumSize\(\)](#).

You can edit these values via the **cache.max.*** properties:

cache.max.clarity.system.attrs=1 [system attributes]

cache.max.loading.pattern.lkp=1 [loading pattern lookup]

cache.max.investment=10 [investments]

cache.max.glob.rights.by.user=100 [global rights by user]

cache.max.object.perm.by.user=40 [object permissions by user]

cache.max.translation.cache=20 [translation cache]

cache.max.preference.lkp=300 [preferences lookup]

cache.max.calender=1 [calendar]

cache.max.project.hpd.factor=1 [project hours per day factor]

cache.max.custom.inv=1 [custom investments]

Please note: Changing these values will not impact the amount of data loaded and used, only the amount of data that is cached for later use. Raising these values will take up more working memory. Lowering these values will result in reduced performance.

8.15.3 Load Batch Sizing

With **Calculate Sums** set to **On** or **Filtered** in the **Timeslices** tab of the **Preferences** for the respective view mode, aggregated values will be calculated and displayed for all visible aggregation levels (task, phase, investment, resource/role/team). These data will be loaded from Clarity PPM curves. Curves will be loaded in batches to save heap space.

You can configure the size of these batches.

You can edit these values via the `cache.max.batch.curve.*` properties:

`cache.max.batch.curve.task=100` [tasks]

`cache.max.batch.curve.res=100` [resources]

`cache.max.batch.curve.inv.res=100` [investments per resource]

`cache.max.batch.curve.inv=100` [investments]

Please consider the following when adjusting these numbers:

- > Lower values will cause more frequent requests to the database
- > Higher values will increase the amount of working memory used during these calculations.

8.15.4 Updating itd Advanced Resource Planning

After changing settings for itd Advanced Resource Planning via the governors lookup, you need to reset the cache to apply the new settings.

This requires membership in the **ARP Admin** group.

To do so, call the portlet with `&flushCaches=true`, replacing `[clarity_url]` by your Clarity URL:

`https://[clarity_url]/niku/nu#action:pl.itd.ae.page.assignment.editor&flushCaches=true`

Please note that the parameter won't be passed to an embedded page in the Modern UX.

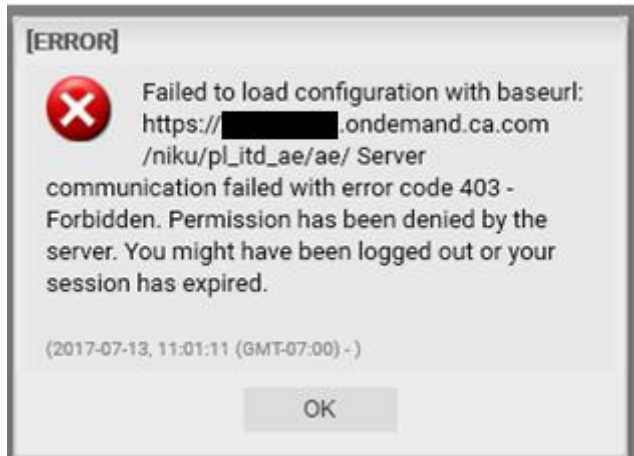
You need to open the portlet in the Classic UI with `&flushCaches=true` to reset the cache.

8.16 Troubleshooting

This section provides solutions for known issues with itd Advanced Resource Planning.

8.16.1 Failed to load configuration with baseurl - error 403 – Forbidden

Issue: Any user trying to access itd Advanced Resource Planning, including system administrators, gets a "403 – Forbidden" error.



Cause: The reference to the `pl_itd_ae` component was removed from the `components.xml` file. This may happen when a general patch is installed on the Clarity PPM server (not necessarily for the affected customer).

Solution: Insert the line `<component id="pl_itd_ae" active="true" type="plugin"/>` in the `components.xml` file or reinstall the itd Advanced Resource Planning application.

The latter is the only viable solution for SaaS systems.