itdesign

# itd Advanced Resource Planning

User and Administrator Manual v8.0

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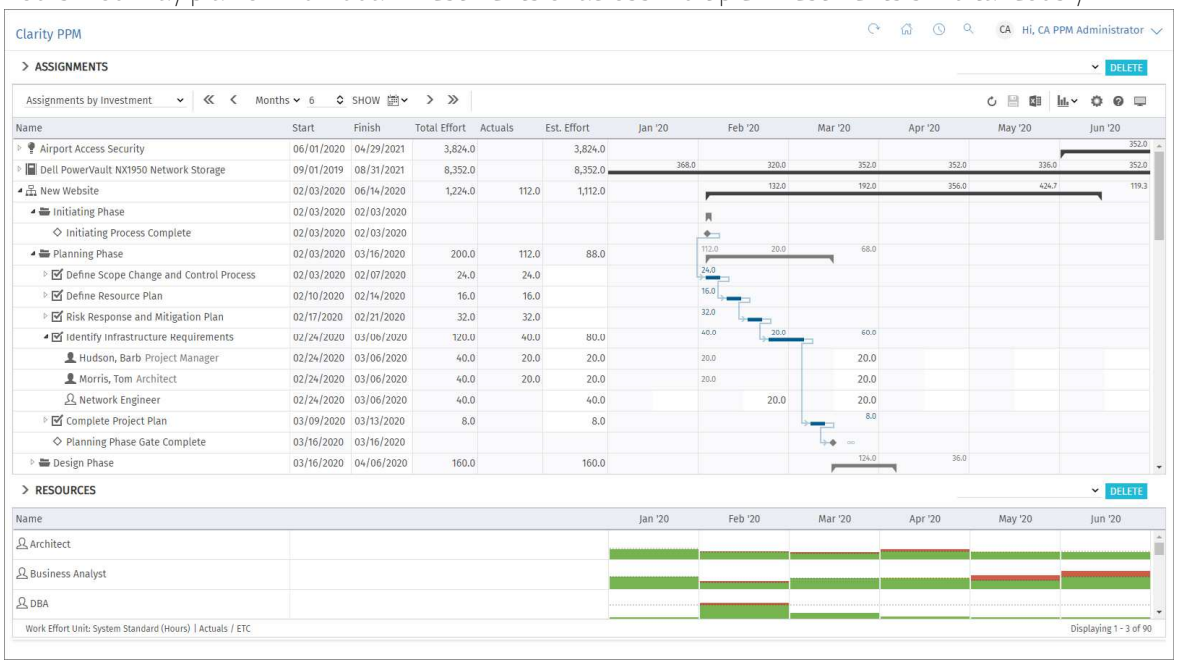
# 1 Short Description

itd Advanced Resource Planning is an add-on tightly integrated with Clarity PPM for planning working hours. You may plan on individual investments or across multiple investments simultaneously.



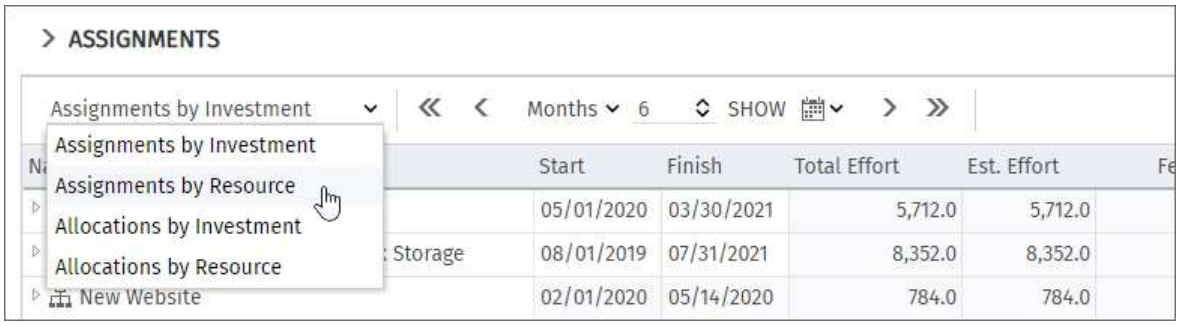

Workload can be entered per resource and task and may be summed up on various levels.
The global total utilization rate for each resource from all investments is also displayed. This allows to quickly spot resource overbookings or underbookings.

## Feature Overview

- Edit assignments or allocations (planned or hard)
- Plan across several investments
- View and edit project phases, tasks, milestones, assignments, team entries and dependencies between tasks and milestones in the interactive Gantt chart
- Global overview of resource availability and utilization in numbers or as a graphical histogram
- Quick selection of investments, tasks and roles/resources via filters for standard and custom investment, role/resource, team entry, task and assignment fields
- Edit scenario data in the allocations modes

# 2 Overview of View Modes

itd Advanced Resource Planning supports four hierarchic view modes, displayed and selected in the toolbar:




The selected view mode determines whether investments or resources will be displayed on the top level and whether assignments or allocations will be displayed.

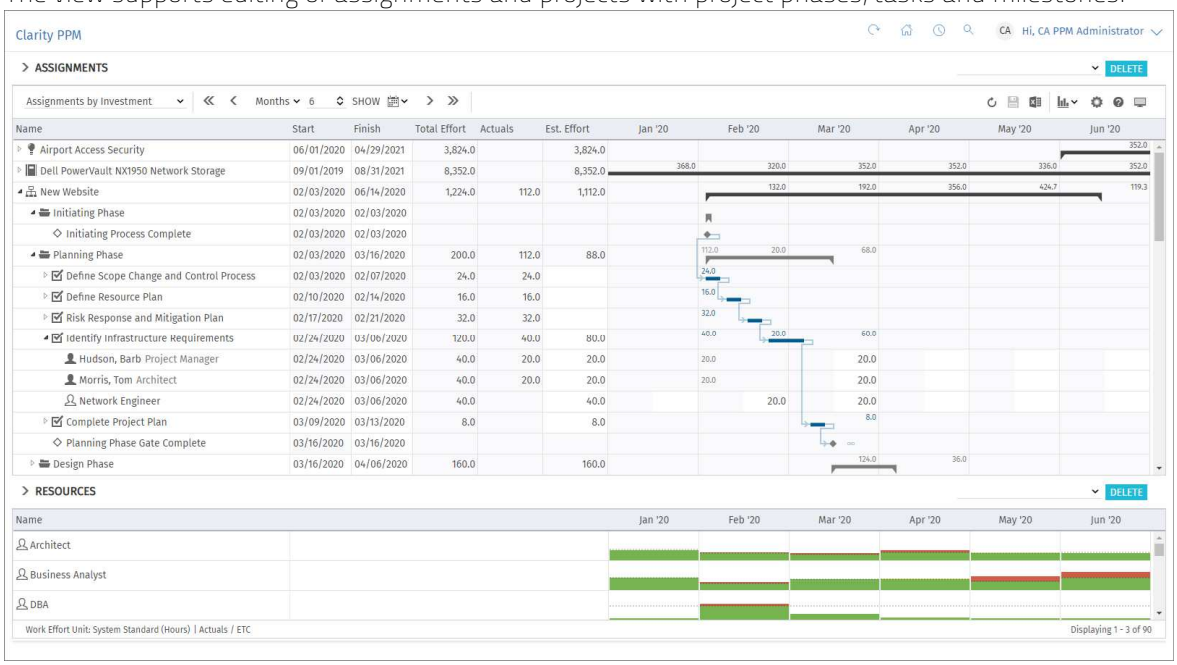
The view mode also affects the layout of the view's main area.

The following sections offer a quick overview of the four modes.

## 2.1 Assignments by Investment

The **Assignments by Investment** view groups role and resource assignments under the associated investments. For projects, the project structure is also displayed. The utilization and availability of roles and resources are displayed in numbers or graphically in histograms.

The view supports editing of assignments and projects with project phases, tasks and milestones.




### 2.1.1 Displayed Data

In **Assignments by Investment** mode, the following data will always be displayed:

- Investments
- Tasks in which selected roles and resources have been assigned to displayed projects
- Assigned roles and resources and associated assignments
- List of all roles and resources, optionally with utilization and availability (separate view)

You may limit the selection of data records via filter conditions (see "3 Filter" on page 20).

Displaying of project phases and milestones as well as of investment hierarchies is optional and can be toggled for each in the **General** tab of the **Preferences** (for investment hierarchies, also see "3.9.2 Selecting Investment Hierarchies in by Investment Modes" on page 28).

Displaying of assignments is also optional and can be turned off in the **Visualization** menu to speed up loading of the view.

See section "4.1 Displayed Data" on page 34 for details.

### 2.1.2 Estimated Effort, Actuals and Total Effort

In the **Columns** tab of the **Preferences**, you can display or hide the **Estimated Effort**, **Actuals** and **Total Effort** (total for **Estimated Effort** + **Actuals**) fields (see "7.3 Columns" on page 76).

See section "4.3 Estimated Effort, Actuals and Total Effort" on page 35 for details.

### 2.1.3 Editing Assignments and Monetary Values

In the right hand side assignment grid view, you can view and edit the **ETC** as well as any custom time scaled monetary values per period. See sections "4.4 Editing Assignments" on page 35 and "4.5 Editing Custom Time Scaled Monetary Values" on page 36 for details.

### 2.1.4 Editing List Fields

You may edit most fields displayed in the list.

See section "4.6 Editing List Fields" on page 37 for details.

### 2.1.5 Context Menu for Displayed Objects

Hover over an investment, project phase, task, milestone or assignment and click the three dots that are displayed to open the associated context menu.

The following default options are available here.

- **Open properties:** for investments, project phases, tasks, milestones and assignments
- **Create Task:** for projects, project phases and tasks without any assignments
- **Autoschedule:** projects
- **Allocate From Estimates:** for investments and assignments of roles and resources to tasks
- **Remove lock:** for projects locked due to changes made in itd Advanced Resource Planning
- **Indent Task:** tasks, milestones and project phases
- **Outdent Task:** indented tasks, milestones and project phases
- **Delete:** tasks and assignments without actuals and milestones
- **Task Dependencies:** for tasks and milestones
- **Expand all:** display full sub-structures of investments and project phases
- **Rename:** investments, project phases, tasks and milestones
- **Filter by Role, OBS and Skills:** role assignments

See section "4.7 Context Menu for Displayed Objects" on page 39 for details.

### 2.1.6 Moving and Copying Tasks, Milestones and Project Phases via Drag-and-Drop

You may change the order and hierarchy of tasks, milestones and project phases via drag-and-drop. Changes will be directly applied without further confirmation. Hold the [Ctrl] key while executing the following steps to copy the selected object instead of moving it.

See section "4.8.4 Moving and Copying Tasks, Milestones and Project Phases" on page 42 for details.

### 2.1.7 Interactive Gantt Chart

An interactive Gantt chart of the investments and any sub-structures they may have is also available here. You may toggle display of the interactive Gantt chart via the **Visualization** menu in the toolbar.
Also in the **Visualization** menu, you can toggle display of critical paths for projects.
In the Gantt chart, via drag-and-drop, you can change the **Start**, **Finish** and **Duration** fields of tasks and non-project investments that have no actuals yet, move milestones (drag horizontally), as well as create and edit dependencies between tasks and milestones (drag task or milestone vertically or double-click an existing dependency).
See section "4.9 Interactive Gantt Chart" on page 44 for details.

### 2.1.8 Utilization and Availability

The lower section of the view displays all roles and resources for which you have access rights by default. If desired, you may filter the displayed roles and resources.
With **Show Utilization** in the **General** tab of your **Preferences**, the total utilization and remaining availability of these roles and resources are also displayed per period, either in color-coded numbers or as a histogram chart.
The displayed workload is based on remaining estimated effort from assignments. Optionally, the workload and remaining availability displayed for the current period also consider actuals already entered for that period (see "8.12.7 Consider Actuals for Remaining Availability" on page 103).
Hover over a grid cell or histogram segment to display a hint indicating which values are displayed.
See section "4.10 Utilization and Availability" on page 45 for details about this view.

### 2.1.9 Assigning Roles and Resources via Drag-and-Drop

You may assign roles and resources to tasks or to non-project investments via drag-and-drop.
See the following sections for details about this feature:

- 4.10.4 Assigning a Role or Resource via Drag-and-Drop (page 47)
- 4.10.5 Copying Assigments (page 48)
- 4.10.6 Creating Multi-Role Assignments (page 48)

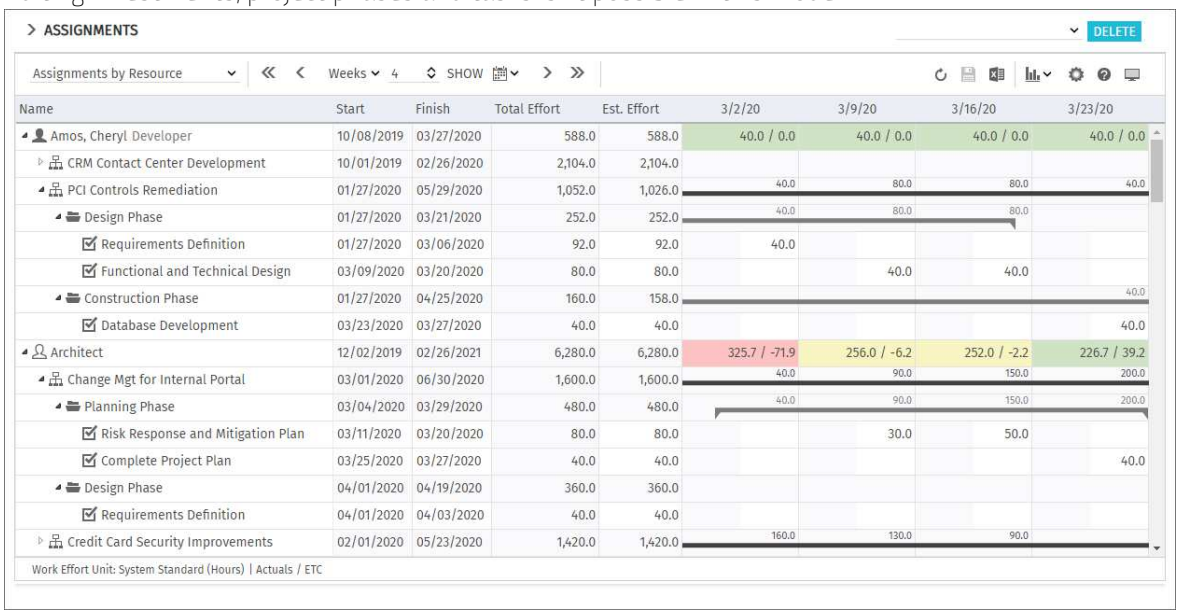
### 2.1.10 Assignments and Allocations in Single Investment Mode

In single investment mode, you may graphically compare assignments with the planned or hard allocation of associated team entries in the histogram instead of ETC and capacity.
See section "4.10.7 Assignments and Allocations in Single Investment Mode" on page 49 for details about this feature.
See sub-section "7.6.1 Assignments Modes" of "7.6 Layout" on page 83 for details about the **Preferences** for this feature

## 2.2 Assignments by Resource

The **Assignments by Resource** view groups investments, tasks and assignments under the assigned roles and resources. Because role and resource utilization are displayed directly in the right hand side assignment grid view in **Assignments by Resource** mode, there is no separate utilization view with associated filter settings in this view mode.

Editing investments, project phases and tasks isn't possible in this mode.




### 2.2.1 Displayed Data

In **Assignments by Resource** mode, the following data will always be displayed:

- Roles and resources
- Investments with team entries for displayed roles and resources
- Associated tasks and assignments
- Team entries without assignments

You may limit the selection of data records via filter conditions (see "3 Filter" on page 20).

Displaying project phases and parent investment hierarchies is optional and can be toggled for each in the **General** tab of the **Preferences**. See section "5.1 Displayed Data" on page 51 for details.

### 2.2.2 Estimated Effort, Actuals and Total Effort

In the **Columns** tab of the **Preferences**, you can display or hide the **Estimated Effort**, **Actuals** and **Total Effort** (total for **Estimated Effort** + **Actuals**) fields (see "7.3 Columns" on page 76).

See section "5.3 Estimated Effort, Actuals and Total Effort" on page 52 for details.

### 2.2.3 Editing Assignments and Monetary Values

In the right hand side assignment grid view, you can view and edit the **Estimated Effort** as well as any custom time scaled monetary values per period. See sections "5.4 Editing Assignments" on page 52 and "5.5 Editing Custom Time Scaled Monetary Values" on page 53 for details.

### 2.2.4 Editing List Fields

You may edit most fields displayed in the list.

See section "5.6 Editing List Fields" on page 53 for details.

### 2.2.5 Context Menu for Displayed Objects

Hover over a role, resource, investment or task and click the three dots that are displayed to open the associated context menu.
The following default options are available here.

- **Open properties:** for roles, resources, investments and task
- **Add Assignment:** for roles and resources to project tasks
- **Allocate From Estimates:** for assignments of roles and resources to project tasks
- **Delete:** assignments without actuals
- **Remove lock:** for projects locked due to changes made in itd Advanced Resource Planning
- **Expand all:** display full sub-structures of roles, resources and project phases

See section "5.7 Context Menu for Displayed Objects" on page 54 for details.

### 2.2.6 Gantt Chart

The optional Gantt chart is also available but doesn't offer any interaction features in this view mode. Like in **Assignments by Investment** mode, you may toggle display of the interactive Gantt chart via the **Visualization** menu in the toolbar.

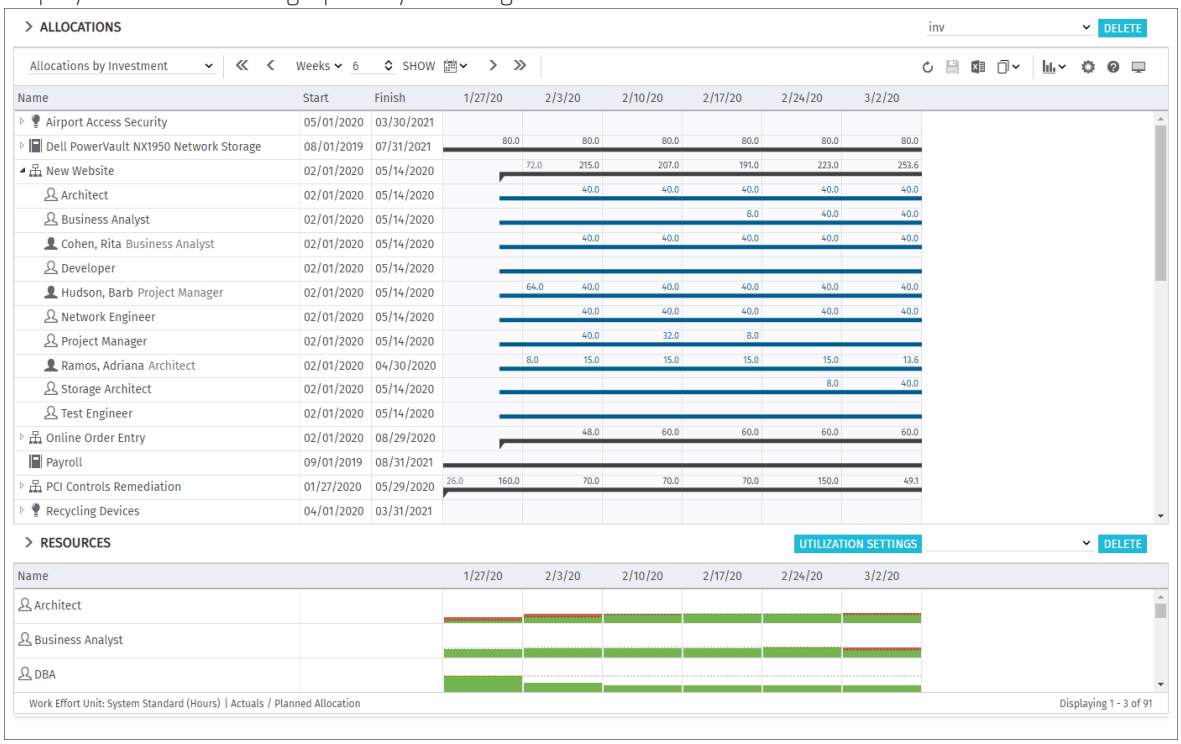
### 2.2.7 Utilization and Availability

With **Show Utilization** in the **General** tab of your **Preferences**, the utilization for displayed assignments and the global remaining availability based on all assignments are displayed per period for each role and resource in color-coded numbers in the header row with the role's or resource's name.
See section "5.9 Utilization and Availability" on 56 page for details.

## 2.3 Allocations by Investment

The **Allocations by Investment** view groups the team entries of allocated roles and resources and their allocations under the investments they belong to.

As in **Assignments by Investment** mode, the utilization and availability of roles and resources will be displayed in numbers or graphically in histograms.




### 2.3.1 Displayed Data

In **Allocations by Investment** mode, the following data will be displayed:

- Investments
- Roles and resources with team entries for displayed investments
- Associated team entries and allocations
- List of all roles and resources, optionally with utilization and availability (separate view)

You may limit the selection of data records via filter conditions (see "3 Filter" on page 20).

Displaying investment hierarchies is optional and can be toggled in the **General** tab of the **Preferences** (also see "3.9.2 Selecting Investment Hierarchies in by Investment Modes" on page 28).

See section "6.1 Displayed Data (Allocations by Investment)" on page 57 for details.

### 2.3.2 Displayed and Editable Values per Period

In **Allocations by Investment** mode, you may select up to two values that will be displayed per period for team entries (see sub-section "7.6.2 Allocations Modes" of "7.6 Layout" on page 84):

- **Optional read-only value (small blue number at the left edge of the cell):** Planned Allocation, Hard Allocation, ETC, Actuals, Actuals + ETC, Requested or Availability
- **Editable value (larger number at the right edge of the cell):** Planned Allocation or Hard Allocation

The editable value is also the value displayed in the utilization view (see "2.3.8 Availability and Utilization" on page 17).

### 2.3.3 Planned Allocation, Hard Allocation and Actuals

In the **Columns** tab of the **Preferences**, you can display or hide the **Planned Allocation**, **Hard Allocation** and **Actuals** fields (see "7.3 Columns" on page 76).

See section "6.4 Planned Allocation, Hard Allocation and Actuals" on page 52 for details.

### 2.3.4 Editing Allocations

In the upper section of the view, you can see and edit team entries for roles and resources, grouped by the associated investments.

See section "6.5 Editing Allocations" on page 59 for details.

### 2.3.5 Editing List Fields

You may edit most fields displayed in the list.

See section "6.6 Editing List Fields" on page 59 for details.

### 2.3.6 Context Menu for Investments and Team Entries

Hover over an investment, a role or a resource and click the three dots that are displayed to open the associated context menu.

The following default options are available here.

- **Open properties:** for investments and team entries (roles and resources)
- **Create Requisition:** for team entries (roles and resources)
- **Allocate From Estimates:** for investments and team entries (roles and resources)
- **Commit Planned Allocation:** for investments and team entries (roles and resources)
- **Accept Hard Allocation:** for investments and team entries (roles and resources)
- **Delete:** team entries (roles and resources) without actuals and associated allocations
- **Remove lock:** for projects locked due to changes made in itd Advanced Resource Planning
- **Expand all:** display all team entries of an investment
- **Rename:** investments
- **Filter by Role, OBS and Skills:** role team entries

See section "6.7 Context Menu for Displayed Objects" on page 61 for details.

### 2.3.7 Interactive Gantt Chart

The interactive Gantt chart is available here like in **Assignments by Investment** mode.

Investment Gantt bars will always be displayed. Via the **Show Gantt Bars for Team Members** option of the **Visualization** menu in the toolbar, you can switch between two edit modes for team entries:

- With the **Show Gantt Bars for Team Members** option, Gantt bars represent the start and finish of associated team entries and can be edited via drag-and-drop.
- Without the **Show Gantt Bars for Team Members** option, a grid will be displayed to display and edit the planned or hard allocation per period.

See section "6.8 Interactive Gantt Chart" on page 63 for details.

### 2.3.8 Availability and Utilization

The lower view section displays all roles and resources for which you have access rights by default and may be filtered. With **Show Utilization** in the **General** tab of your **Preferences**, the total or remaining availability and utilization of roles and resources are also displayed per period, in color-coded numbers or as a histogram chart. You may filter this view to only include approved investments and/or selected departments (see "3.7 Utilization Filters for Allocations Modes" on page 23).

In **Allocations by Investment** mode, only allocations are considered here. The editable value (**Planned** or **Hard**) is displayed (see "2.3.2 Displayed and Editable Values per Period" on page 15).

Hover over a grid cell or histogram segment to display a hint indicating which values are displayed.

Click a grid cell or histogram segment to display the associated investments.

See section "6.9 Availability and Utilization (Allocations by Investment)" on page 64 for details.

### 2.3.9 Allocating Roles and Resources via Drag-and-Drop

Drag a role or resource from the utilization view onto an investment to create a new team entry. Without Gantt bars for team members, you can then enter the planned or hard allocation for that team entry.

See the following sections for details about this feature:

- 6.9.5 Allocating a Role or Resource via Drag-and-Drop (page 65)
- 6.9.6 Creating Multi-Role Allocations (page 65)

### 2.3.10 Scenario Comparison

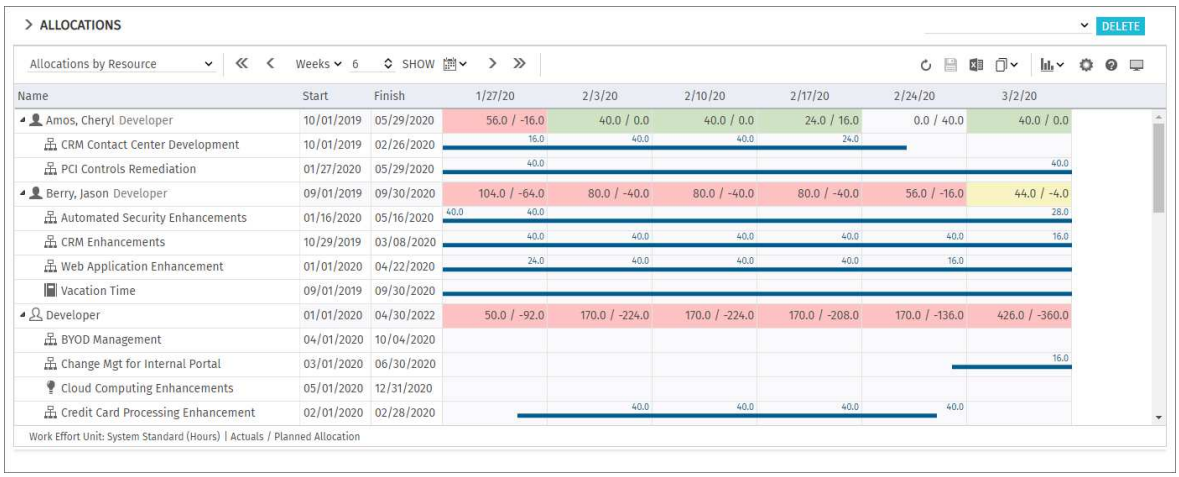
In the **Allocations** modes, the **Scenario** menu will be available in the toolbar if you have the **Scenario – Navigate** right and if the menu hasn't been hidden by a Clarity PPM application administrator (see "8.12.2 Hide Toolbar Buttons" on page 100).

In the **Scenario** menu, you have access to all scenarios for which you have the **View** right. You may edit data in any scenario for which you have the **Edit** right, regardless of resource or investment rights.

See section "6.11 Scenario Comparison" on page 67 for details.

## 2.4 Allocations by Resource

The **Allocations by Resource** view groups the team entries for investments and the associated allocations under the allocated roles and resources.




### 2.4.1 Displayed Data

In **Allocations by Resource** mode, the following data will be displayed:

- Roles and resources
- Investments with team entries of displayed roles and resources
- Associated team entries and allocations

You may limit the selection of data records via filter conditions (see "3 Filter" on page 20).

See section "6.2 Displayed Data (Allocations by Resource) " on page 58 for details.

### 2.4.2 Displayed and Editable Values per Period

Like in **Allocations by Investment** mode, you may select up to two values that will be displayed per period for team entries (see sub-section "7.6.2 Allocations Modes" of "7.6 Layout" on page 84).

Except for the **Availability**, the same values are available as in **Allocations by Investment** mode:

- **Optional read-only value (small blue number at the left edge of the cell):** Planned Allocation, Hard Allocation, ETC, Actuals, Actuals + ETC or Requested
- **Editable value (larger number at the right edge of the cell):** Planned Allocation or Hard Allocation

The editable value is also the displayed value for the utilization view (see "2.4.8 Utilization and Availability" on page 19).

### 2.4.3 Planned Allocation, Hard Allocation and Actuals

In the **Columns** tab of the **Preferences**, you can display or hide the **Planned Allocation**, **Hard Allocation** and **Actuals** fields (see "7.3 Columns" on page 76).

See section "6.4 Planned Allocation, Hard Allocation and Actuals" on page 52 for details.

### 2.4.4 Editing Allocations

At the right, you see and edit team entries of roles and resources for investments, grouped by the allocated roles and resources. See section "6.5 Editing Allocations" on page 59 for details.

### 2.4.5 Editing List Fields

You may edit most fields displayed in the list.

See section "6.6 Editing List Fields" on page 59 for details.

### 2.4.6 Context Menu for Roles / Resources and Team Entries

Hover over a role/resource or an investment and click the three dots that are displayed to open the associated context menu.

The following default options are available here.

- **Open properties**: for roles/resources and team entries (investments)
- **Create Requisition:** for team entries (investments)
- **Allocate From Estimates:** for team entries (investments)
- **Commit Planned Allocation:** for team entries (investments)
- **Accept Hard Allocation:** for team entries (investments)
- **Delete:** team entries (investments) without actuials and associated allocations
- **Expand all:** display all team entries of a role or resource.

See section "6.7 Context Menu for Displayed Objects" on page 61 for details.

### 2.4.7 Interactive Gantt Chart

The interactive Gantt chart is available here like in **Allocations by Investment** mode.

In **Allocations by Resource** mode, Gantt bars for investments won't be displayed.

Gantt bars for team entries will be displayed and may be edited via drag-and-drop when the **Show Gantt Bars for Team Members** option of the **Visualization** menu in the toolbar is selected.

See section "6.8 Interactive Gantt Chart" on page 63 for details.

### 2.4.8 Utilization and Availability

With **Show Utilization** in the **General** tab of your **Preferences**, the utilization for displayed allocations and the global remaining availability based on all allocations are displayed per period for each role and resource in color-coded numbers in the header row with the role's or resource's name.

You may filter this view to only include approved investments and/or selected departments (see "3.7 Utilization Filters for Allocations Modes" on page 23).

See section "6.10 Utilization and Availability (Allocations by Resource)" on page 66 for details.

### 2.4.9 Scenario Comparison

The scenario comparison mode offers the same features in **Allocations by Resource** mode as in **Allocations by Investment** mode (see "2.3.10 Scenario Comparison" on page 17.

# 3 Filter

This chapter describes the filter settings for the main view of itd Advanced Resource Planning.


- 3.1 Displayed Data (page 20)
- 3.2 Access Rights and Query Limits (page 21)
- 3.3 Selecting Filter Fields (page 21)
- 3.4 Filtering the Main View (page 21)
- 3.5 Filtering the Role and Resource List (page 22)
- 3.6 Applying, Resetting, Saving and Configuring Filters (page 22)
- 3.7 Utilization Filters for Allocations Modes (page 23)
- 3.8 Clarity PPM Lookups (page 25)
- 3.9 Default Filter Fields for the Main View (page 26)
- 3.10 Default Filter Fields for the Role and Resource List (page 32)


## 3.1 Displayed Data

Depending on your view mode, the following data will be loaded and displayed without a filter:

- Assignments by Investment
  - Any investments to which you have access
  - Associated tasks and optionally project phases, milestones and investment hierarchies (see "4.1.1 Displaying Milestones, Project Phases and Ínvestment Hierarchies" on page 34)
  - Optionally assignments under tasks and assigned roles and resources (see "4.1.2 Displaying Assignments" on page 34)
  - In the role and resource list, any roles and resources to which you have access
- Assignments by Resource
  - Any roles and resources with team entries for investments to which you have access (Optionally, only roles and resources you have access to will be displayed. In this case, access rights for associated investments will still be required, see "8.12.4 Configure Assignments by Resource View Rights" on page 101).
  - Assignments under roles/resources, associated investments, tasks and optionally project phases and parent investment hierarchies (see "5.1.5 Displaying Project Phases and Parent Investment Hierarchies" on page 52).
  - Team entries without assignments under associated investments
- Allocations by Investment
  - Any investments to which you have access, optionally with investment hierarchies (see "6.1.2 Displaying Investment Hierarchies" on page 57).
  - Roles and resources with team entries for displayed investments
  - Associated team entries and allocations
  - In the role and resource list, any roles and resources to which you have access
- Allocations by Resource
  - Any roles and resources with team entries for investments to which you have access (Optionally, any roles and resources you have access to are displayed instead, requiring no investment rights, see "8.12.5 Configure Allocations by Resource View Rights" on page 102).
  - Investments with team entries of displayed roles and resources
  - Associated team entries and allocations

## 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 in the `pl_itd_ae.properties` file on the server:

- **Access Rights:** data records to which you have no access in Clarity PPM will not be displayed in the itd Advanced Resource Planning application either (see "8.5 User Access Rights" on page 88).
- **Query Limits:** limits for the number of roles, resources, investments and assignments to load at the same time, entered by a system administrator in the `pl_itd_ae.properties` file on the server (see "8.13.1 Query Limits" on page 106).

  If data records aren't displayed due to query limits, this will be indicated.

## 3.3 Selecting Filter Fields

Which filter fields are available in what order is defined per user and view mode in the **Preferences** (see "7.4.1 Filter – Assignments/Allocations / Filter" on page 78).

In the **by Investment** view modes, you also select filter fields for the role and resource list in the **Preferences** (see "7.4.2 Filter – Resources" on page 80).

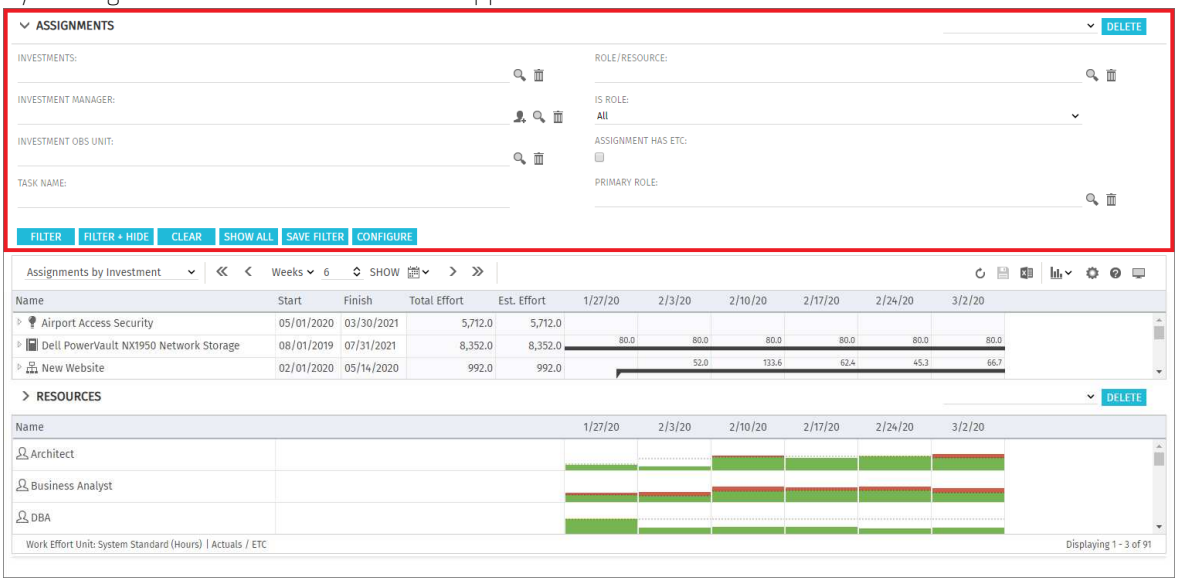
You may open the selection of available filter fields directly by clicking the **Configure** button on the respective filter panel.

By default, the filter fields listed in section "3.9 Default Filter Fields for the Main View" on page 26 will be available for the main view and the filter fields listed in section "3.10 Default Filter Fields for the Role and Resource List" on page 32 will be available for the role and resource list.

Members of the **ARP Admin** group may add other fields available for investments, investment sub-types, roles/resources, team entries, tasks and assignments to the selection of filter fields (see "8.11 Configuring List and Filter Fields" on page 96). Most Clarity PPM standard fields may be added, as well as most custom fields defined for these objects.

## 3.4 Filtering the Main View

The filter area for the main view is always displayed at the top. You can display or hide the filter area by clicking the little arrow button in the upper left corner of the view.



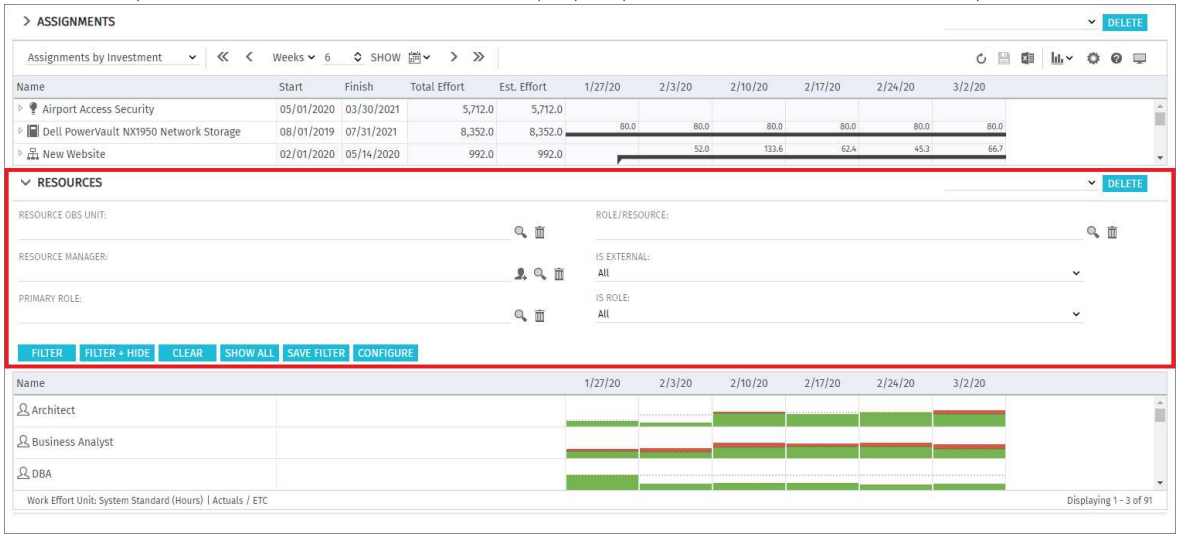

Enter filter conditions to filter the view by investment, role/resource, team entry, task and assignment properties.

## 3.5 Filtering the Role and Resource List

In the **by Investment** modes, the **Resources** view is displayed below the main view, listing available roles and resources. Click the little arrow button in the upper left corner of this view to display or hide the associated filter area.

Please note that filters entered for the main view have no effect on the **Resources** view. Likewise, filter conditions entered here have no effect on the main view.

Without any filters, the **Resources** view will display any roles and resources to which you have access.




Enter filter conditions to filter the list by role and resource properties.

## 3.6 Applying, Resetting, Saving and Configuring Filters

Use the buttons at the lower left of the filter panel to apply, reset or save your filter and to configure filter fields.

- Click **Filter** to load the data set matching the filter conditions.
- Click **Filter + Hide** to apply and hide the filter settings, expanding the assignment matrix.
- Click **Clear** to delete all filter conditions.
- Click **Show all** to clear all filter values and reload all data.
- Click **Save Filter** to preserve your current filter settings for future use. This includes filter fields and values. Name your filter and set it as default filter, if desired.
- Click **Configure** to change the selection of available filter fields.

Once you have saved your set of filter settings, you can always select it in the menu in the top right corner of the filter settings. Here, you may also **Delete** the selected filter.

Click the small arrow up button in the upper left corner to hide the filter settings, expanding the main area, or to display the filter settings again.

In **Allocations by Investment** mode, you can also access the **Utilization Filter** at the top right of the filter panel for the resource filter. This filter is described in the following section.

## 3.7 Utilization Filters for Allocations Modes

In the **Allocations** modes, you can filter the displayed utilization and availability.

Please note that team entries and allocations that aren't included in the utilization and availability will still be displayed in the main view as long as they match the separate filter for the main view.

### 3.7.1 Include Only Approved Investments

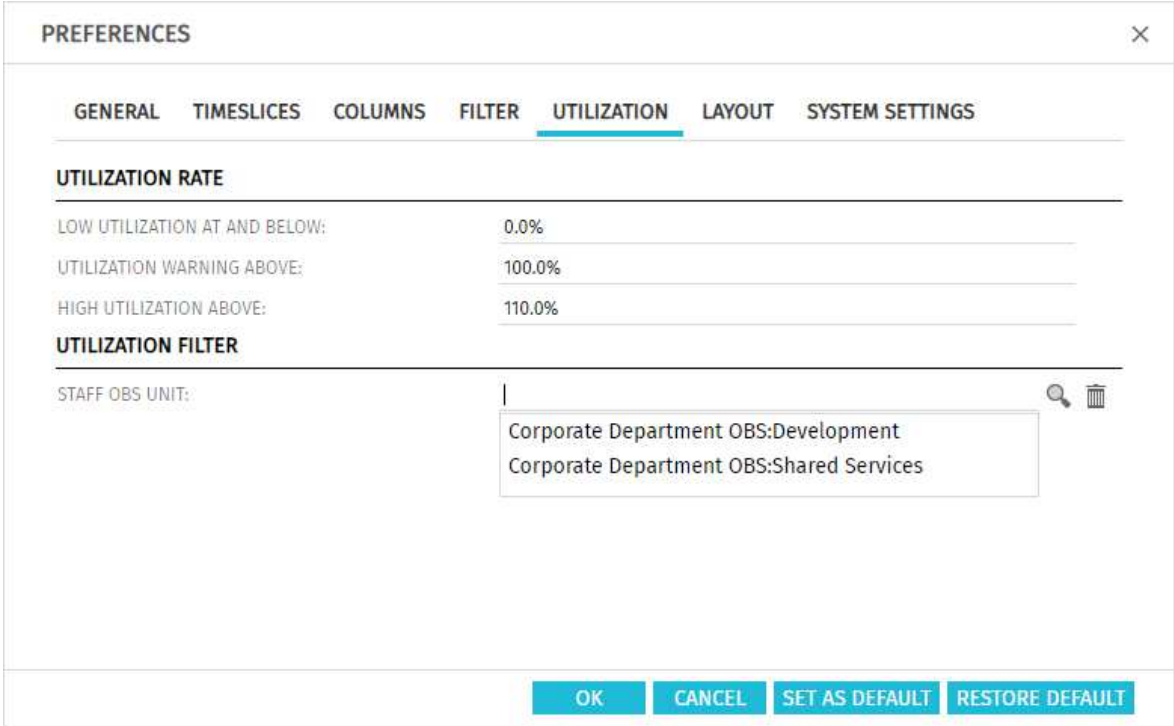
In either **Allocations** mode, select **Include Only Approved Investments** from the **Visualization** menu in the toolbar to exclude allocations from unapproved investments from the displayed utilization.

### 3.7.2 Department Filter (Utilization Filter)

In either **Allocations** mode, you can also filter the availability and utilization of displayed roles and resources by **Staff OBS**.

In **Allocations by Investment** mode, click on the **Utilization Filter** button on the filter panel and select the departments to display.

In **Allocations by Resource** mode, the filter is also applied but there is no shortcut for entering it. However, you may still access it via the **Utilization** tab of the **Preferences**.




With this filter, the availability will be displayed for resources with selected **Department OBS** only.

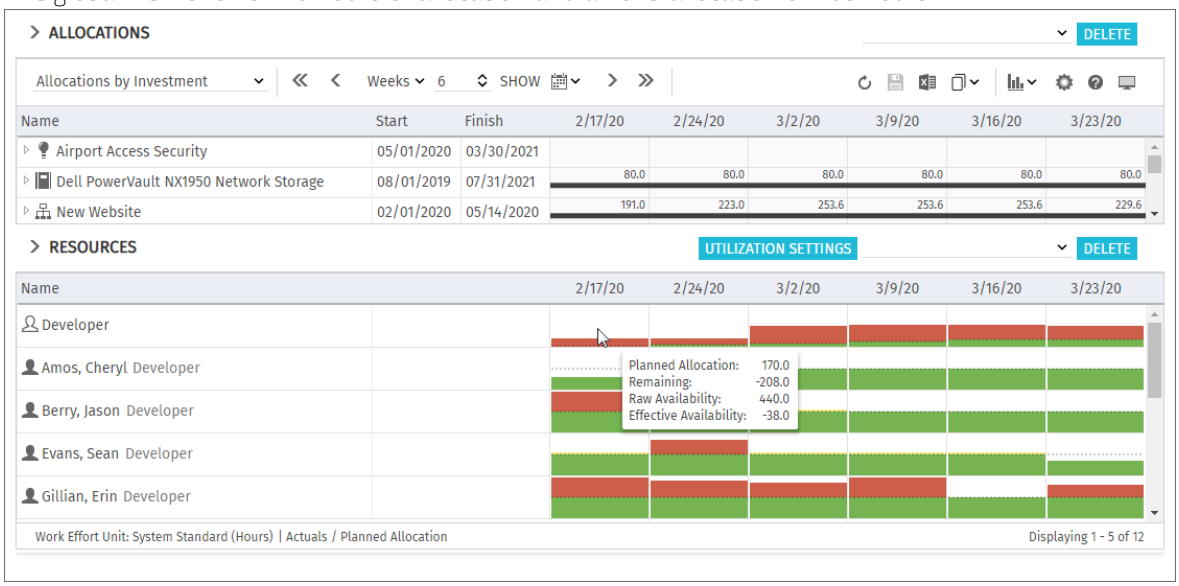
The utilization will be displayed for team entries with selected **Staff OBS** only.

This will limit the availability and utilization displayed for associated roles accordingly.

The following example shows how the filter affects the utilization and availability displayed for a role.

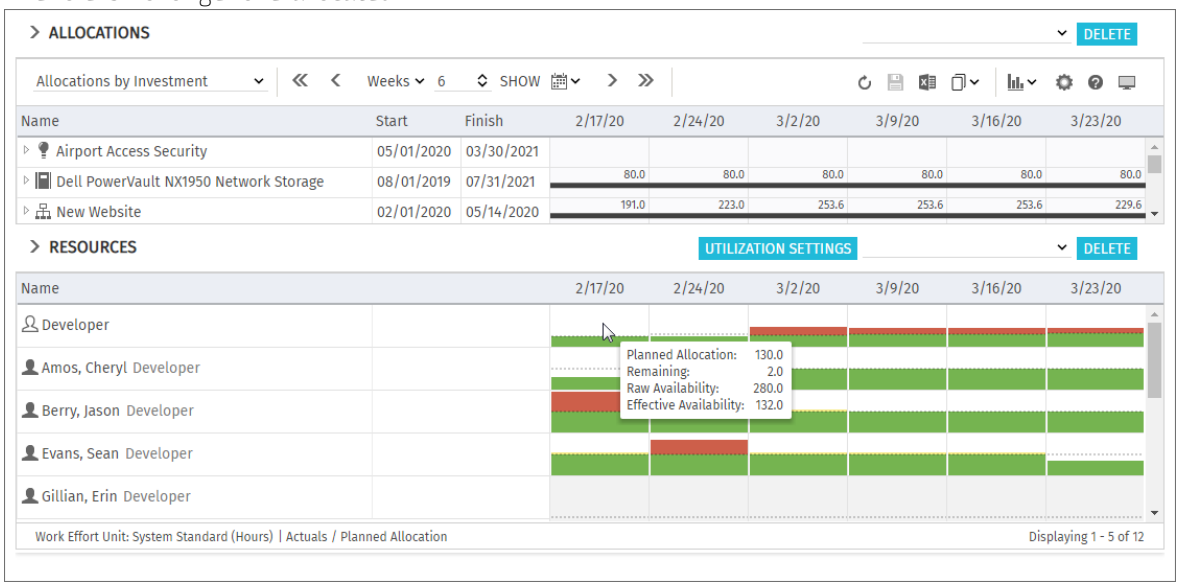
### 3.7.3 Department Filter Example

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




The filtered view shows the allocation and availability for the selected department only.

The role is no longer overallocated:




Note that no more availability or utilization are displayed for **Goldman, Mark** because he doesn't belong to the selected department.

Use the **Only with Availability** resource filter field to filter out roles and resources for which no availability is displayed.

This filter field is only available in **Allocations by Investment** mode and can only be selected with an active **Utilization Filter** by department (see " **Resource – Only with Availability**" on page 33).

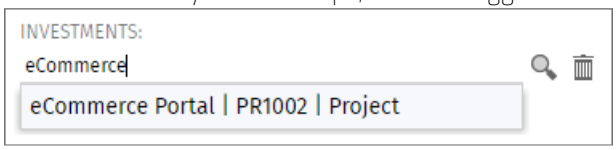
## 3.8 Clarity PPM Lookups

Some filter fields are backed by a Clarity PPM lookup.

- Click on the add user icon to enter your user name in a field. This icon is only available for fields that support entering a Clarity PPM user.
- 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. Investments or roles/resources matching any selected value will be displayed.

As with all Clarity PPM 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].

## 3.9 Default Filter Fields for the Main View

The following sections list and describe the filter fields available for the main view area by default. Please note that not all filter fields are available in all view modes and some work differently depending on your view mode. See the following sections for details.

### 3.9.1 Default Filter Fields for Investments

The following investment filter fields are available by default.
How exactly these filter fields work depends on your view mode:

- In the **Assignments by Investment** and **Allocations by Investment** modes, any investments selected via filters will be displayed on the top level.
- In **Assignments by Resource** mode, any investments selected via filters that have assignments or team entries for displayed roles and resources will be displayed under the roles and resources they belong to.
- In **Allocations by Resource** mode, any investments selected via filters that have team entries for displayed roles and resources will be displayed under the roles and resources they belong to.

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

**Hierarchies:** If applicable, investment hierachies will also be displayed (see "3.9.2 Selecting Investment Hierarchies in by Investment Modes" on page 28).

- **Investment – Investments:** select one or more investments to display.
  This is a multi-valued lookup filter. If you make a selection here, only selected investments and associated investment hierarchies, if applicable, will be displayed.
  - The lookup browse window lets you filter the selection of available investments by name, investment ID, investment type and status ("active?").
  - Click the trashcan icon 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 – Hide Investments from the Past:** by default, any investments you have access to will be loaded. Select this to hide investments ending before the start of the previous month.
- **Investment – Inactive Investments (allocation filter only):** in the **Allocations** modes, use this to determine whether investments deactivated via **Properties - Settings – General – Active** should be displayed. In the **Assignments** modes, inactive investments will never be displayed.
  With the default setting **Show**, inactive investments will be displayed. Select **Hide** if you don't wish to display inactive investments. Select **Show if relevant** to display inactive investments only if they have team entries that are completely or partly in the selected time period.

- **Investment – Investment Type:** filter investments by type (Application, Asset, Idea, Other Work, Product, Project or Service). This is a multi-valued lookup filter. If you make a selection here, only investments of selected types will be displayed.
  - The lookup browse window lets you filter the selection of investment types.
  - Click the trashcan icon to remove selected values or to clear the field, if no value is selected.
- **Investment – Investment Status:** filter investments by status. This is a multi-valued lookup filter. If you make a selection here, only investments with selected status values will be displayed.
  - The lookup browse window lets you filter the selection of investment status values.
  - Click the trashcan icon to remove selected values or to clear the field, if no value is selected.
- **Investment – Investment Manager:** filter investments by manager.
  This is a multi-valued lookup filter. If you make a selection here, only investments of selected managers will be displayed.
  - Click the add user icon to enter yourself in the field.
  - 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 the trashcan icon to remove selected values or to clear the field, if no value is selected.
- **Investment – Investment OBS Unit:** filter investments by OBS unit.
  This is a multi-valued lookup filter. If you make a selection here, only investments belonging to a selected OBS unit or to a sub unit of a selected OBS unit will be displayed.
  - The lookup browse window lets you select the desired OBS top level, sub levels and units.
  - Click the trashcan icon to remove selected values or to clear the field, if no value is selected.
- **Project – Project Templates:** determine whether to display project templates (for which **Properties - Settings – General – Template** has been selected).
  With the default setting **Show all**, any investments, including project templates, will be displayed
  Select **Hide Project Templates** to display only investments that are not project templates.
  Select **Show only Project Templates** to display only project templates and no other investments.

### 3.9.2 Selecting Investment Hierarchies in by Investment Modes

When investment hierarchies are displayed, in the **Assignments by Investment** and **Allocations by Investment** modes, using the **Investments**, **Investment Name** and **Investment ID** fields without any other investment filter fields will also select associated hierarchies.

In this case, all of the following investments will be loaded and displayed:

- Investments explicitly selected via a filter
- Any parent investments of explicitly selected investments
- Any sub-investments of displayed investments

**Notes:** You can turn off displaying of investment hierarchies completely via the **Preferences** (see "7.1.1 Assignments by Investment" on page 71 and "7.1.3 Allocations Modes" on page 74). If you do, only explicitly selected investments, without any parent or sub-investments, will be displayed.

With **Show investment hierarchy**, in the **Assignments by Investment** and **Allocations by Investment** modes, parent investment hierarchies of investments that have been explicitly selected via a filter will always be displayed.

When using no investment filters except for **Investments**, **Investment Name** and **Investment ID**, sub-investments of selected investments and of displayed parent investments will also be displayed.

### 3.9.3 Default Filter Fields for Roles and Resources

The following filter fields for roles and resources are available by default.

How exactly these filter fields work depends on your view mode:

- In **Assignments by Investment** mode, any roles and resources selected via filters that have assignments for displayed investments will be displayed under the investments, project phases and tasks they belong to.
  Investments without assignments of selected roles and resources will not be displayed.
- In **Allocations by Investment** mode, any roles and resources selected via filters that have team entries for displayed investments will be displayed under the investments they belong to.
  Investments without team entries of selected roles and resources will not be displayed.
- In the **Assignments by Resource** and **Allocations by Resource** modes, any roles and resources selected via filters will be displayed.

By default, you may use the following fields to filter roles and resources:

- **Resource – Role/Resource:** select one or more roles and/or resources to display.
  This is a multi-valued lookup filter. If you make a selection here, only selected roles and resources will be displayed.
  - The lookup browse window lets you filter the selection of available available roles and resources by last name, first name and resource ID
  - Click the trashcan icon to remove selected values or to clear the field, if no value is selected.
- **Resource – Is Role:** filter roles and resources by resource type, role or resource.
  With the default setting **All**, roles and resources will not be filtered by resource type.
  Select **Yes** to only display roles. Select **No** to only display resources.
- **Resource – Primary Role:** filter roles and resources by role, primary role and/or parent role.
  This is a multi-valued lookup filter. If you make a selection here, only selected roles and resources will be displayed:
  - **Role:** all selected roles.
  - **Role Parent Role:** all roles having any of the selected roles as their parent roles.
  - **Resource Primary Role:** all resources having any of the selected roles as their primary roles.
  - The lookup browse window lets you filter the selection of available roles by role name.
  - Click the trashcan icon to remove selected values or to clear the field, if no value is selected.
- **Resource – Resource Name:** enter a search term which occurs in the role or resource name. Use the asterisk ("*") as a placeholder for an arbitrary number of characters. Search terms will be treated as if ending with "*" (e.g., "*son" will find both "Harrison" and "Jackson").
- **Resource – Booking Manager:** filter roles and resources by booking manager.
  This is a multi-valued lookup filter. If you make a selection here, only roles and resources of selected booking managers will be displayed.
  - Click the add user icon to enter yourself in the field.
  - The lookup browse window lets you filter the selection of available booking managers by last name, first name and resource ID.
  - Click the trashcan icon to remove selected values or to clear the field, if no value is selected.
- **Resource – Resource Manager:** filter resources by resource manager.
  This is a multi-valued lookup filter. If you make a selection here, only resources of selected resource managers will be displayed. Roles won't be displayed in this case.

Click the add user icon to enter yourself in the field.

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 the trashcan icon to remove selected values or to clear the field, if no value is selected.

- **Resource – Resource OBS Unit:** filter roles and resources by OBS unit.
  This is a multi-valued lookup filter. If you make a selection here, only roles and resources belonging to any selected OBS unit or to a sub unit of a selected OBS unit will be displayed.

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

  Click the trashcan icon to remove selected values or to clear the field, if no value is selected.
- **Resource – Is External:** filter resources by their **External** property (selected via **Properties – General – Resource Management – External**).
  With the default setting **All**, any roles and resources will be displayed.
  Select **Yes** to display only external resources. With this setting, roles will not be displayed.
  Select **No** to display only roles and internal resources.
- **Resource – Skills:** filter roles and resources by skills.
  By default, all roles and resources 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:** here, you determine the mode for the skill filter, **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 roles and resources with any selected skill will be displayed.
- **Resource – In Task (assignment filter only):** see following section.
- **Resource – In Assignment (assignment filter only):** see following section.

### 3.9.4 Selecting Roles and Resources in Assignments by Investment Mode

In **Assignments by Investment** mode, roles and resources that are selected via the **Role/Resource** and **Is Role** filter fields and have assignments for displayed investments will be displayed under the investments, project phases and tasks they belong to.

If you don't filter roles and resources by other fields, other project phases, tasks and milestones of displayed investments as well as other roles and resources assigned to any displayed task or NPIO will also be displayed.

Investments without assignments of selected roles and resources won't be displayed.

Select the **In Task** filter field as well to display only tasks to which selected roles and resources are assigned.

Select the **In Assignment** filter field as well to display only tasks to which selected roles and resources are assigned.

### 3.9.5 Default Filter Fields for Team Entries

The following team entry filter fields are available by default.

- **Team – Booking Status:** filter team entries by booking status. This is a multi-valued lookup filter. If you make a selection here, only team entries with a selected booking status will be displayed.

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

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

- **Team – Request Status:** filter team entries by request status. This is a multi-valued lookup filter. If you make a selection here, only team entries with a selected request status will be displayed.

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

  Click the trashcan icon to remove selected values or to clear the field, if no value is selected.
- **Team – Staff OBS Unit:** filter team entries by staff OBS unit. This is a multi-valued lookup filter. If you make a selection here, only team entries belonging to any selected OBS unit or to a sub unit of a selected OBS unit will be displayed.

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

  Click the trashcan icon to remove selected values or to clear the field, if no value is selected.
- **Team – Team Has Hard Allocation (allocation filter only):** display only team entries with hard allocation in the selected time period. This filter requires **Calculate Sums** to be set to either **On** of **Filtered** (see "**Calculate Sums**" on page 74).
- **Team – Team Has Planned Allocation (allocation filter only):** display only team entries with planned allocation in the selected time period. This filter requires **Calculate Sums** to be set to either **On** of **Filtered** (see "**Calculate Sums**" on page 74).

### 3.9.6 Default Filter Fields for Tasks (Assignment Filter Only)

The following task filter fields are available by default.

- **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:** filter tasks by status. This is a multi-valued lookup filter. If you make a selection here, only tasks with a selected task status will be displayed.

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

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

### 3.9.7 Default Filter Fields for Assignments (Assignment Filter Only)

The following assignment filter fields are available by default.

- **Assignment – Assignment Role:** filter assignments by assignment role.
  This is a multi-valued lookup filter. If you make a selection here, only assignments with a selected assignment role will be displayed.

  The lookup browse window lets you filter the selection by assignment role name.

  Click the trashcan icon 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:** filter assignments by status.
  This is a multi-valued lookup filter. If you make a selection here, only assignments with a selected assignment status will be displayed.

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

  Click the trashcan icon to remove selected values or to clear the field, if no value is selected.
- **Assignment – Assignment Has ETC:** display only assignments that have remaining ETC (remaining hours of work to be done) in the selected time period.
- **Assignment – Assignment Has Actuals:** display only assignments for which actuals have been entered in the selected time period.

## 3.10 Default Filter Fields for the Role and Resource List

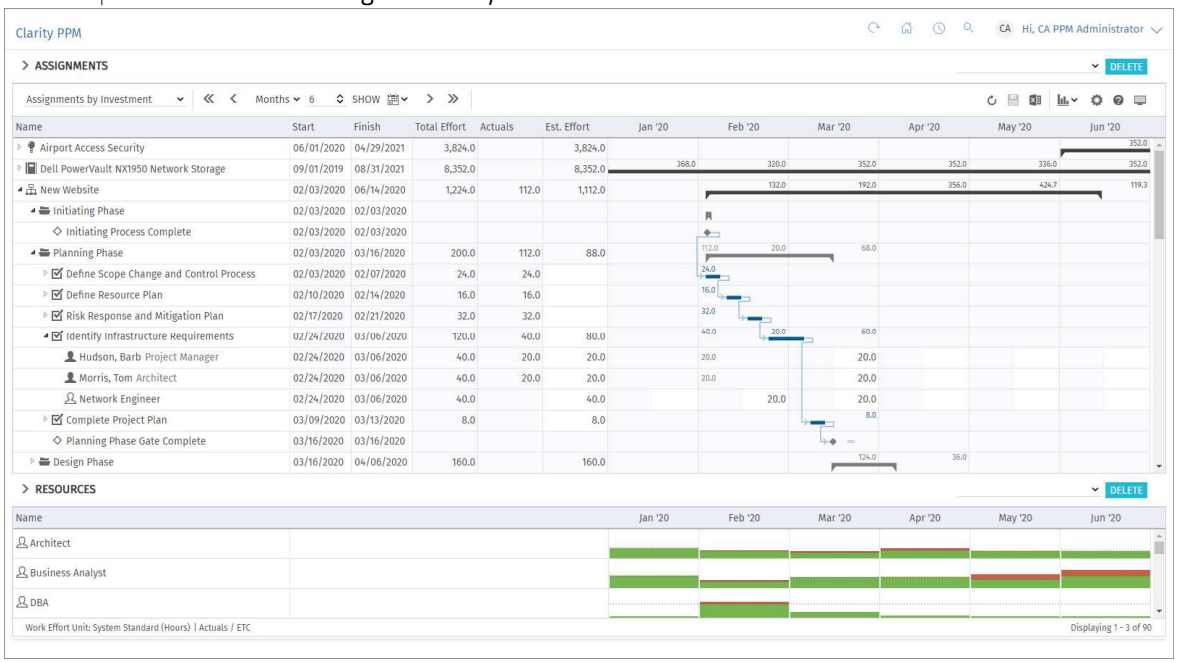
For the role and resource list displayed in the **by Investment** modes, the same default filter fields are available as for filtering roles and resources in the main view.

- **Resource – Role/Resource:** select one or more roles and/or resources to display. If you do, only selected roles and resources will be displayed.
  - The lookup browse window lets you filter the selection of available available roles and resources by last name, first name and resource ID
  - Click the trashcan icon to remove selected values or to clear the field, if no value is selected.
- **Resource – Is Role:** filter roles and resources by resource type, role or resource. With the default setting **All**, roles and resources will not be filtered by resource type. Select **Yes** to only display roles. Select **No** to only display resources.
- **Resource – Primary Role:** filter roles and resources by role, primary role and/or parent role. If you do, only selected roles and resources will be displayed:
  - **Role:** all selected roles.
  - **Role Parent Role:** all roles having any of the selected roles as their parent roles.
  - **Resource Primary Role:** all resources having any of the selected roles as their primary roles.
  - The lookup browse window lets you filter the selection of available roles by role name.
  - Click the trashcan icon to remove selected values or to clear the field, if no value is selected.
- **Resource – Resource Name:** enter a search term which occurs in the role or resource name. As for the investment name and id filters, you may use the asterisk character "*" as a placeholder for a character string of arbitrary length (e.g., '*son*' will find both 'Harrison' and 'Jackson').
- **Resource – Booking Manager:** filter roles and resources by booking manager. If you do, only roles and resources of selected booking managers will be displayed.
  - Click the add user icon to enter yourself in the field.
  - The lookup browse window lets you filter the selection of available booking managers by last name, first name and resource ID.
  - Click the trashcan icon to remove selected values or to clear the field, if no value is selected.
- **Resource – Resource Manager:** filter resources by resource manager. If you do, only resources of selected resource managers will be displayed. Roles won't be displayed in this case.
  - Click the add user icon to enter yourself in the field.
  - 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 the trashcan icon to remove selected values or to clear the field, if no value is selected.
- **Resource – Resource OBS Unit:** filter roles and resources by OBS unit. If you do, only roles and resources belonging to selected OBS units or to sub units of selected OBS units will be displayed.
  - The lookup browse window lets you select the desired OBS top level, sub levels and units.
  - Click the trashcan icon to remove selected values or to clear the field, if no value is selected.
- **Resource – Is External:** filter resources by their **External** property (selected via **Properties – General – Resource Management – External**). With the default setting **All**, any roles and resources will be displayed. Select **Yes** to display only external resources. With this setting, roles won't be displayed. Select **No** to display only roles and internal resources.

- **Resource – Skills:** filter roles and resources by skills.
  By default, all roles and resources 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:** here, you determine the mode for the skill filter, **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 roles and resources with any selected skill will be displayed.
- **Resource – Only with Availability (Allocations by Investment only):** With the **Utilization Filter** by department, the availability and utilization are only displayed for resources from selected departments and associated roles (see "3.7.3 Department Filter Example" on page 24).
  With the **Only with Availability** filter field, you can filter out roles and resources for which no availabilty is displayed.
  This filter field is only available in **Allocations by Investment** mode and can only be selected with an active **Utilization Filter** by department.
- **Team – Show Team Only (single investment mode only):** display only team members.

# 4 Assignments by Investment

This chapter describes the **Assignments by Investment** view mode.




## 4.1 Displayed Data

In **Assignments by Investment** mode, the following data will always be displayed:

- Investments
- Tasks in which selected roles and resources have been assigned to displayed projects
- Assigned roles and resources and associated assignments
- List of all roles and resources, optionally with utilization and availability (see "4.10 Utilization and Availability" on page 45).

You may limit the selection of data records via filter conditions (see "3 Filter" on page 20).

### 4.1.1 Displaying Milestones, Project Phases and Investment Hierarchies

Displaying of project phases and milestones as well as of investment hierarchies is optional and can be toggled for each in the **General** tab of the **Preferences** (for investment hierarchies, also see "3.9.2 Selecting Investment Hierarchies in by Investment Modes" on page 28).

### 4.1.2 Displaying Assignments

Displaying assignments is also optional and can be toggled in the **Visualization** menu.

Without assignments, the view will load faster and display only investments, project phases, tasks and milestones. In this project planning mode, the following features won't be available:

- Role/resource, assignment and team entry filters
- Assignment data
- Calculated sums of **Estimated Effort**, **Actuals** und **Total Effort**
- Editing the **Estimated Effort** of tasks and assignments
- Role/resource utilization view.

## 4.2 Displaying Investment Descriptions

Hover over an investment to display its description.

This feature may be deactivated via the **itd AE Preferences Lookup** by Clarity PPM application administrators (see "8.12.8 Hide Description Tooltips" on page 103).

## 4.3 Estimated Effort, Actuals and Total Effort

In the **Columns** tab of the **Preferences**, you can display or hide the **Estimated Effort**, **Actuals** and **Total Effort** (total for **Estimated Effort** + **Actuals**) fields (see "7.3 Columns" on page 76).

The fields display the respective values for each assignment.

With **Calculate Sums** enabled in the **General** tab of the **Preferences**, aggregated sums will also be displayed per task, project phase and investment. Depending on the **Calculate Sums** setting, global sums (**On**) or **Filtered** sums will be displayed (see "**Calculate Sums"** on page 71).

Only assignments of labor roles and resources will be included in the sums. Assignments of material and equipment roles and resources won't be included.

For investments, you can display the sums calculated by Clarity PPM, as displayed in investment lists, instead of letting itd Advanced Resource Planning calculate the sums. To do this, select the **Use Clarity PPM's calculated investment sums** option in the **General** tab of the **Preferences** (see "7.1 General" on page 71).

You can edit the **Estimated Effort** for assignments and tasks by entering a value (see "4.6 Editing List Fields" on page 37).

## 4.4 Editing Assignments

In the right hand side assignment grid, you can see and edit the **ETC** per period in the right half of each cell. Click the right half of a cell to edit the associated 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**, **Availability** or any custom time scaled monetary value (see "7.6.1 Assignments Modes" under "7.6 Layout" on page 83).

The **Estimated 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 71), this will also update the associated task, project 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 **Estimated Effort** for a task or an assignment in the associated column (see "4.6.4 Editing the Estimated Effort of Tasks and Assignments" on page 38).

With the **Update Soft Allocation** option in the **General** tab of the **Preferences**, the new assignment values will also be entered as planned allocation for the same periods.

- 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 member of the **ARP Admin** group 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.

### 4.4.1 Copying Grid Cells via Drag and Drop

Via drag and drop, you may copy the value of a grid cell to neighboring cells, either horizontally, on the timeline, or vertically, to other roles and resources:

- To do this, click 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.

### 4.4.2 Display ETC sums outside of visible time range

Via **Columns** in the **Preferences**, you can display ETC sums for assignmens 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 a value in the **ETC before** column to shift the visible period back, such that the first ETC value in that direction is at the end of the new range . Click a value in the **ETC after** column to shift the visible period ahead, such that the first ETC value in that direction is at the start of the new range.

### 4.4.3 Display Options

Use the buttons and menus in the toolbar to select the start date and period and to specify how many periods to display at once. Display options for this view are also available in the **Timeslices** tab of the **Preferences** (see "7.2 Timeslices" on page 75).

## 4.5 Editing Custom Time Scaled Monetary Values

In the left half of an assignment grid cell, depending on your settings, **Actuals**, **Availability** or any custom time scaled monetary value will be displayed (see sub-section "7.6.1 Assignments Modes" of "7.6 Layout" on page 83).

When working with custom time scaled monetary values, clicking the left half of a cell displaying such a value will edit that value.

The white background of a cell or its left half indicates that the value can be edited.

When displaying the associated column, that column will be updated on the assignment level and on all other levels summing up over the assignment.

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 member of the **ARP Admin** group 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.

### 4.5.1 Integrating a Custom Time Scaled Monetary Value

Displaying and editing custom time scaled monetary 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 96).
  - 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 monetary values only (e.g., **Material**, **Equipment** and **Expense**; see "8.12.10 Editable Resource Types" on page 104).
  - This step requires the global **Administration – Application Setup** right, which Clarity PPM application administrators have by default.

Configuration Options

- Add the field as a visible column (see "7.3 Columns" on page 76).
- Select the field as grid value (see "7.6.1 Assignments Modes" under "7.6 Layout" on page 83).

## 4.6 Editing List Fields

Click table cells in the left hand side hierarchic list to edit the displayed investments, team entries, project phases, tasks, milestones and assignments.

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 member of the **ARP Admin** group 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.

### 4.6.1 Renaming Investments, Projects Phases, Tasks and Milestones

You may rename investments, project phases, tasks and milestones. To do this, click 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 objects via the context menu.

### 4.6.2 Editing the IDs of Project Phases, Tasks and Milestones

If **Auto-numbering** is disabled for the **ID** field of tasks, you may edit the IDs of project phases, tasks and milestones. To do this, click in the respective field and enter the desired ID.
You cannot edit the IDs of investments, roles and resources that are also displayed in this view.

### 4.6.3 Editing the Start, Finish and Duration of Objects

You may edit the **Start**, **Finish** and **Duration** of non-project investments, project phases, tasks and assignments in the list. You may not change the **Start** and **Finish** of projects directly, as they are derived from the total duration of associated project phases, tasks and milestones.

- 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 project phase or task will keep the **Duration** by shifting the **Finish** for the same number of work days according to the base calendar. This feature may be disabled by Clarity PPM application administrators via the **itd AE Preferences** lookup (see "8.12.11 Keep Task Duration" on page 104). 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 project phase or task bar in the interactive Gantt chart (see "4.9 Interactive Gantt Chart" on page 44).

- Alternatively, you can change the **Duration** of a project phase or task. The duration is measured in work days within the actual duration of the project phase or task according to the base calendar. The **Finish** date will be adjusted accordingly.
  - Changing the duration of a project phase will change its tasks proportionally (e.g., shrinking a project 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 project 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, such that it includes the assignment. Likewise, extending a task will extend the associated project phase, if required. Extending a project 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 the **Update Soft Allocation** option in the **General** tab of the **Preferences**, the new assignment values will also be entered as planned allocation for the same periods.

### 4.6.4 Editing the Estimated Effort of Tasks and Assignments

You may edit the **Estimated Effort** of a task or assignment.

To do this, click into the **Est. Effort** field in the associated row and enter the desired value.

- If you enter **Estimated Effort** for a task, it will be distributed proportionally to the assigned roles and resources with respect to the previous **Estimated Effort** values. For example, if you change the effort for a task from 40 to 80 hours, with one resource booked for 30 hours and another one for 10 hours, the first one will be set to 60 hours and the second one will be set 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 **Estimated Effort** for an assignment, directly or via the associated task, the new value will be evenly distributed over the working hours during th 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 the **Update Soft Allocation** option in the **General** tab of the **Preferences**, the new assignment values will also be entered as planned allocation for the same periods.

### 4.6.5 Editing a Custom Time Scaled Monetary Value for an Assignment

You may edit any custom time scaled monetary value displayed as a visible column for an assignment in very much the same fashion as for editing the **Estimated Effort**: click into the field in the associated row and enter the desired value.

- Changing a custom time scaled monetary value for an assignment will distribute that value over the working hours during the assignment, overwriting the previous planning, considering the **Loading Pattern**.

### 4.6.6 Editing the Loading Pattern of Project Task Assignments

For project task assignments, you may edit the **Loading Pattern**. Click the field to make a selection.

### 4.6.7 Editing the Staff OBS Unit of Team Entries

You may edit the **Staff OBS Unit** Field of team entries in the list. To do this, click in the field.
Click the magnifier icon to select an OBS unit or the trashcan icon to clear the field.

### 4.6.8 Editing the Investment Status

For investments, you may edit the **Investment Status**. Click the field to make a selection.

### 4.6.9 Editing Additional Fields

You may edit additional list fields made editable by members of the **ARP Admin** group (see "8.11 Configuring List and Filter Fields" on page 96). This is supported for most standard fields that may be added as well as any custom field displayed in the list except for fields of the **Calculated**, **Formula** and **URL** types. To edit lookup fields, click the magnifier icon to enter a value. Click the trashcan icon to clear the field (single-valued lookups) or remove the selected value (multi-valued lookups).

## 4.7 Context Menu for Displayed Objects

Hover over an investment, project phase, task, milestone or assignment and click the three dots that are displayed to open the associated context menu.
The following sections describe the default options available here.
Members of the **ARP Admin** group can hide default options and add additional custom options (see "8.10 Defining Actions" on page 94).

### 4.7.1 Open Properties

The **Open properties** option is available in the context menu for investments, project phases, tasks, milestones and assignments. Here you open the associated Clarity PPM detail view in a new browser tab.

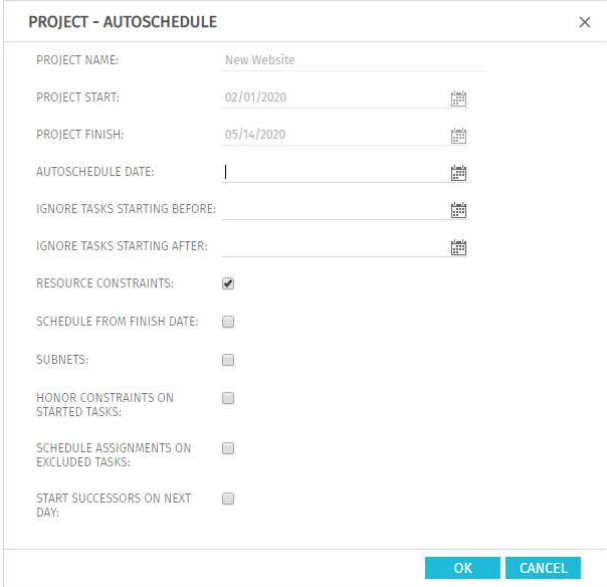
### 4.7.2 Create Task

The **Create Task** option is available in the context menu for projects, project phases and tasks without assignments. The latter will become project phases when a task is created for them. For details about this feature, see the "4.8.1 Creating Tasks, Milestones and Project Phases" section on page 41.

### 4.7.3 Autoschedule

The **Autoschedule** option is available in the context menu for projects and applies the Clarity PPM standard process for autoscheduling a project.
Autoschedule a project as follows:

- Hover over the desired project.
- Click the three dots displayed next to the project's name.
- Select the **Autoschedule** option 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.

### 4.7.4 Allocate From Estimates

The **Allocate From Estimates** option is available in the context menu for investments and task assignments.
For each team entry of the selected investment or for the team entry of the selected assignment, this will enter the sum of the estimated effort entered for associated assignments as planned allocation.
This action will be directly applied without further confirmation.

### 4.7.5 Indent or Outdent Task

The **Indent Task** and **Outdent Task** options are available in the context menu for project phases, tasks and milestones. Here you include them in a preceding task or project phase or remove them from one.
See section "4.8.3 Indenting and Outdenting Tasks" on page 42 for details about this.

### 4.7.6 Delete

The **Delete** option is available in the context menu for tasks and assignments without actuals as well as for milestones. You will be asked to confirm before anything is deleted.
You may only delete project phases after outdenting or deleting any included tasks and milestones.

### 4.7.7 Task Dependencies

The **Task Dependencies** option is available in the context menu for tasks and milestones.
This will open a window where you can see and edit dependencies between tasks and milestones.
See section "4.8.5 Creating and Editing Task and Milestone Dependencies" on page 42 for details.

### 4.7.8 Remove Lock

The **Remove lock** option is available in the context menu of projects locked due to changes made by users in itd Advanced Resource Planning.

Every user may unlock projects via the context menu that were locked due to her own changes made in itd Advanced Resource Planning.
Members of the **ARP Admin** group may unlock any projects via the context menu that were locked due to changes made by any user in itd Advanced Resource Planning.
Projects locked due to changes made outside of itd Advanced Resource Planning can only be unlocked via the associated button in the project's properties.

### 4.7.9 Expand All

The **Expand all** option is available in the context menu for investments and project phases.
Select this to expand the full sub-structure of the selected investment or project phase.

### 4.7.10 Rename

The **Rename** option is available in the context menu for investments, project phases, tasks and milestones. Press [Return] to confirm or [Esc] to cancel. The change will only be applied when saving via the toolbar. Refresh without saving to undo.

### 4.7.11 Filter by Role, OBS and Skills

The **Filter by Role, OBS and Skills** option is available for role assignments.
Selecting it will apply the following filters to the **Resources** list:

- **Primary Role** will be the selected role.
- **Resource OBS Unit** will be the **Staff OBS Unit** of the associated team entry, if selected.
- **Skills** will be the skills selected for the associated team entry, if any.
- **Skill Matching** will require to match all skills (alternatively, you can require to match at least one).

Missing filter fields will be added automatically.

## 4.8 Working with Tasks, Milestones and Project Phases

The following sections describe creating and editing tasks, milestones and project phases in a project.

### 4.8.1 Creating Tasks, Milestones and Project Phases

Create a task for an investment, project phase or task as follows. Creating a task for another task makes the latter a project phase. Please note that this is only possible for tasks without assignments. In the context menu for tasks with assigments, the **Create Task** option will therefore not be available.

- Hover over the desired investment or project phase.
- Click the three dots displayed next to the name of the investment or project phase.
- Select the **Create Task** option 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 may enter the desired ID.
- Click the **Save** button in the toolbar to confirm. To cancel, click the **Refresh** button in the toolbar and select **No** when asked whether pending changes should be saved.

### 4.8.2 Working with Project Phases

You can turn any task without assigmments into a project phase by creating another task for it (see "4.8.1 Creating Tasks, Milestones and Project Phases" on page 41) or by indenting a task, milestone or project phase following it (see the following section "4.8.3 Indenting and Outdenting Tasks").

After converting a task into a project phase, you can create additional tasks and milestones for it via the associated context menu (see "4.8.1 Creating Tasks, Milestones and Project Phases" on page 41).

You can also add existing tasks, milestones and project phases to a project phase via drag-and-drop (see "4.8.4 Moving and Copying Tasks, Milestones and Project Phases" on page 42) or by indenting them (see the following section "4.8.3 Indenting and Outdenting Tasks").

The depth of project phases and sub-phases is unlimited.

Outdenting or deleting all associated tasks, milestones and project phases will turn a project phase back into a task.

### 4.8.3 Indenting and Outdenting Tasks, Milestones and Project Phases

You may indent a task, milestone or project phase under a project phase or under another task without assignments, making the latter a project phase. Outdent or delete all tasks, milestones and project phases belonging to a project phase to make that project phase a task again.

Indent or outdent via the context menu in the left hand side hierarchic list view. To open the context menu, hover over the desired task or milestone and click the three dots, then select the desired action:

- **Indent Task** following a project phase or another task.
- **Outdent Task** moves an indented task, milestone or project phase up one level. Outdent all tasks, milestones and project phases belonging to a project phase to make it a task again.

You can also change the structure level of a task, milestone or project phase by adding it to an existing project phase or by removing it from a project phase via drag-and-drop (see "4.8.4 Moving and Copying Tasks, Milestones and Project Phases" on page 42).

The indenting and outdenting of tasks will be directly applied without confirmation.

### 4.8.4 Moving and Copying Tasks, Milestones and Project Phases

You may modify the order and hierarchy of tasks, milestones and project phases via drag-and-drop. Changes will instantly be applied without confirmation.

Hold the [Ctrl] key while executing the following 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. Project 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 roles and resources. 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 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.

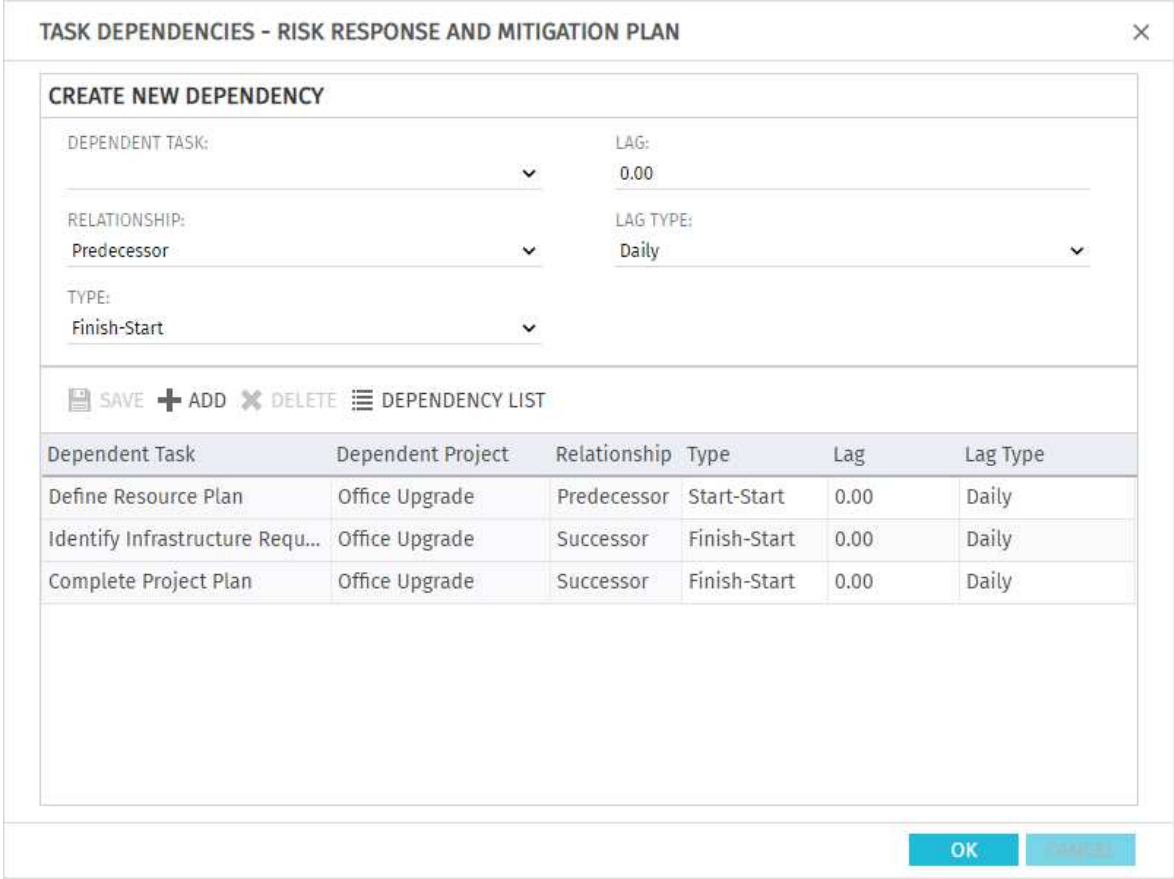
### 4.8.5 Creating and Editing Task and Milestone Dependencies

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 may open a list view of a task's or milestone's dependencies, in which you can also create new dependencies, as follows.

- Double-click a dependency in the Gantt chart OR

- Hover over a task or milestone in the left hand side hierarchic list, click the three dots and select the **Task Dependencies** option from the associated context menu.

Either of these actions will open the **Task Dependencies** view for the selected task or milestone:




- To create a new dependency, enter parameters in the upper half of the view under **Create New Dependency**. Enter a daily or percentual **Lag** to require a delay between the predecessor and its successor. If you enter a percentual lag, specify the duration of the required delay as a percentage of the predecessor's duration. Click **Add** in the toolbar in the middle to create the dependency. With the **Move successors on dependency creation** option selected 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.

## 4.9 Interactive Gantt Chart

The interactive Gantt chart may be toggled via the **Visualization** menu in the toolbar.

### 4.9.1 Gantt Chart Interactions

With the Gantt chart displayed, the following interaction features are available:

- Change start, finish or duration of a non-project investment object: drag horizontally.
- Change start, finish or duration of a project phase: drag horizontally.
- Change start, finish or duration of a project task: drag horizontally
- Change milestone date: drag horizontally.
- Create task or milestone dependency: drag vertically from predecessor to successor.
  Depending on your **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 "4.8.5 Creating and Editing Task and Milestone Dependencies" on page 42).
- Edit task or milestone dependency: double-click dependency arrow.

The **Start** and **Finish** of projects depend on the associated project phase, task and milestone dates and may not be modified directly.

### 4.9.2 Changing the Duration

Consider the following when changing the durations of objects:

- Changing the duration of a project phase will change its tasks proportionally (e.g., changing the duration of a project 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 project 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, such that it includes the assignment. Likewise, extending a task will extend the associated project phase, if required. Extending a project 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 assignment's 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.

### 4.9.3 Dependencies from Tasks and Milestones Not Currently Displayed

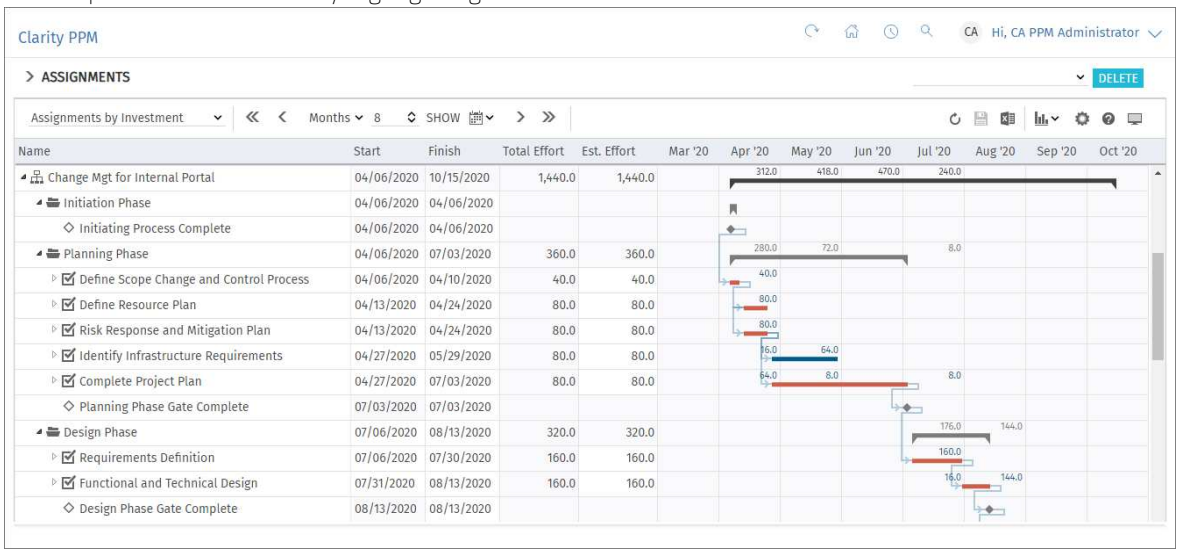
A special icon indicates dependencies from tasks and milestones that aren't currently displaye:are

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 the icon to display the associated projects and tasks or milestones.

### 4.9.4 Displaying Critical Paths for Projects

In the **Visualization** menu, you can toggle display of critical paths for projects.

Critical paths are indicated by highlighting the associated tasks in red:




### 4.9.5 Saving or Reverting Changes

New dependencies between tasks and milestones will be directly created without confirmation.

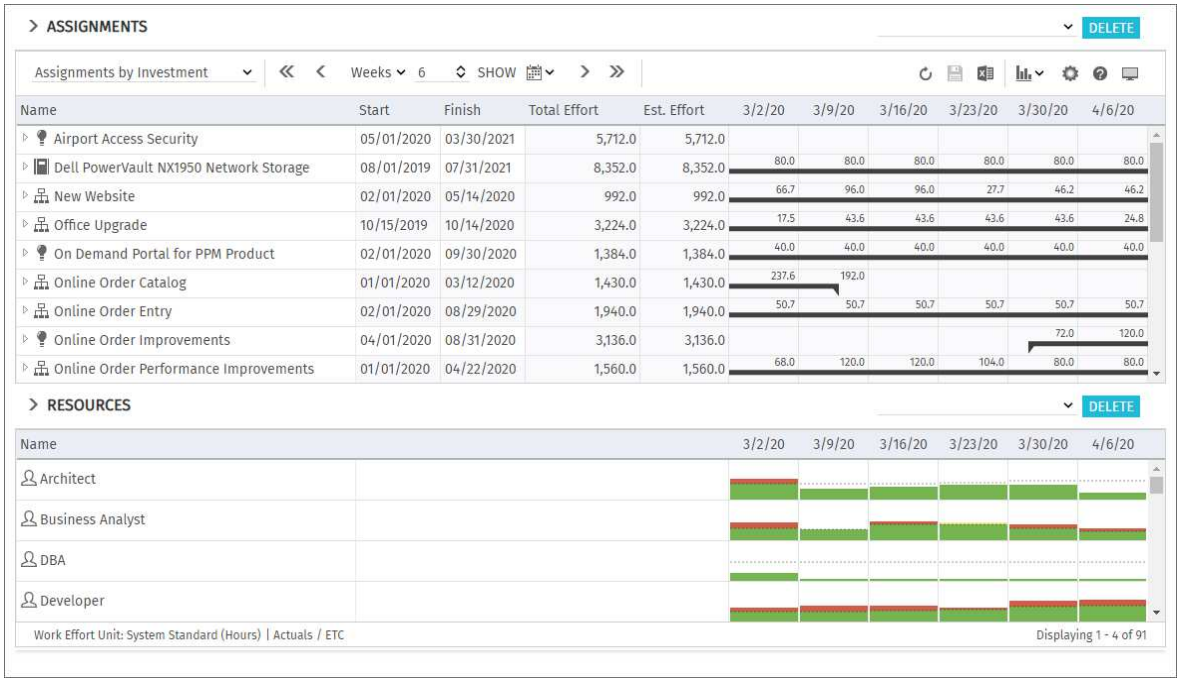
- Changes of the **Start** or **Finish** will only be applied when you save them via the toolbar. You can easily identify unsaved changes via the red triangle in a field.
- Refresh the view without saving to revert your changes.
- Changing the **Start** or **Finish** of a project phase, project task or milestone will lock the associated project for editing by others users until you save or revert your changes. This is indicated by a padlock icon. If your session is interrupted before a project is unlocked, you or any member of the **ARP Admin** group 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.

## 4.10 Utilization and Availability

The lower section of the view displays all roles and resources for which you have access rights by default. You may filter this view (see "4.10.2 Filtering the View" on page 47). With **Show Utilization** in the **General** tab of your **Preferences**, the total utilization and remaining availability of these roles and resources are also displayed per period, either in color-coded numbers or as a histogram chart.

In **Assignments by Investment** mode, only assignments are considered here.

Hover over a grid cell or histogram segment to display a hint indicating which values are displayed.




## 4.10.1 Visualization: Color-Coded Table or Histogram

There are two display modes available for the utilization view:

- With the **Show Utilization** option selected in the **General** tab of the **Preferences**, the global total utilization, based on the remaining estimated effort of assignments, and the resulting remaining availability of the displayed roles and resources will be displayed per period in numbers that are color coded to display low or high utilization.

  Optionally, the remaining availability displayed for the current period will also consider actuals entered for that period (see "8.12.7 Consider Actuals for Remaining Availability" on page 103).
  Cell colors indicate low (white), optimal (green), high (yellow) or very high (red) utilization of a role or resource in a period (see "7.5 Utilization" on page 81).
- Alternatively, via the **Show Histogram** option of the **Visualization** menu in the toolbar, you can display the utilization and availability as a histogram chart. The histogram displays the utilization as a colored stack which is matched against a dotted capacity line.

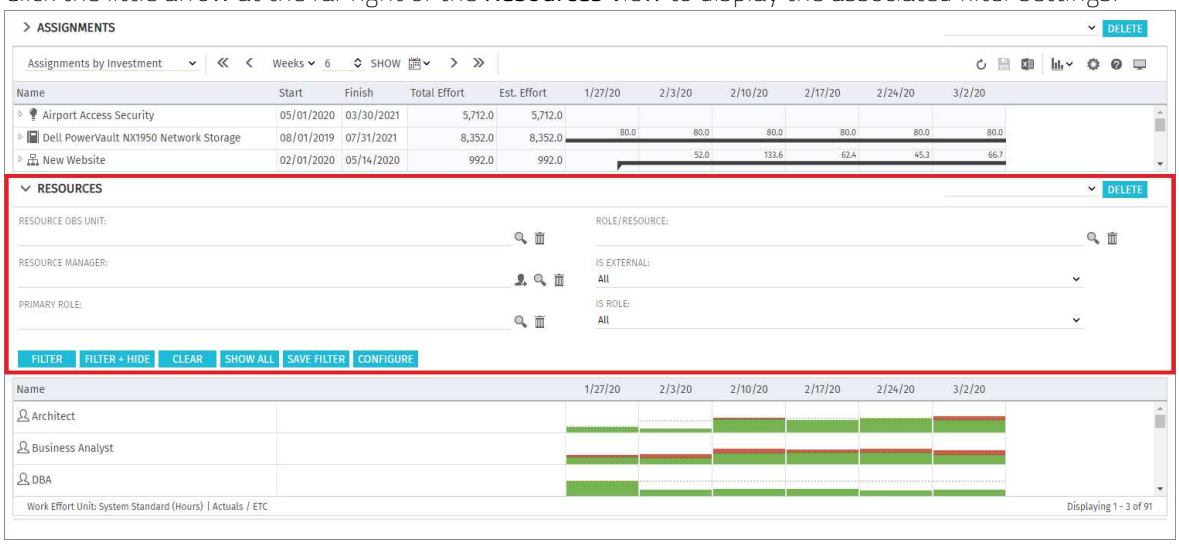
  This view is always displayed with the **Show Histogram** option. The **Show Utilization** option is only considered when the histogram is not displayed.
  As in the default view that displays the actual figures as numbers, signal colors indicate an optimal utilization or overload in this view mode as well. However, only the utilization warning and high utilization thresholds take effect in the histogram:
  - The dotted horizontal line displays the role or resource capacity.
  - Workload below the utilization warning threshold is colored green.
  - Further workload is colored yellow if it is between the utilization and high utilization thresholds and red above the high utilization threshold.
  - The low utilization threshold has no effect here (see "7.5 Utilization" on page 81).

  The displayed workload is based on remaining estimated effort from assignments. Optionally, the workload and remaining availability displayed for the current period also consider actuals already entered for that period (see "8.12.7 Consider Actuals for Remaining Availability" on page 103).
  Please note that in single investment mode, the histogram can also be set up to compare the **Total Effort** and the **Planned** or **Hard Allocation** (see "4.10.7 Assignments and Allocations in Single Investment Mode" on page 49). Hover over the histogram to display units and figures.

### 4.10.2 Filtering the View

Without a filter, any roles and resources for which you have access rights will be displayed.

Click the little arrow at the far right of the **Resources** view to display the associated filter settings.




Here you can filter the roles and resources to be displayed by preselected filter fields.

You may select and lay out the required filter fields on the **Filter – Resources** tab of the **Preferences** for the **Assignments by Investment** view (see "7.4.2 Filter – Resources" on page 80).

In addition to the fields listed here, members of the **ARP Admin** group may add other fields available for roles and resources to the selection of filter fields (see "8.11 Configuring List and Filter Fields" on page 96). Most Clarity PPM standard fields and most custom role/resource fields may be added.

You have access to the same default filter fields available for roles and resources in the main view. These fields are listed in section "3.10 Default Filter Fields for the Role and Resource List" on page 32.

### 4.10.3 Selecting a Role or Resource

When you select a role or resource assignment in the left hand side hierarchic list in the upper view section, the assigned role or resource will also be automatically selected in the utilization view.

### 4.10.4 Assigning a Role or Resource via Drag-and-Drop

You may assign roles and resources as follows:

- Click a role or resource in the **Utilization rate** view and drag it onto a task to assign the role or resource to the task. Hold the [Ctrl] key while dragging a role or resource to an existing assignment to duplicate that assignment for that role or resource
- Project's **Assignment Pool** settings are applied when creating a new assignment: To a project with the **Team only** setting, only project members may be added as roles and resources. To a project with the **Resource Pool** setting, all available roles and resources may be assigned.

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 member of the **ARP Admin** group 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.

### 4.10.5 Copying Assigments

You may copy any assignment by dragging a role or resource displayed in the hierarchic list 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: Assignment Role, Loading Pattern
- Team: Staff OBS Unit, Investment Role, Teamname

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. This is only possible for roles; resources may not have more than one team entry in any investment.

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.

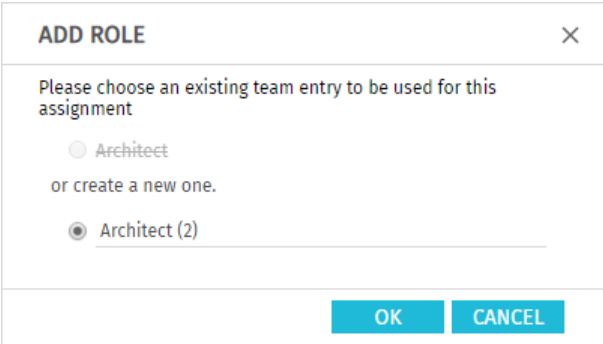
Refresh the view without saving to revert your changes.

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 member of the **ARP Admin** group 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.

### 4.10.6 Creating Multi-Role Assignments

In **Assignments by Investment** mode, you may assign roles to tasks and non-project investments more often than once. This is done by copying and renaming the role, adding an index (e.g., "Architect" becomes "Architect (2)".)

- Drag the role from the resource view onto the same task or non-project investment repeatedly.
- You will be prompted to create a new team entry for a copy of the role with a name or your choice, which will be the role's original name with an index by default.




- Team entries created this way will be retained even if all associated assignments are deleted.
- When you drag a role onto an investment for which at least one team entry already exists for that role, you will be asked 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 have no assignments to the selected task or non-project investment.

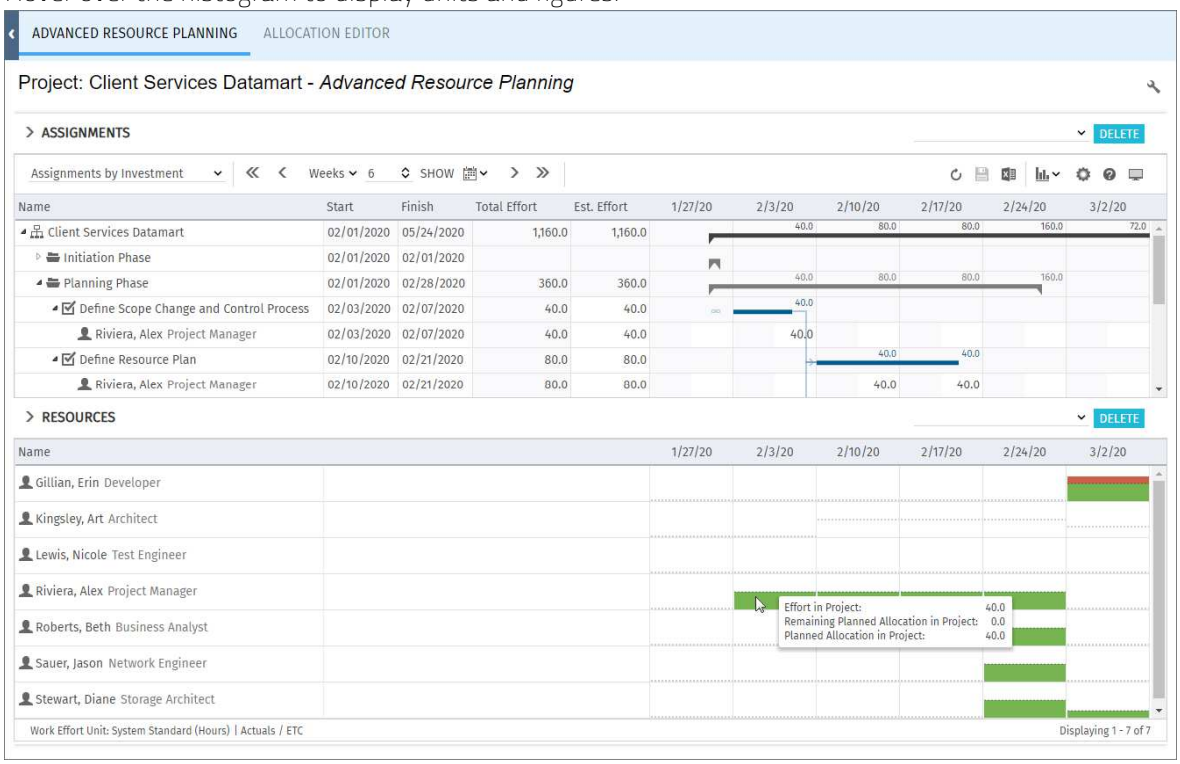
- Team entries and assignments will only be created when saving via the toolbar. You can easily identify unsaved assignments via the red triangle in a field.
- Refresh the view without saving to revert your changes.
- Projects will automatically be locked for editing by other users while unsaved changes 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 member of the **ARP Admin** group 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.

### 4.10.7 Assignments and Allocations in Single Investment Mode

In single investment mode, you may graphically compare the total estimated effort (Actuals + ETC) of assignments to the planned or hard allocation of the associated team entries.

Select the values to compare in the **Layout** tab of the **Preferences** (see "7.6.1 Assignments Modes" on page 83).

Hover over the histogram to display units and figures:




Please note: As opposed to the default mode of the histogram which shows the global utilization of all displayed roles and resources, when comparing assignments with the planned or hard allocation, only values entered for the current investment will be displayed.

Use the **Team – Team only** filter to hide roles and resources that have no team entries in the current investment

Use the context menu for the investment or for any assignment to **Allocate from Estimates**.

For each team entry of the selected investment or for the team entry of the selected assignment, this will enter the sum of the estimated effort entered for associated assignments as planned allocation. This action will be instantly applied without further confirmation.

### 4.10.8 Open Detailed View (Additional Module Not Available by Default)

Click the **Detailed view** button in the toolbar to open an overview of tasks and assignments of resources displayed in the associated list as selected via filters.

## 4.11 Toolbar Actions

The following actions are available in the view's toolbar.

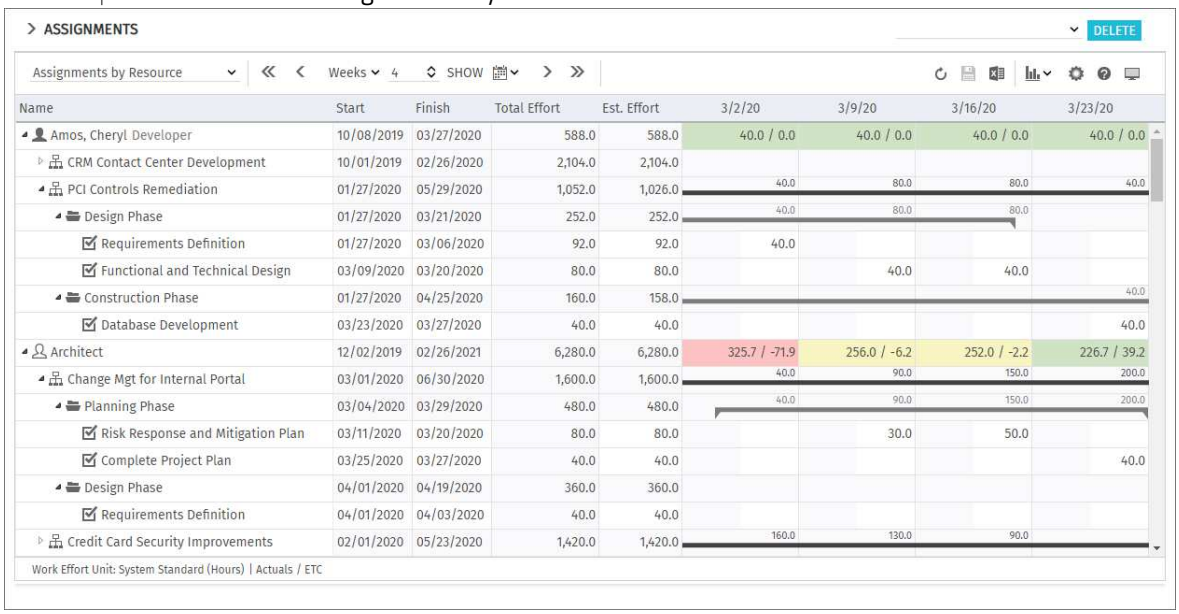
- **View mode:** select **Assignments by Investment**, **Assignments by Resource**, **Allocations by Inve(stment** or **Allocations by Resource** mode (see "2 Overview of View Modes" on page 10).
- **Save:** apply any unsaved changes made in the view.
- **Refresh:** reload all data. If there are unsaved changes, you will be asked if you want to save first.
- **Preferences:** edit view options (see "7 User Preferences" on page 71).
- **Visualization:** toggle display of **Gantt Bars**, of **Assignments**, of **Critical Paths** for projects and of **Histograms** for availability and utilization (see "4.10 Utilization and Availability" on page 45).
- **Export to Excel:** export the current view to 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 entries with sub-elements, these sub-elements will only be exported if their parent item has been expanded, such that they are currently visible.

  Please note: the maximum number of rows to export to Excel may be limited by the **Maximum rows for Export to Excel** Clarity PPM system option. Clarity PPM application administrators may access this setting via **Administration > General Settings > System Options > Other** (bottom of page).
- **Timeslices:** use the buttons and menus to the right of the **Visualization** menu to change the scale, size and start date of the assignment grid. These settings are directly interconnected with the **Timeslices** tab of the **Preferences**. Most options available there are also available in the toolbar, with the exception of fiscal periods as slice periods (see "7.2 Timeslices" on page 75).

  The selection of available slice periods may be limited by Clarity PPM application administrators via the **itd AE Preferences** lookup (see "8.12.3 Restrict Time Slice Periods in the Preferences and in the Toolbar" on page 101). In this case, only the options enabled via the associated lookup value will be available here and in the **Timeslices** tab of the **Preferences**.
  - **Previous or next period or periods:** use the arrow buttons to change the view's start date. The double arrows will shift the start date for the selected number of periods.
    The single arrows will shift the start date for one period.
  - **Slice Period:** select the desired period here. Available options are **Days**, **Weeks**, **Months**, **Quarters** and **Calendar Years**.
  - **Number of Periods:** select or enter the desired number of periods in the box next to the slice period menu. This setting will not be applied directly. Click **Show** to apply it.
  - **Jump to Date:** click the calendar sheet to select a start date.
- **Toggle Full Screen:** hide or display the Clarity PPM navigation bar at the top of the screen. In full screen mode, the navigation bar will be hidden, such that more items can be displayed in the main view area.
- **About:** display the installed version of itd Advanced Resource Planning.

# 5 Assignments by Resource

This chapter describes the **Assignments by Resource** mode.




| Name | Start | Finish | Total Effort | Est. Effort | 3/2/20 | 3/9/20 | 3/16/20 | 3/23/20 |
|---|---|---|---|---|---|---|---|---|
| Amos, Cheryl Developer | 10/08/2019 | 03/27/2020 | 588.0 | 588.0 | 40.0 / 0.0 | 40.0 / 0.0 | 40.0 / 0.0 | 40.0 / 0.0 |
| CRM Contact Center Development | 10/01/2019 | 02/26/2020 | 2,104.0 | 2,104.0 | | | | |
| PCI Controls Remediation | 01/27/2020 | 05/29/2020 | 1,052.0 | 1,026.0 | 40.0 | 80.0 | 80.0 | 40.0 |
| Design Phase | 01/27/2020 | 03/21/2020 | 252.0 | 252.0 | 40.0 | 80.0 | 80.0 | |
| Requirements Definition | 01/27/2020 | 03/06/2020 | 92.0 | 92.0 | 40.0 | | | |
| Functional and Technical Design | 03/09/2020 | 03/20/2020 | 80.0 | 80.0 | | 40.0 | 40.0 | |
| Construction Phase | 01/27/2020 | 04/25/2020 | 160.0 | 158.0 | | | | 40.0 |
| Database Development | 03/23/2020 | 03/27/2020 | 40.0 | 40.0 | | | | 40.0 |
| Architect | 12/02/2019 | 02/26/2021 | 6,280.0 | 6,280.0 | 325.7 / -71.9 | 256.0 / -6.2 | 252.0 / -2.2 | 226.7 / 39.2 |
| Change Mgt for Internal Portal | 03/01/2020 | 06/30/2020 | 1,600.0 | 1,600.0 | 40.0 | 90.0 | 150.0 | 200.0 |
| Planning Phase | 03/04/2020 | 03/29/2020 | 480.0 | 480.0 | 40.0 | 90.0 | 150.0 | 200.0 |
| Risk Response and Mitigation Plan | 03/11/2020 | 03/20/2020 | 80.0 | 80.0 | | 30.0 | 50.0 | |
| Complete Project Plan | 03/25/2020 | 03/27/2020 | 40.0 | 40.0 | | | | 40.0 |
| Design Phase | 04/01/2020 | 04/19/2020 | 360.0 | 360.0 | | | | |
| Requirements Definition | 04/01/2020 | 04/03/2020 | 40.0 | 40.0 | | | | |
| Credit Card Security Improvements | 02/01/2020 | 05/23/2020 | 1,420.0 | 1,420.0 | 160.0 | 130.0 | 90.0 | |

## 5.1 Displayed Data

In **Assignments by Resource** mode, the following data will always be displayed:

- Roles and resources
- Investments to which these roles and resources are assigned
- Associated tasks and assignments
- Team entries without assignments

You may limit the selection of data records via filter conditions (see "3 Filter" on page 20).

### 5.1.1 Show Utilization

With the **Show Utilization** option selected in the **General** tab of the **Preferences**, the utilization and availability of a role or resource will be displayed in the associated row (see "5.9 Utilization and Availability" on page 56).

### 5.1.2 Assignments to Non-Project Investments

For each non-project investment, a task with the same name will be displayed under which associated assignments are listed.

### 5.1.3 Roles with Multiple Assignments

For roles assigned multiple times to a project task or non-project investment, the associated task will be displayed once for each assignment of the role.

### 5.1.4 Task and Assignment Fields

Tasks and associated assignments will be displayed in the same row. All displayed fields that exist for assignments as well as the assignment values will be taken from the assignment. Fields only existing for tasks (e.g., **ID** or additional fields only existing for tasks) will be taken from the associated task.

### 5.1.5 Displaying Project Phases and Parent Investment Hierarchies

Displaying project phases and parent investment hierarchies is optional and can be toggled for each in the **General** tab of the **Preferences**.

## 5.2 Displaying Investment Descriptions

Hover over an investment to display its description.

This feature may be deactivated via the **itd AE Preferences Lookup** by Clarity PPM application administrators (see "8.12.8 Hide Description Tooltips" on page 103).

## 5.3 Estimated Effort, Actuals and Total Effort

In the **Columns** tab of the **Preferences**, you can display or hide the **Estimated Effort**, **Actuals** and **Total Effort** (total for **Estimated Effort** + **Actuals**) fields (see "7.3 Columns" on page 76).

The fields display the respective values for each assignment.

With **Calculate Sums** enabled in the **General** tab of the **Preferences**, aggregated sums will also be displayed per project phase, investment and role or resource. Depending on the **Calculate Sums** setting, global sums (**On**) or **Filtered** sums will be displayed (see "**Calculate Sums**" on page 71).

You can edit the **Estimated Effort** for assignments by entering a value (see "5.6.2 Editing the Estimated Effort of Assignments" on page 53).

## 5.4 Editing Assignments

In the right hand side assignment grid, you can see and edit the **ETC** per period in the right half of each cell. A white background on the cell or its right half indicates you can click it to edit the value. The left half of a cell displays **Actuals**, **Availability** or any custom time scaled monetary value (see sub-section "7.6.1 Assignments Modes" of "7.6 Layout" on page 83)

The **Estimated 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 **Estimated Effort** for an assignment in the associated column (see "5.6.2 Editing the Estimated Effort of Assignments" on page 53).

With the **Update Soft Allocation** option in the **General** tab of the **Preferences**, the new assignment values will also be entered as planned allocation for the same periods.

- 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 member of the **ARP Admin** group 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.

### 5.4.1 Copying Grid Cells via Drag and Drop

Via drag and drop, you may copy the value of a grid cell to neighboring cells, either horizontally, on the timeline, or vertically, to other tasks:

- To do this, click 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.

### 5.4.2 Display ETC sums outside of visible time range

Via **Columns** in the **Preferences**, you can display ETC sums for assignmens 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. Clicking values in one of these columns will shift the visible period there.
See "4.4.2 Display ETC sums outside of visible time range" on page 36 for details and an example.

### 5.4.3 Display Options

Use the buttons and menus in the toolbar to select the start date and period and to specify how many periods to display at once. Display options for this view are also available in the **Timeslices** tab of the **Preferences** (see "7.2 Timeslices" on page 75).

## 5.5 Editing Custom Time Scaled Monetary Values

Editing custom time scaled monetary values works the same as in **Assignments by Investment** mode (see "4.5 Editing Custom Time Scaled Monetary Values" on page 36).

## 5.6 Editing List Fields

In **Assignments by Resource** mode, the left hand side hierarchic list supports editing of the **Start**, **Finish**, **Estimated Effort** and **Loading Pattern** assignment fields, of the **Staff OBS Unit** team entry field, of the **ID** project phase field and of most additional fields, if editing was enabled for them by members of the **ARP Admin** group (see "8.11 Configuring List and Filter Fields" on page 96).
Renaming investments, project phases and tasks is not possible in this view mode.
Click any field you wish to edit and enter or select the desired value.

- 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 member of the **ARP Admin** group 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.

### 5.6.1 Editing the Start and Finish of Assignments

You may edit the **Start** and **Finish** of assignments in the list. Changing the duration of an assignment this way will redistribute the remaining effort over the working hours during the the assignment's new remaining duration (between **Actuals Thru** and **Finish**) in the same proportions as before the change. You can then no longer change the effort per period until the changes are applied or rejected. With **Update Soft Allocation** in the **General** tab of the **Preferences**, the new assignment values will also be entered as planned allocation for the same periods.

### 5.6.2 Editing the Estimated Effort of Assignments

You may edit the **Estimated Effort** of assignments in the list. The entered value will be distributed evenly over the assignment's new remaining duration (between **Actuals Thru** and **Finish**), overwriting

any previous planning. The effort per period can then no longer be edited until the changes are applied or rejected. With **Update Soft Allocation** in the **General** tab of the **Preferences**, the new assignment values will also be entered as planned allocation for the same periods.

### 5.6.3 Editing a Custom Time Scaled Monetary Value for an Assignment

You may edit any custom time scaled monetary value displayed as a visible column for an assignment in very much the same fashion as for editing the **Estimated Effort**.

To do this, click into the field in the associated row and enter the desired value.

- Changing a custom time scaled monetary value for an assignment will distribute that value over the working hours during the assignment, overwriting the previous planning, considering the **Loading Pattern**.

### 5.6.4 Editing the Loading Pattern of Project Task Assignments

You may edit the **Loading Pattern** of project task assignments. Click in the field to make a selection.

### 5.6.5 Editing the Staff OBS Unit of Team Entries

You may edit the **Staff OBS Unit** field of team entries in the list. To do this, click in the field. Click the magnifier icon to select an OBS unit or the trashcan icon to clear the field.

### 5.6.6 Editing the ID of Project Phases

If **Auto-numbering** is disabled for the **ID** field of tasks, you may edit the IDs of project phases. You cannot edit the IDs of roles, resources, investments and tasks displayed in this view.

### 5.6.7 Editing Additional Fields

You may edit most additional list fields for which members of the **ARP Admin** group have enabled editing (see "8.11 Configuring List and Filter Fields" on page 96).

This is supported for most standard fields that may be added as well as any custom field displayed in the list except for fields of the **Calculated**, **Formula** and **URL** types.

To edit lookup fields, click the magnifier icon to enter a value. Click the trashcan icon to clear the field (single-valued lookups) or remove the selected value (multi-valued lookups).

## 5.7 Context Menu for Displayed Objects

Hover over a role, resource, investment, project phase or task and click the three dots that are displayed to open the associated context menu.

The following sections describe the default options available here.

Members of the **ARP Admin** group can hide default options and add custom options (see "8.10 Defining Actions" on page 94).

### 5.7.1 Open Properties

The **Open properties** option is available in the context menu for roles, resources, investments, project phases and tasks. Here you open the associated Clarity PPM detail view in a new browser tab.

### 5.7.2 Add Assignment

The **Add Assignment** option is available in the context menu for roles and resources.

Here you open a selection of available projects with tasks. You can select any number of tasks. Once you click **Add** to confirm, assignments for the selected tasks will be directly created and displayed.

### 5.7.3 Allocate From Estimates

The **Allocate From Estimates** option is available in the context menu for tasks.
For the team entry of the task's assignment, this will enter the sum of the estimated effort entered for associated assignments as planned allocation.
This action will be directly applied without further confirmation.

### 5.7.4 Delete

The **Delete** option is available in the context menu for tasks with assignments without actuals.
Here you delete the associated assignment. Before it is deleted, you will be asked for confirmation.
Assignments with actuals can't be deleted.
Deleting other objects isn't supported in **Assigments by Resource** mode.

### 5.7.5 Remove Lock

The **Remove lock** option is available in the context menu of projects locked due to changes made by users in itd Advanced Resource Planning.
Every user may unlock projects via the context menu that were locked due to her own changes made in itd Advanced Resource Planning.
Members of the **ARP Admin** group may unlock any projects via the context menu that were locked due to changes made by any user in itd Advanced Resource Planning.
Projects locked due to changes made outside of itd Advanced Resource Planning can only be unlocked via the associated button in the project's properties.

### 5.7.6 Expand All

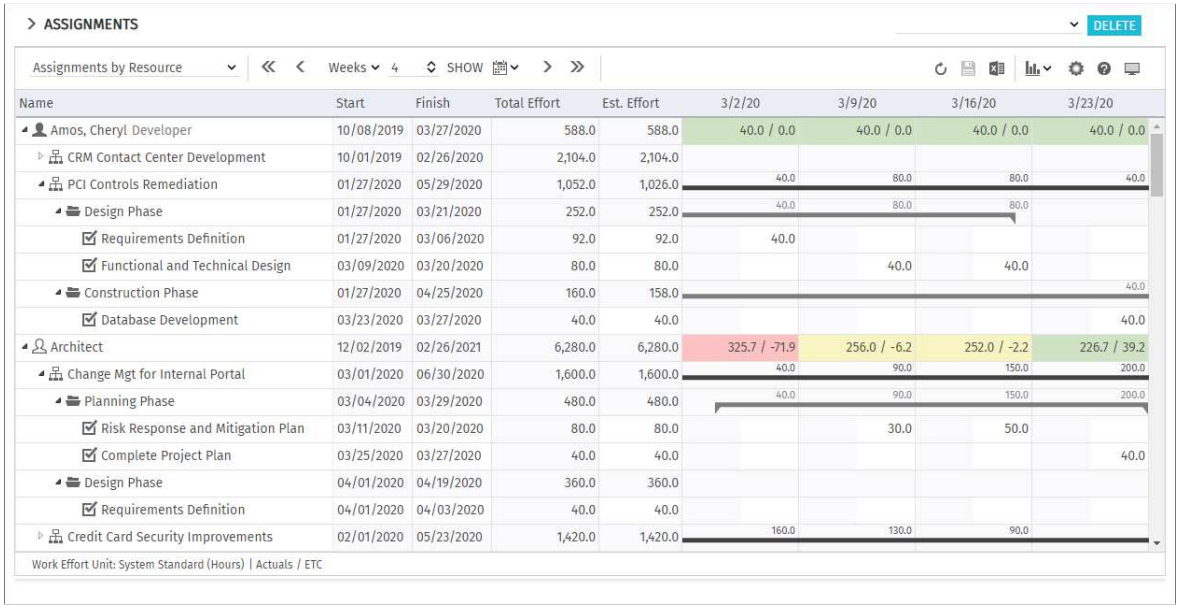
The **Expand all** option is available in the context menu for roles, resources and project phases.
Select this to expand the full sub-structure of the selected investment or project phase.

## 5.8 Gantt Chart

The optional Gantt chart is also available but doesn't offer any interaction features in this view mode.
Like in **Assignments by Investment** mode, you may toggle display of the interactive Gantt chart via the **Visualization** menu in the toolbar.

## 5.9 Utilization and Availability

With **Show Utilization** in the **General** tab of your **Preferences**, the utilization for displayed assignments and the global remaining availability based on all assignments are displayed per period for each role and resource in color-coded numbers in the header row with the role's or resource's name.




| Name | Start | Finish | Total Effort | Est. Effort | 3/2/20 | 3/9/20 | 3/16/20 | 3/23/20 |
|---|---|---|---|---|---|---|---|---|
| Amos, Cheryl Developer | 10/08/2019 | 03/27/2020 | 588.0 | 588.0 | 40.0 / 0.0 | 40.0 / 0.0 | 40.0 / 0.0 | 40.0 / 0.0 |
| CRM Contact Center Development | 10/01/2019 | 02/26/2020 | 2,104.0 | 2,104.0 | | | | |
| PCI Controls Remediation | 01/27/2020 | 05/29/2020 | 1,052.0 | 1,026.0 | 40.0 | 80.0 | 80.0 | 40.0 |
| Design Phase | 01/27/2020 | 03/21/2020 | 252.0 | 252.0 | 40.0 | 80.0 | 80.0 | |
| Requirements Definition | 01/27/2020 | 03/06/2020 | 92.0 | 92.0 | 40.0 | | | |
| Functional and Technical Design | 03/09/2020 | 03/20/2020 | 80.0 | 80.0 | | 40.0 | 40.0 | |
| Construction Phase | 01/27/2020 | 04/25/2020 | 160.0 | 158.0 | | | | 40.0 |
| Database Development | 03/23/2020 | 03/27/2020 | 40.0 | 40.0 | | | | 40.0 |
| Architect | 12/02/2019 | 02/26/2021 | 6,280.0 | 6,280.0 | 325.7 / -71.9 | 256.0 / -6.2 | 252.0 / -2.2 | 226.7 / 39.2 |
| Change Mgt for Internal Portal | 03/01/2020 | 06/30/2020 | 1,600.0 | 1,600.0 | 40.0 | 90.0 | 150.0 | 200.0 |
| Planning Phase | 03/04/2020 | 03/29/2020 | 480.0 | 480.0 | 40.0 | 90.0 | 150.0 | 200.0 |
| Risk Response and Mitigation Plan | 03/11/2020 | 03/20/2020 | 80.0 | 80.0 | | 30.0 | 50.0 | |
| Complete Project Plan | 03/25/2020 | 03/27/2020 | 40.0 | 40.0 | | | | 40.0 |
| Design Phase | 04/01/2020 | 04/19/2020 | 360.0 | 360.0 | | | | |
| Requirements Definition | 04/01/2020 | 04/03/2020 | 40.0 | 40.0 | | | | |
| Credit Card Security Improvements | 02/01/2020 | 05/23/2020 | 1,420.0 | 1,420.0 | 160.0 | 130.0 | 90.0 | |

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

The remaining availability also considers assignments that are not currently displayed.

In **Assignments by Resource** mode, remaining estimated effort from assignments is considered here.

Optionally, the remaining availability displayed for the current period will also consider actuals entered for that period (see "8.12.7 Consider Actuals for Remaining Availability" on page 103).

Hover over a grid cell to display a hint indicating which values are displayed.

Cell colors display whether a role's or resource's utilization is low (white), optimal (green), high (yellow) or very high (red) in that period (see "7.5 Utilization" on page 81).

Utilization histogram charts are not available in **Assignments by Resource** mode.

## 5.10 Toolbar Actions

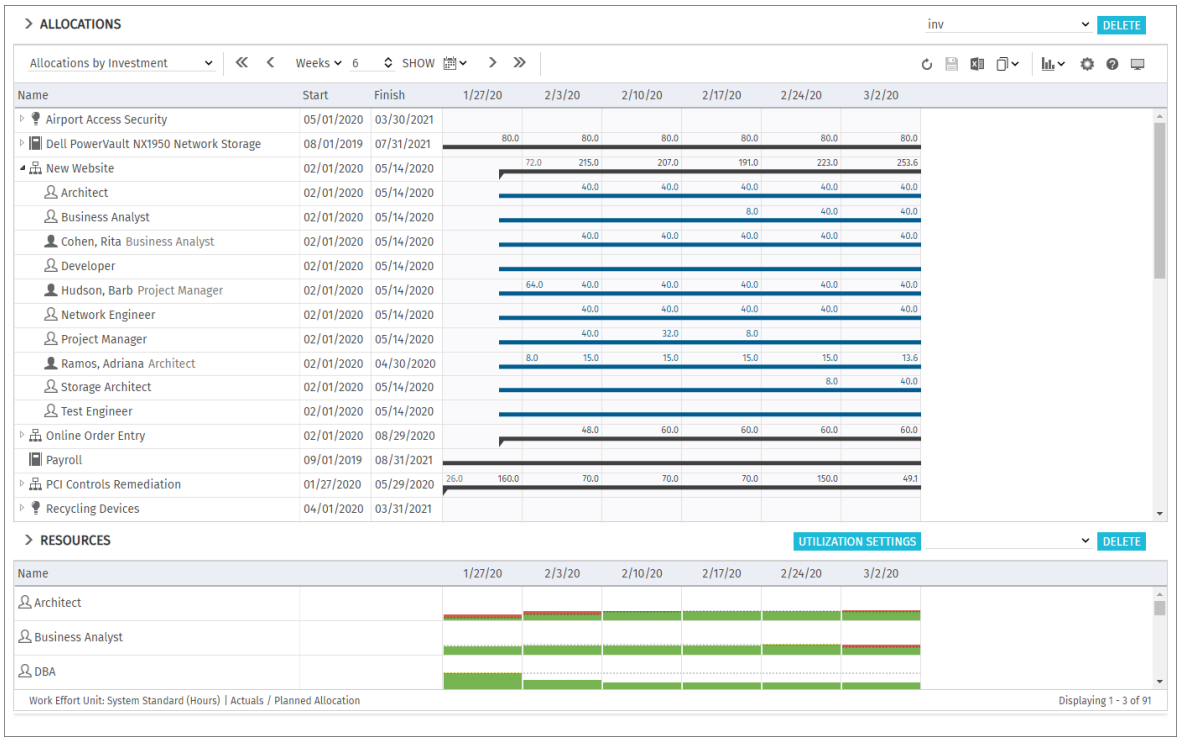
In **Assignments by Resource** mode, you can only toggle the display of **Gantt Bars** under **Visualization**. The other toolbar features are the same as in **Assignments by Investment** mode (see "4.11 Toolbar Actions" on page 50).

# 6 Allocations by Investment or by Resource

This chapter describes the most common use cases for the **Allocations** view modes. Because they are very similar, the following sections refer to both modes. Differences are indicated where they exist.

## 6.1 Displayed Data (Allocations by Investment)

The **Allocations by Investment** view groups the team entries of allocated roles and resources and their allocations under the associated investments.




In **Allocations by Investment** mode, the following data will be displayed:

- Investments
- Roles and resources with team entries for displayed investments
- Associated team entries and allocations
- List of all roles and resources, optionally with utilization and availability (see "6.9 Availability and Utilization (Allocations by Investment)" on page 64).

You may limit the selection of data records via filter conditions (see "3 Filter" on page 20).

### 6.1.1 Team Entry Data

In this mode, displayed roles and resources represent team entries.

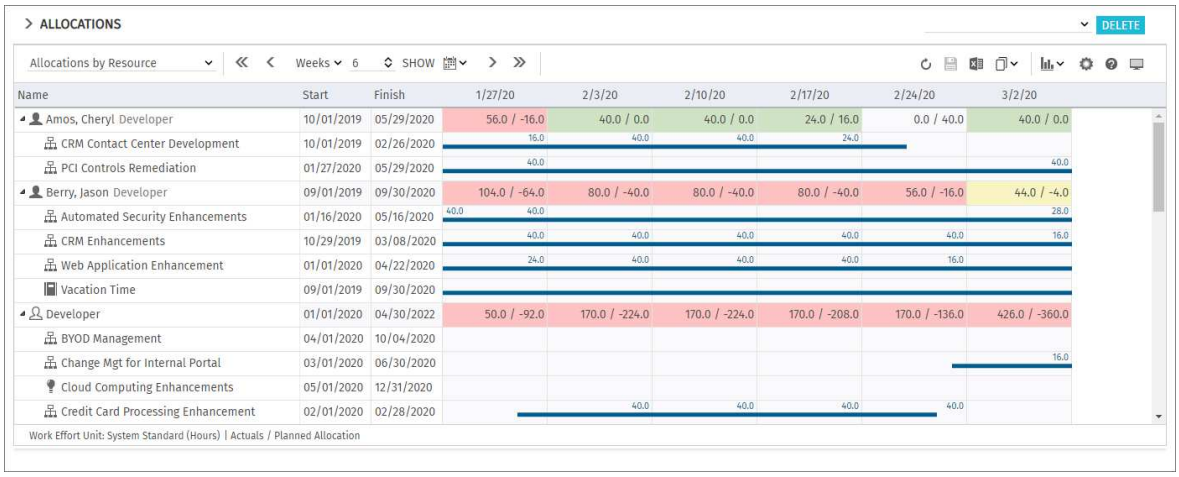
The **Start** and **Finish** displayed for investments are equal to the investment fields of the same name only when no team entries are displayed for the investment. Otherwise, they are the earliest **Start** and last **Finish** of team entries displayed for the investment.

### 6.1.2 Displaying Investment Hierarchies

Displaying investment hierarchies is optional and can be toggled in the **General** tab of the **Preferences** (also see "3.9.2 Selecting Investment Hierarchies in by Investment Modes" on page 28).

## 6.2 Displayed Data (Allocations by Resource)

The **Allocations by Resource** view groups the team entries for investments and the associated allocations under the allocated roles and resources.




In **Allocations by Resource** mode, the following data will be displayed:

- Roles and resources
- Investments with team entries of displayed roles and resources
- Associated team entries and allocations

You may limit the selection of data records via filter conditions (see "3 Filter" on page 20).

### 6.2.1 Show Utilization

With the **Show Utilization** option selected in the **General** tab of the **Preferences**, the utilization and availability of a role or resource will be displayed in the associated row (see "6.10 Utilization and Availability (Allocations by Resource)" on page 66).

### 6.2.2 Team Entry Data

In this mode, displayed investments represent associated team entries. The **Start** and **Finish** fields displayed for a role or resource indicate the earliest start and lastest finish of associated team entries.

## 6.3 Displayed and Editable Values per Period

In both of the **Allocations** modes, you may select up to two values that will be displayed per period for team entries (see sub-section "7.6.2 Allocations Modes" of "7.6 Layout" on page 84):

- **Optional read-only value (small blue number at the left edge of the cell):** Planned Allocation, Hard Allocation, ETC, Actuals, Actuals + ETC, Requested (both **Allocations** modes) or Availability (**Allocations by Investment** mode only).
- **Editable value (larger number at the right edge of the cell):** Planned Allocation or Hard Allocation

The editable value is also displayed as utilization (see "6.10 Utilization and Availability (Allocations by Resource)" on page 66).

## 6.4 Planned Allocation, Hard Allocation and Actuals

In the **Columns** tab of the **Preferences**, you can display or hide the **Planned Allocation**, **Hard Allocation** and **Actuals** fields (see "7.3 Columns" on page 76).

The fields display the respective values for each team entry.

With **Calculate Sums** enabled in the **General** tab of the **Preferences**, aggregated sums will also be calculated and displayed per investment (in **Allocations by Investment** mode) or per role and resource (in **Allocations by Resource** mode). Depending on the **Calculate Sums** setting, global sums (**On**) or **Filtered** sums will be displayed (see "**Calculate Sums**" on page 74).

In **Allocations by Resource** mode, **Show Utilization** will also calculate sums. When combined with **Calculate Sums** set to **Filtered**, the sums displayed per role and resource will be filtered (see "**Show Utilization**" on page 74).

## 6.5 Editing Allocations

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

Without selection of the **Show Gantt Bars for Team Members** option in the **Visualization** menu in the toolbar, you may enter the desired allocation values in the right hand side grid. 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 member of the **ARP Admin** group 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.

## 6.6 Editing List Fields

In **Allocations by Investment** mode, you can rename investments in the left hand side hierarchic list.

In both **Allocations** modes, you can also edit the **Start**, **Finish** and **Staff OBS Unit** fields of team entries in the list. Most additional fields may also be made editable by members of the **ARP Admin** group (see "8.11 Configuring List and Filter Fields" on page 96).

- 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 member of the **ARP Admin** group 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.

### 6.6.1 Renaming Investments in Allocations by Investment Mode

To rename an investment, click 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 via the context menu.

### 6.6.2 Editing the Investment Status in Allocations by Investment Mode

For investments, you may edit the **Investment Status**. Click the field to make a selection.

### 6.6.3 Editing the Start and Finish of Investments

In **Allocations by Investment** mode, you can directly edit the **Start** and **Finish** of investments for which no team entries are displayed.

Please note that the **Start** and **Finish** displayed for an investment are not equal to the investment fields of the same names when team entries are displayed for that investment. In this case, they are the earliest **Start** and last **Finish** of these team entries.

### 6.6.4 Editing the Start and Finish of Team Entries

You can change the duration of team entries via the **Start** and **Finish** fields displayed in the left hand side hierarchic list, distributing planned and hard allocations 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 a team entry will lower it.

In **Allocations by Investment** mode, you can also change the **Start** or **Finish** fields for all team entries of an investment with visible team entries via the **Start** and **Finish** fields displayed for the investment. The duration of all associated team entries will be changed by the same factor as the total duration of all team entries displayed for the investment (e.g., changing the total duration from 8 to 6 weeks will reduce a team entry spanning 4 weeks to 3 weeks).

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 won't reduce the investment's duration.

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

### 6.6.5 Editing the Staff OBS Unit of Team Entries

You may edit the **Staff OBS Unit** field of team entries in the list. To do this, click in the field.

Click the magnifier icon to select an OBS unit or the trashcan icon to clear the field.

### 6.6.6 Editing Additional Fields

You may also edit any additional list fields that have been made editable by members of the **ARP Admin** group (see "8.11 Configuring List and Filter Fields" on page 96).

This is supported for most standard fields that may be added as well as any custom field displayed in the list except for fields of the **Calculated**, **Formula** and **URL** types.

For lookups, click the magnifier icon to enter a value. Click the trashcan icon to clear the field (single-valued lookups) or remove the selected value (multi-valued lookups).

## 6.7 Context Menu for Displayed Objects

Hover over an investment, role, resource or team entry to open the associated context menu.

The following sections describe the default options available here.

Members of the **ARP Admin** group can hide default options and add additional custom options (see "8.10 Defining Actions" on page 94).

### 6.7.1 Open Properties

The **Open properties** option is available in the context menu for investments, roles, resources and team entries. Here you open the associated Clarity PPM detail view in a new browser tab.

### 6.7.2 Create Requisition

The **Create Requisition** option is available in the context menu for team entires. Here you create a new new requisition for the planned allocation of a team entry.

This action will be directly applied without further confirmation.

### 6.7.3 Allocate From Estimates

The **Allocate From Estimates** option is available in the context menu for team entries.

In **Allocations by Investment** mode, it is also available in the context menu for investments.

For the selected team entry, or for all team entries of the selected investment, the estimated effort of associated assignments will be entered as planned allocation.

This action will be directly applied without further confirmation.

### 6.7.4 Commit Planned Allocation

The **Commit Planned Allocation** option is is available in the context menu for team entries.

In **Allocations by Investment** mode, it is also available in the context menu for investments.

For the selected team entry, or for all team entries of the selected investment, the planned allocation will be entered as hard allocation.

This action will be directly applied without further confirmation.

### 6.7.5 Accept Hard Allocation

The **Accept Hard Allocation** option is is available in the context menu for team entries.

In **Allocations by Investment** mode, it is also available in the context menu for investments.

For the selected team entry, or for all team entries of the selected investment, the hard allocation will be entered as planned allocation.

This action will be directly applied without further confirmation.

### 6.7.6 Delete

The **Delete** option is available in the context menu for team entries without actuals. Once you select the **Delete** option, the selected team entry will instantly be deleted without further confirmation.

Team entries with actuals can't be deleted.

Deleting other objects isn't supported in the allocations modes.

### 6.7.7 Remove Lock

The **Remove lock** option is available in the context menu of projects locked due to changes made by users in itd Advanced Resource Planning.

Every user may unlock projects via the context menu that were locked due to her own changes made in itd Advanced Resource Planning.

Members of the **ARP Admin** group may unlock any projects via the context menu that were locked due to changes made by any user in itd Advanced Resource Planning.

Projects locked due to changes made outside of itd Advanced Resource Planning can only be unlocked via the associated button in the project's properties.

### 6.7.8 Expand All

The **Expand all** option is available in the context menu for first level objects (investments or roles/ resources). Select this to expand all associated team entries.

### 6.7.9 Rename

In **Allocations by Investment** mode, the **Rename** option is available in the context menu for investments. Press [Return] to confirm or [Esc] to cancel. The change will only be applied when saving via the toolbar. Refresh without saving to undo.

### 6.7.10 Filter by Role, OBS and Skills

The **Filter by Role, OBS and Skills** option is available for role team entries in **Allocations by Investment** mode. Selecting it will apply the following filters to the **Resources** list:

- **Primary Role** will be the selected role.
- **Resource OBS Unit** will be the **Staff OBS Unit** of the associated team entry, if selected.
- **Skills** will be the skills selected for the associated team entry, if any.
- **Skill Matching** will require to match all skills (alternatively, you can require to match at least one).

Missing filter fields will be added automatically.

If no **Staff OBS Unit** or **Skills** are configured in the role's team entry, they will be ignored.

## 6.8 Interactive Gantt Chart

An interactive Gantt chart is available in both **Allocations** modes like in **Assignments by Investment** mode. It displays the duration of team entries and, in **Allocations by Investment** mode, of investments without team entries.

### 6.8.1 Gantt Bars for Investments

In **Allocations by Investment** mode, Gantt bars for investments will always be displayed. Please note that these represent the actual investment duration only for investments for which no team entries are displayed. In this case, resizing or moving an investment bar will directly change the **Start** and **Finish** fields of that investment. When team entries are displayed for an investment, its Gantt bar will stretch from the earliest **Start** to the last **Finish** of these team entries. In this case, you can move, shorten or extend all team entries belonging to the investment at once via its Gantt bar, retaining the proportion of each team entry's duration as related to the total duration.

### 6.8.2 Gantt Bars for Team Entries

In both **Allocations** modes, Gantt bars for the actual team entries will be displayed with the **Show Gantt Bars for Team Members** option selected in the **Visualization** menu. With this option selected, you can move, shorten or extend displayed team entries via drag-and-drop.

### 6.8.3 Changing the Duration of Team Entries

Changing the duration of a team entry in the Gantt chart via the associated investment bar or directly will redistribute its allocations with the same proportions as before the change.
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. Directly editing the allocation values is only possible when Gantt bars for team members are not displayed.

- Changes made to Gantt bars 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 member of the **ARP Admin** group 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.

## 6.9 Availability and Utilization (Allocations by Investment)

In **Allocations by Investment** mode, the lower view section displays all roles and resources for which you have access rights by default.

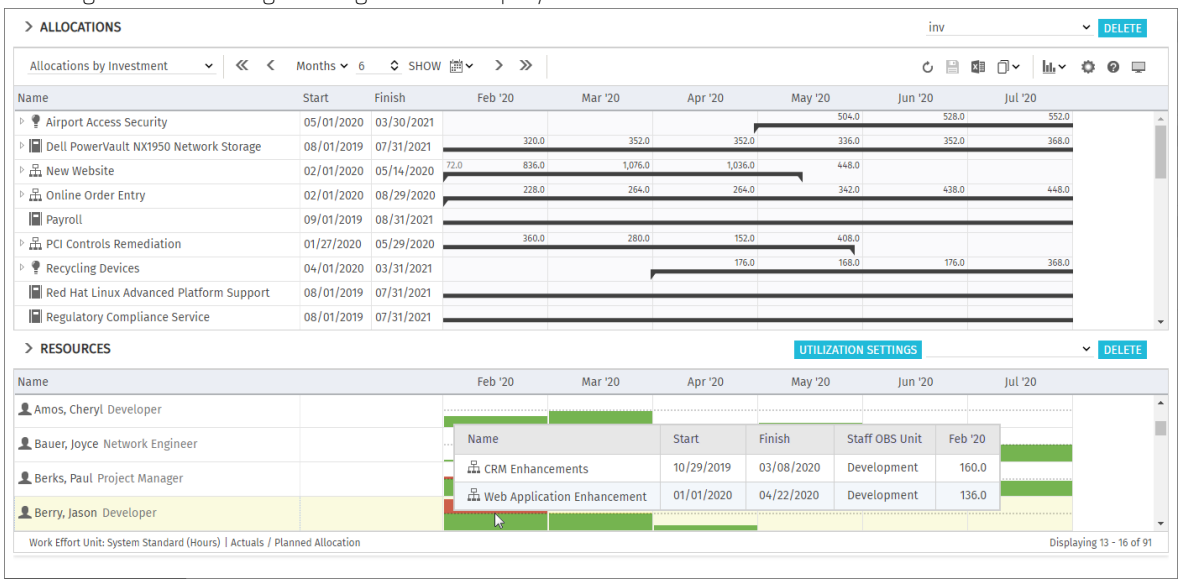
With **Show Utilization** in the **General** tab of your **Preferences**, the total or remaining availability (raw or effective availability, see "8.12.12 Show Raw Availability in Utilization Panel" on page 104) and utilization of roles and resources are also displayed per period, either in color-coded numbers or as a histogram chart. Only allocations are considered. The editable value (**Planned** or **Hard**) is displayed (see "6.3 Displayed and Editable Values per Period" on page 58).

### 6.9.1 Visualization

The view supports the same view modes selectable via the **Show Utilization** option in the **General** tab of the **Preferences** and via the **Show Histogram** option in the **Visualization** menu. These view modes use the same threshold values as in the **Assignments by Investment** mode (see "4.10.1 Visualization: Color-Coded Table or Histogram" on page 46).

### 6.9.2 Displaying Availability and Utilization Details

Hover over a grid cell or histogram segment to display a hint indicating which values are displayed. Click a grid cell or histogram segment to display the associated investments:




### 6.9.3 Filtering the View

The view uses the same filter settings for roles and resources as in the **Assignments by Investment** mode (see "4.10.2 Filtering the View" on page 47).

In the **Allocations** modes, you can also filter the displayed utilization and availability to only include approved investments and/or selected departments. The filters affect the displayed availability and utilization and the color codes for utilization levels and histograms.

- With **Visualization** > **Utilization** > **Include Only Approved Investments**, you can filter the displayed utilization to only include approved investments.
- Via the **Utilization Filter** button on the filter panel, you can select one or more departments (**Staff OBS**) to include only the availability and utilization of associated resources.

  This will also affect the availability and utilization displayed for roles.

See "3.7 Utilization Filters for Allocations Modes" on page 23 for details.

### 6.9.4 Selecting a Role or Resource

When you select a team entry in the left hand side hierarchic list in the upper view section, the associated role or resource will also be automatically selected in the utilization view.

### 6.9.5 Allocating a Role or Resource via Drag-and-Drop

You may create a new team entry by dragging a role or resource from the utilization view onto an investment. When the Gantt chart is not displayed, you can then enter the planned or hard allocation for that team entry. Drag a resource onto an existing team entry to replace the allocated role or resource. Please note that only resources can be dragged onto team entries this way. It is not possible to replace a role or resource with a role.

- 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 member of the **ARP Admin** group 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.

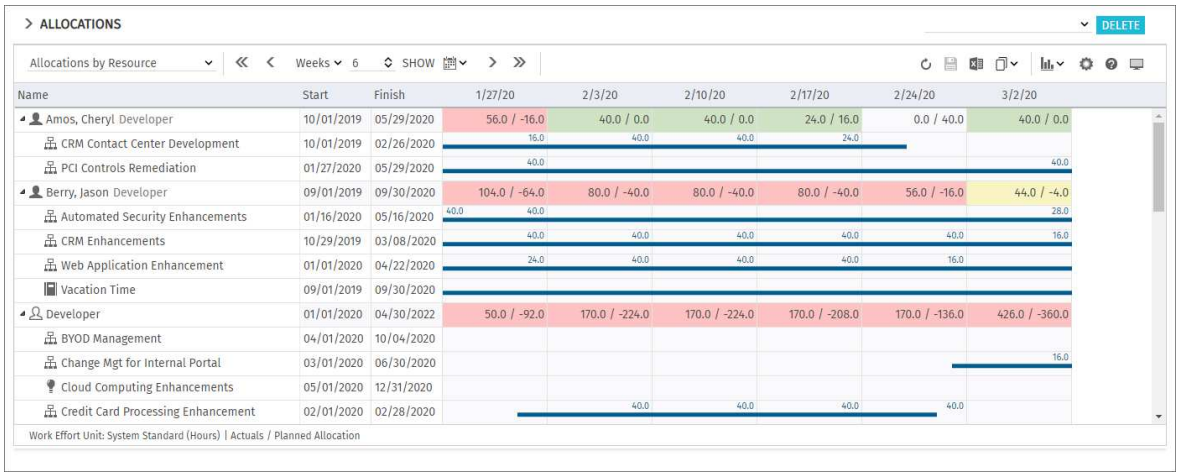
### 6.9.6 Creating Multi-Role Allocations

Like in **Assignments by Investment** mode, you can allocate a role to the same investment multiple times by repeatedly dragging it onto that investment and confirming to create a new team entry.

- 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 member of the **ARP Admin** group 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.

## 6.10 Utilization and Availability (Allocations by Resource)

With **Show Utilization** in the **General** tab of your **Preferences**, the utilization for displayed allocations and the global remaining availability based on all allocations are displayed per period for each role and resource in color-coded numbers in the header row with the role's or resource's name.




The remaining availability also considers allocations that are not currently displayed.

In **Allocations by Resource** mode, only allocations are considered here. The editable value (**Planned** or **Hard**) is displayed (see "6.3 Displayed and Editable Values per Period" on page 58).

Utilization histogram charts are not available in **Allocations by Resource** mode.

### 6.10.1 Visualization of Low, Optimal, High and Very High Utilization

Cell colors display whether a role's or resource's utilization is low (white), optimal (green), high (yellow) or very high (red) in that period (see "7.5 Utilization" on page 81).

### 6.10.2 Displaying Utilization and Availability Details

Hover over a grid cell to display a hint indicating which values are displayed.

### 6.10.3 Filtering the View

In the **Allocations** modes, you can filter the displayed utilization and availability to only include approved investments and/or selected departments.

The filters affect the displayed remaining availability and the color codes for utilization levels.

- With **Visualization** > **Utilization** > **Include Only Approved Investments**, you can filter the displayed remaining availability to only include approved investments.

  Team entries will still be displayed for all investments.
- Via the **Utilization** tab in your **Preferences**, you can select one or more departments (**Staff OBS**) to calculate the remaining availability based only on the availability and utilization of associated resources.

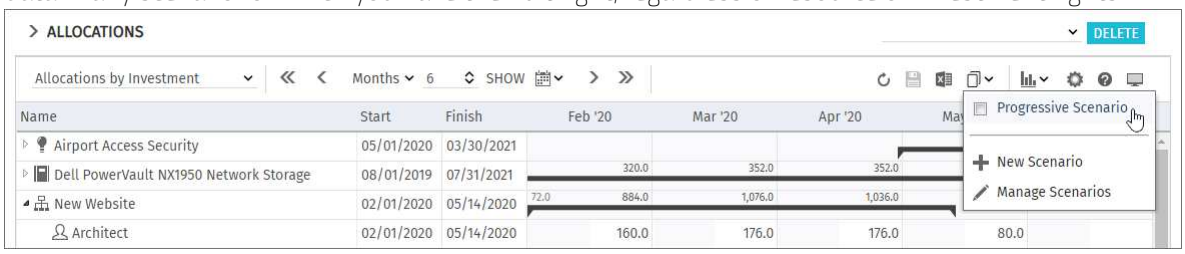
  This will also affect the remaining availability displayed for roles.

See "3.7 Utilization Filters for Allocations Modes" on page23 for details.

## 6.11 Scenario Comparison

In the **Allocations** modes, the **Scenario** menu is available in the toolbar if you have the **Scenario – Navigate** right and if the menu hasn't been hidden by a Clarity PPM application administator (see "8.12.2 Hide Toolbar Buttons" on page 100).

In the **Scenario** menu, you have access to all scenarios for which you have the **View** right. You may edit data in any scenario for which you have the **Edit** right, regardless of resource or investment rights.




### 6.11.1 Scenario Menu Features

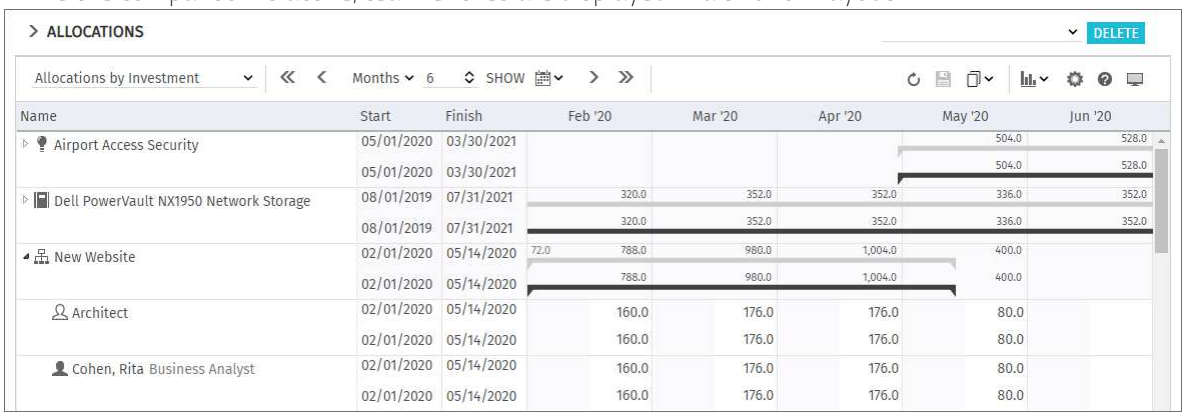
The scenario menu in the toolbar offers the following features.

- Select a scenario to compare with the plan of record.
- Deselect a selected scenario to end the scenario comparison.
- Via the **Scenario** menu, you may also create new scenarios or open the scenario manager.

See section "6.12 Toolbar Features" on page 70 for details about these features.

### 6.11.2 Visualization and Editing in Scenario Comparison Mode

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




- The first row displays the plan of record data, which you may not edit in comparison mode.
- The second row displays the associated data in the compared scenario. In comparison mode, you may only edit scenario data: the **Investment Status** of an investment, the Start and Finish of a team entry and, without **Show Gantt Bars for Team Members** in the **Visualization** menu, the associated **Planned Allocation** per period. With **Show Gantt Bars for Team Members** in the **Visualization** menu, you may 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 commited plan of record values. You cannot change these values in a scenario.

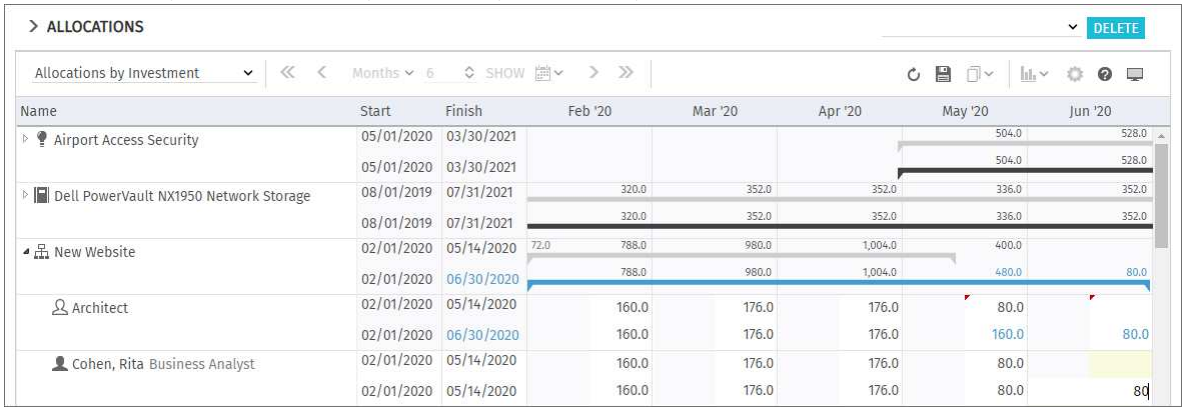
### 6.11.3 Transferring Investments and Team Entries to a Scenario

Initially, investments exist only in the plan of record. Change the **Investment Status** in an investment's second row or the **Start**, **Finish** or **Planned Allocation** per period in a team entry's second row to copy the associated investment with all team entries to the scenario.

Please note:

- You may change the **Investment Status** in **Allocations by Investment** mode only, and you may set it to **Approved** or **Unapproved** only in a scenario, provided these values are available.
- Team entries added to an investment 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 the copies of team entries created in the scenario:




Changes made to the **Start**, **Finish**, **Investment Status** or **Planned Allocation** per period are highlighted in light blue. On the top level (investment or role/resource), allocations will be summed up. Changes as opposed to the plan of record, where they exist, will also be highlighted in light blue on this level. Additionally, the Gantt bars for investments and team entries will also be highlighted in light blue when the **Start**, **Finish** or total **Planned Allocation** change as opposed to the plan of record.

Extending a team entry beyond the **Start** or **Finish** of the associated investment will also extend the investment, such that it includes that 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. Changing the duration of a team entry will redistribute its allocation values with the same proportion as before the change.

The **Start** and **Finish** fields displayed for investments are equal to the investment fields of the same name only when no team entries are displayed for the investment. Otherwise, they are the earliest **Start** and last **Finish** of team entries displayed for the investment.

Changing the **Start** and **Finish** displayed for investments via the list or Gantt chart is not possible.

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.

### 6.11.4 Utilization View

In scenario comparison mode, the resource utilization view includes scenario data where they exist:

- Team entries of investments that don't exist in the compared scenario and associated allocations will be loaded from the plan of record.
- Team entries of investments existing in the compared scenario and associated allocations will be loaded from that scenario.

The utilization and availability filters are applied here as well:

- The **Visualization** > **Utilization** > **Include Only Approved Investments** option is applied and will filter the displayed utilization or remaining availability to only include approved investments.

  For investments where the **Investment Status** differs in the scenario, the scenario value will be used. This way, you can see how changing the **Investment Status** affects the utilization.
- The department filter (**Utilization Filter**) filters the availability and utilization of roles and resources, such that only selected departments are considered.

In **Allocations by Investment** mode, while the scenario comparison is active, it is not possible to add team entries to investments via drag-and-drop of roles and resources from the utilization view.

### 6.11.5 Context Menu

In scenario comparison mode, the context menu for investments, roles and resources offers only the **Open properties** and **Expand all** options.

## 6.12 Toolbar Features

The toolbar features are mostly the same for all view modes (see "4.11 Toolbar Actions" on page 50).

In the **Allocations** modes, different features are available under **Visualization**. Also, the **Scenario** menu will be available if you have the **Scenario – Navigate** right and if the menu hasn't been hidden by a Clarity PPM application administator (see "8.12.2 Hide Toolbar Buttons" on page 100).

Please also note that the **Export to Excel** feature that is usually accessible in the toolbar isn't available in scenario comparison mode.

### 6.12.1 Visualization (Allocations by Investment)

In **Allocations by Investment** mode, you have access to the following options under **Visualization**:

- **Show Gantt Bars for Team Members** (investment Gantt bars are always displayed in this mode).
- **Show Histogram:** graphically visualize availability and utilization.
- **Include Only Approved Investments:** only display utilization from approved investments (unapproved investments and associated team entries and allocations will still be displayed but won't be included in the displayed utilization).

### 6.12.2 Visualization (Allocations by Resource)

In **Allocations by Resource** mode, you have access to the following options under **Visualization**:

- **Show Gantt Bars for Team Members** (investments Gantt bars aren't displayed in this mode).
- **Include Only Approved Investments:** only display utilization from approved investments (unapproved investments and associated team entries and allocations will still be displayed but won't be included in the displayed utilization).

### 6.12.3 Selecting or Deselecting a Scenario

All scenarios you have access to are available for selection in the **Scenario** menu. Select a scenario to start the scenario comparison. Deselect the active scenario to end the scenario comparison.

See "6.11 Scenario Comparison" on page 67 for details about working with the scenario comparison.

### 6.12.4 Adding a Scenario

Select the **New Scenario** option to create a scenario. You can then enter a name for the new scenario directly in the toolbar. Click the check mark to confirm or the X to abort.

### 6.12.5 Manage Scenarios

Select the **Manage Scenarios** option to open the Clarity PPM default scenario manager view. Here, you can view, edit, add or delete scenarios.

You can also set the **Current** and **Compare** flags, which won't affect itd Advanced Resource Planning.

# 7 User Preferences

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

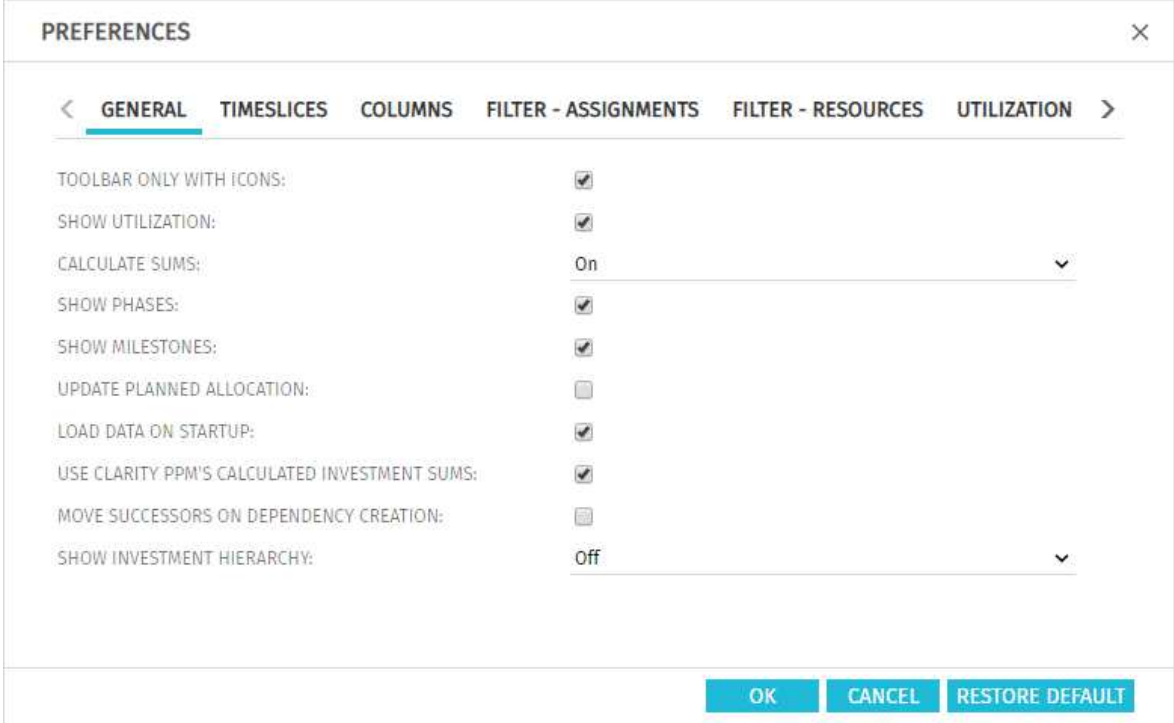
Please note that options differ slightly for the **Assignments by Investment**, **Assignments by Resource**, **Allocations by Investment** and **Allocations by Resource** modes.

While most options affect all four modes, some are restricted to one or two modes and some are equal but stored separately for each mode. This will be pointed out where it applies.

## 7.1 General

Some options available here are shared among the four view modes. All options will be described in detail for the **Assignment by Investment** mode in the following section. After that, the differences of the **Assignments by Resource** and **Allocations** modes will shortly be described.

### 7.1.1 Assignments by Investment




- **Toolbar Only with Icons:** select this to hide the captions on buttons with icons, reducing the width of the toolbar.
- **Show Utilization:** specify here whether to calculate and display the global total utilization and remaining availability of roles and resources in the resource view when the histogram is not displayed. This option doesn't disable displaying the histogram.
- **Calculate Sums:** specify here whether totals of the **Estimated Effort**, **Actuals** and **Total Effort** fields (**Assignments** modes) or the **Planned Allocation**, **Hard Allocation** and **Actuals** fields (**Allocations** modes) should be calculated and displayed for all aggregation levels (task, project phase, investment, role/resouce).

  You may choose between **On** (display global totals), **Filtered** (apply selected filters to global totals) and **Off** (don't calculate sums). This setting affects the loading time, with **Off** being the fastest and **Filtered** the slowest method.
  - In **Assigments by Investment** mode, if you also select the **Use Clarity PPM's calculated investment sums** option, instead of calculating aggregated values for investments, the

sums calculated by Clarity PPM will be used, which are also displayed in investment lists. This applies when combined with the **On** or **Filtered** setting for **Calculate Sums** and corresponds to **On** on the investment level. Using this setting may speed up the loading time as the values don't have to be recalculated.

  - In **Assignments by Resource** mode, **On** will always display totals for investments and project phases, including assignments of other roles and resources than those below the items are listed. **Filtered** will sum up over the displayed assignments and therefore only display sums for the roles and resources below which the items are listed.
  - In **Allocations by Resource** mode, the **Show Utilization** option will always calculate and display aggregated sums per role/resource for the **Planned Allocation**, **Hard Allocation** and **Actuals** values. Selecting **On** or **Off** for **Calculate Sums** has no effect in this case. Combining **Show Utilization** with **Filtered** for **Calculate Sums** will apply the selected filters to the sums.
- **Show Phases:** specify here whether to display project phases between investments and associated tasks. If phases are not displayed, tasks associated with phases will be displayed directly under their respective investments.
- **Show Milestones:** specify here whether milestones should be displayed.
- **Update Planned Allocation:** specify here whether assignments entered for tasks should automatically be entered as planned allocation in the associated projects as well.
- **Load Data on Startup:** specify here whether data is loaded directly when opening itd Advanced Resource Planning or only after clicking the filter button.
- **Use Clarity PPM's Calculated Investment Sums:** this option depends on the **Calculate Sums** option and will only take effect if that option is set to **On** or **Filtered**. Select this to always display the sums calculated by Clarity PPM for investments, which are also displayed in investment lists, instead of letting itd Advanced Resource Planning calculate these sums .
- **Move Successors on Dependency Creation:** with this option, newly created 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 dependencies between the successor and its own successors that are already violated won't be automatically satisfied in this process.

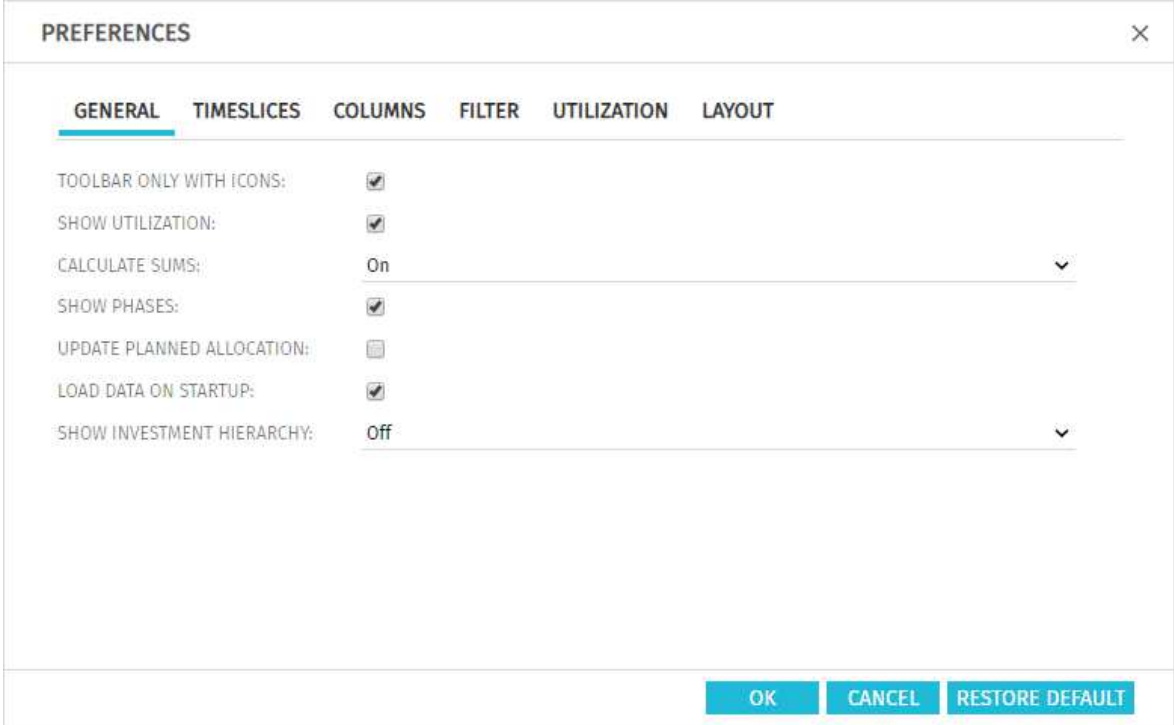
  Also, if the selected successor or any of its successors has actuals or the **Exclude from Autoscheduling** property, that task or milestone and its successors won't be moved.
- **Show Investment Hierarchy:** here, you show or hide investment hierarchies.

  This includes any parent and sub-investments of investments explicitly selected via filter conditions.

  Hiding investment hierarchies may speed up loading the view.

  Please note that displaying of hierarchies also depends on which filters you use (see "3.9.2 Selecting Investment Hierarchies in by Investment Modes" on page 28).

### 7.1.2 Assignments by Resource




The general options for the **Assignments by Resource** mode are mostly the same as in **Assignments by Investment** mode and have the same effects.

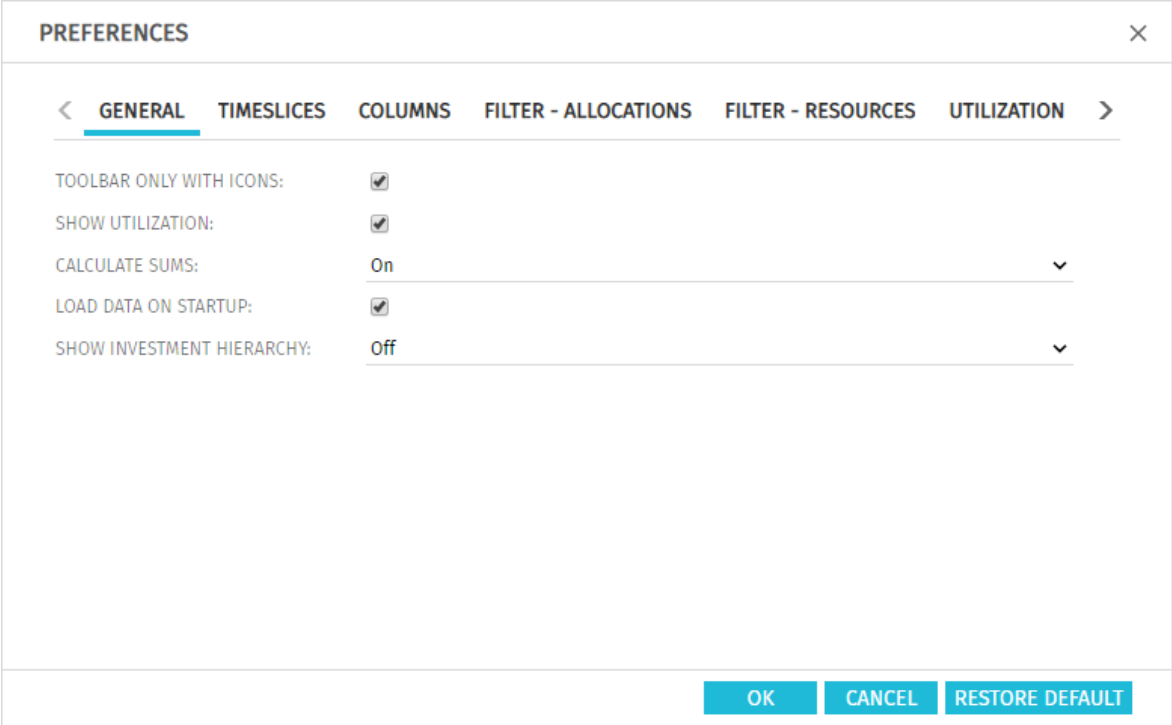
The following options have no effect in this view mode and are therefore not available:

- Show Milestones
- Use Clarity PPM's Calculated Investment Sums
- Move Successors on Dependency Creation

**Show Investment Hierarchy** will display only existing parent investment hierarchies in this mode.

The options that are available in all view modes are directly interdependent, meaning that selecting one of them in one view mode will also apply to the other modes.

### 7.1.3 Allocations Modes




The general options for the **Allocations by Investment** and **Allocations by Resource** modes are mostly the same as for the other two view modes and are directly interdependent, meaning that selecting an option in one view mode also applies to the other three modes.

- The options for project phases and milestones are not available here, as the project sub-structure is not displayed in **Allocations by Investment** mode.
- The **Use Clarity PPM's Calculated Investment Sums** option has no effect in the **Allocations** modes, and is therefore also not available here.
- **Show Utilization:** in **Allocations by Resource** mode, aggregated sums as well as availabilities will always be displayed per role and resource with the **Show Utilization** option. Setting **Calculate Sums** to either **On** or **Off** has no further effect. Combining **Show Utilization** with **Calculate Sums** set to **Filtered** will apply your filters to the sums calculated for roles and resources.
- **Calculate Sums:** as in the **Assignments** modes, the **On** (global sums), **Filtered** (apply filters) and **Off** options are available for **Calculate Sums**, with **Filtered** potentially slowing down loading.

  Select **On** or **Filtered** to use the **Team has Hard Allocation** and **Team has Planned Allocation** filter fields for displaying only team entries with hard or planned allocation in the selected period (see "3.9.5 Default Filter Fields for Team Entries" on page 30).

  In **Allocations by Resource** mode, selecting **Show Utilization** will also enable you to use the filters.
- **Show Investment Hierarchy (Allocations by Investment only):** here, you show or hide investment hierarchies in **Allocations by Investment** mode. This includes any parent and sub-investments of investments explicitly selected via filter conditions.

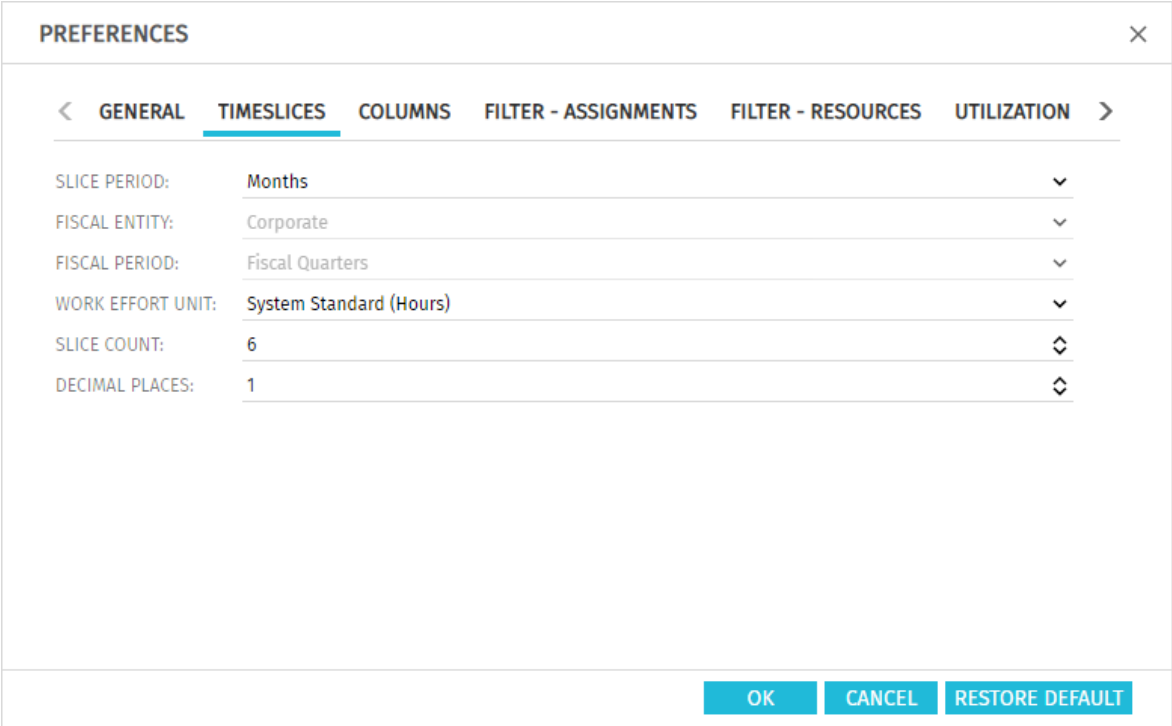
  Hiding investment hierarchies may speed up loading the view.

  Please note that displaying of hierarchies also depends on which filters you use (see "3.9.2 Selecting Investment Hierarchies in by Investment Modes" on page 28).

  In **Allocations by Resource** mode, this option isn't available and investment hierarchies are generally not displayed.

## 7.2 Timeslices

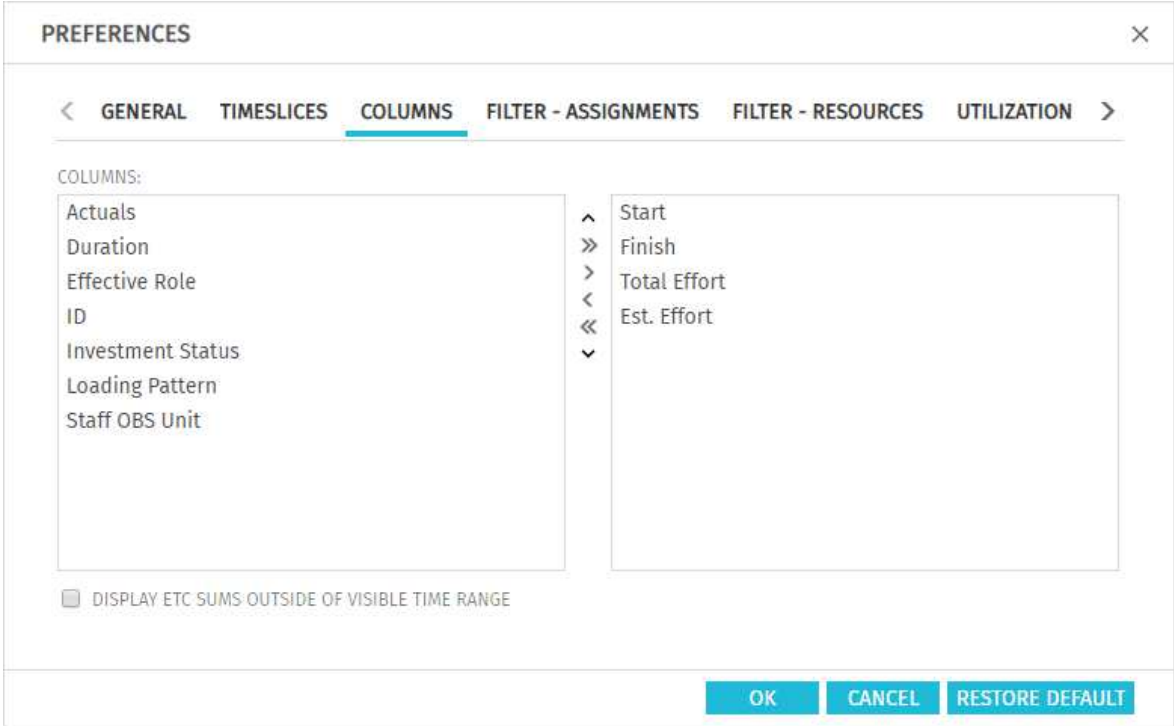
These options are shared among the four view modes.




- **Slice Period:** enter the planning period here. Possible settings are **Days**, **Weeks**, **Months**, **Quarters**, **Calendar Years** and, if configured, **Fiscal Period**.
  The selection of available slice periods may be limited by Clarity PPM application administrators via the **itd AE Preferences** lookup (see "8.12.3 Restrict Time Slice Periods in the Preferences and in the Toolbar" on page 101). In this case, only options enabled via the associated lookup value will be available here and in the toolbar of itd Advanced Resource Planning.
- **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.
- **Work Effort Unit:** specify the unit for efforts here. By default, the **System Standard** will be applied. Alternatively, **Hours**, **Days** or full time equivalents (**FTE**) are available for selection here.
- **Slice Count:** enter the amount of slices to be displayed.
- **Decimal Places:** enter the desired number of decimals for entering and displaying assignments and allocations.

## 7.3 Columns

The available columns depends on the view mode. The selection is stored separately for each mode.




### 7.3.1 Always Displayed

The following fields are always displayed in the first column in all view modes:

- **Name (investment, project phase, task, milestone, role/resource)**
- **Parent role (role), primary role (resource):** for roles, the parent role is displayed next to the role name. For resources, the primary role is displayed next to the resource name.

### 7.3.2 Assignments Modes

The following fields can be selected for display by default in both of the **Assignments** modes:

- **ID (investment, project phase, task, milestone, role/resource)**
- **Start, Finish (investment, project phase, task, milestone, assignment):** editable for project phases, tasks, milestones and assignments in **Assignments by Investment** mode and for assignments only in **Assignments by Resource** mode
- **Duration (project phase, task, assignment):** duration in work days according to the base calendar; editable in **Assignments by Investment** mode only
- **Est. Effort, Actuals, Total Effort (investment, project phase, task, assignment):** remaining, worked and total hours; the **Total Effort** field displays the sum of **Est. Effort** and **Actuals**.
- **Effective Role (assignment):** role/resource assignment role
- **Effective Role (team entry):** role/resource investment role
- **Effective Role (role):** parent role
- **Effective Role (resource):** primary role
- **Loading Pattern (assignment):** editable
- **Staff OBS Unit (team entry):** editable
- **Investment Status (investment):** editable
- **Display ETC Sums outside of Visible Time Range:** see pages 36 and 53.

### 7.3.3 Allocations by Investment

The following fields can be selected for display by default in **Allocations by Investment** mode:

- **ID (investment)**
- **Start, Finish (investment, team entry):** The **Start** and **Finish** displayed for an investment are equal to the investment fields of the same names only when no team entries are displayed for that investment. Otherwise, they are the earliest **Start** and last **Finish** of these team entries.

  In scenario mode, you may change these fields for team entries in the scenario.
- **Actuals, Planned Allocation, Hard Allocation (investment, team entry):** worked, planned and booked working hours for investments (first level), or team entries (second level)
- **Default Allocation (team entry):** editable; this applies in periods during the team entry where no allocation segments have been defined.
- **Effective Role (team entry):** role/resource investment role
- **Staff OBS Unit (team entry):** editable
- **Investment Status (investment):** editable

  In scenario mode, you may change this field for investments in the scenario.

### 7.3.4 Allocations by Resource

The following fields can be selected for display by default in **Allocations by Resource** mode:

- **ID (role/resource)**
- **Start, Finish (team entry):** total duration of all team entries displayed for a role or resource (first level) or duration of team entries (second level)

  In scenario mode, you may change these fields for team entries in the scenario.
- **Actuals, Planned Allocation, Hard Allocation (role/resource, team entry):** worked, planned and booked working hours for roles and resources (first level) or team entries (second level)
- **Default Allocation (team entry):** editable; this applies in periods during the team entry where no allocation segments have been defined.
- **Effective Role (role):** parent role
- **Effective Role (resource):** primary role
- **Effective Role (team entry):** role/resource investment role
- **Staff OBS Unit (team entry):** editable

### 7.3.5 Displaying Additional Fields

In addition to the default fields listed in the previous sections, members of the **ARP Admin** group may add other fields available for investments, investment sub-types, roles and resources, team entries, tasks and assignments to the selection (see "8.11 Configuring List and Filter Fields" on page 96).

Most Clarity PPM standard fields may be added, as well as most custom fields defined for these objects.

### 7.3.6 Editing Additional Fields

Most standard fields and any custom field displayed in the list, except for fields of the **Calculated**, **Formula** and **URL** types, can be made editable by members of the **ARP Admin** group and may be edited in the list in this case (see "8.11 Configuring List and Filter Fields" on page 96).

## 7.4 Filter

All filter settings are stored separately for the four view modes.

Depending on the view mode, there are one or two filter tabs.

- **Assignments by Investment:** this view mode offers two filters. The assignment filter defined under **Filter – Assignments** lets you filter investments, roles and resources, tasks, assignments and team entries.
  The resource filter defined under **Filter – Resources** lets you filter the role/resource utilization view in the lower half of the view.
- **Assignments by Resource:** this view mode offers only an assignment filter defined under **Filter**. This lets you filter investments, roles and resources, tasks, assignments and team entries.
- **Allocations by Investment:** this view mode offers two filters:
  The allocation filter defined under **Filter – Allocations** lets you filter investments, roles/resources, and team entries.
  The resource filter defined under **Filter – Resources** lets you filter the role/resource utilization view in the lower half of the view.
- **Allocations by Resource:** this view mode offers only an allocation filter defined under **Filter**. This lets you filter investments, roles/resources, and team entries.

### 7.4.1 Filter – Assignments / Allocations / Filter

The following filter settings differ depending on the view mode.

These settings can be found under **Filter – Assignments** (**Assignments by Investment**), under **Filter** (**Assignments/Allocations by Resource**) or under **Filter – Allocations** (**Allocations by Investment**).

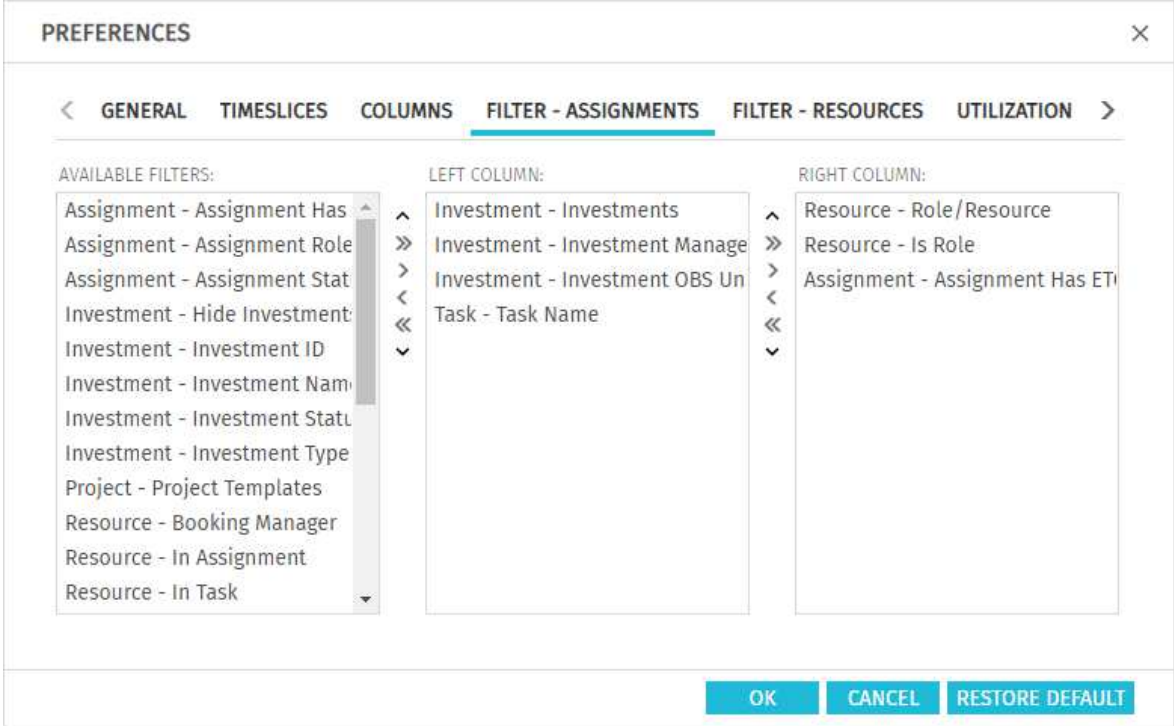
In all view modes, you may filter displayed investments, roles and resources and team entries.

In the **Assignments** modes, you can additionally filter displayed tasks and assignments.

See section "3.9 Default Filter Fields" on page 26 for details about the default filter fields.

In addition to the fields listed there, members of the **ARP Admin** group may add other fields available for investments, investment sub-types, roles and resources, team entries, tasks and assignments to the selection (see "8.11 Configuring List and Filter Fields" on page 96).

Most Clarity PPM standard fields may be added, as well as most custom fields defined for these objects.

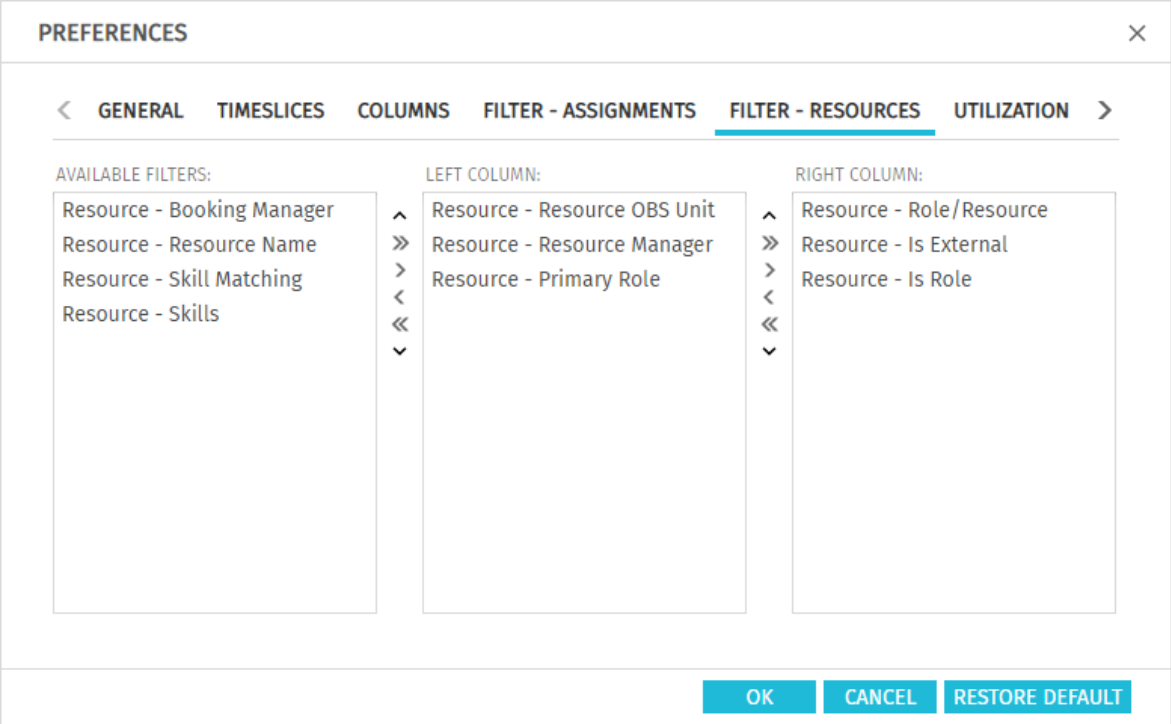



Select the available filter fields for the left and right column of the assignment or allocation filter.

- 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).

### 7.4.2 Filter – Resources

The resource filter defined under **Filter – Resources** is available in the **Assignments by Investment** and **Allocations by Investment** modes. It lets you filter the selection of roles and resources displayed in the utilization view in the lower view section. By default, all roles and resources you have access to are displayed there. Enter filter conditions to narrow down the selection.




Select the available filter fields for the left and right column of the allocation filter settings.

See page 79 for details about selecting filter fields.

See section "3.10 Default Filter Fields for the Role and Resource List" on page 32 for details about supported default filter fields.

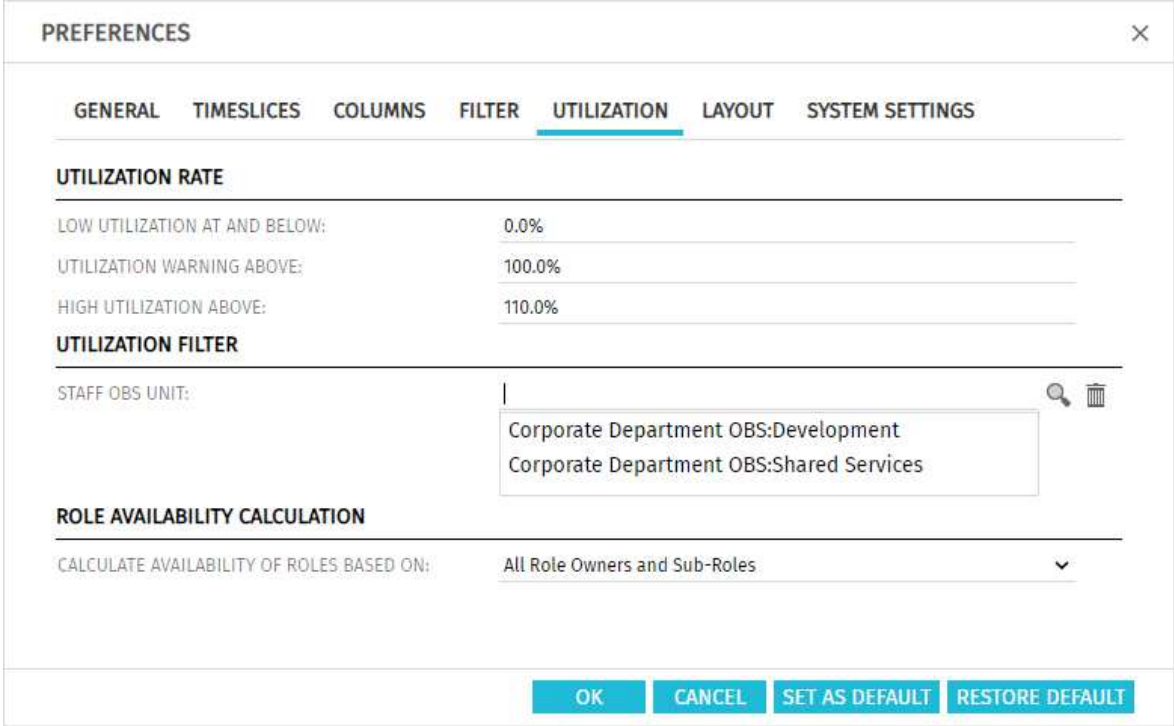
In addition to the fields listed there, members of the **ARP Admin** group may add to the selection of filter fields other fields available for roles and resources (see "8.11 Configuring List and Filter Fields" on page 96). Most Clarity PPM standard fields may be added, as well as most custom fields defined for roles and resources.

## 7.5 Utilization

The options available in the **Utilization** tab depend on your view mode:

- The **Utilization Rate** options are shared among the four view modes.
- The **Utilization Filter** is only available in **Allocations by Investment** mode and only affects that view mode.
- The **Role Availability Calculation** option is only available in the **Allocations by Investment** and **Allocations by Resource** modes and only affects these view modes.

Also depending on your view mode, the utilization will be calculated from assignments or allocations.




### 7.5.1 Utilization Rate

Enter thresholds for the visualization of low or high utilization here.

- **Low Utilization at and Below:** upper utilization boundary below which roles and resources will be marked as lowly utilized with a grey background in the respective period.

  Roles and resources will be marked as optimally utilized with a green background in periods for which their utilization is between the thresholds for low utilization and utilization warning (e.g., as displayed in the screenshot, roles and resources would be marked green for periods in which their utilization is over 90% and less than or equal to 100%).

  This threshold value has no effect in the histogram.
- **Utilization Warning Above:** lower utilization boundary above which roles and resources will be marked as slightly over-utilized with a yellow background in the respective period. Roles and resources will be marked as slightly over-utilized as long as their 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 roles and resources 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.

### 7.5.2 Utilization Filter (Allocations by Investment Only)

Select departments to filter the displayed utilization and availability of displayed roles and resources.
If you do, the utilization will only be displayed for team entries with selected **Staff OBS**.
Also, the availability will only be displayed for resources with selected **Department OBS**.
The utilization and availability displayed for roles will be filtered accordingly.
See "3.7.3 Department Filter Example" on oage 24 for an example.

### 7.5.3 Role Availability Calculation (Allocations Modes Only)

Under **Calculate Availability of Roles Based On**, select whether role availabilites should include the availabilities of sub-roles:

- **All Role Owners (Standard):** in the default setting, the availability of a role is calculated based only on associated resources.
- **All Role Owners and Sub-Roles:** select this option to include the availabilities of sub-roles in the calculation of a role's availability.

This option is only available after an administrator has activated it via the **itd AE Preferences** lookup (see "8.12.13 Include Sub-Roles in Role Availability" on page 105).

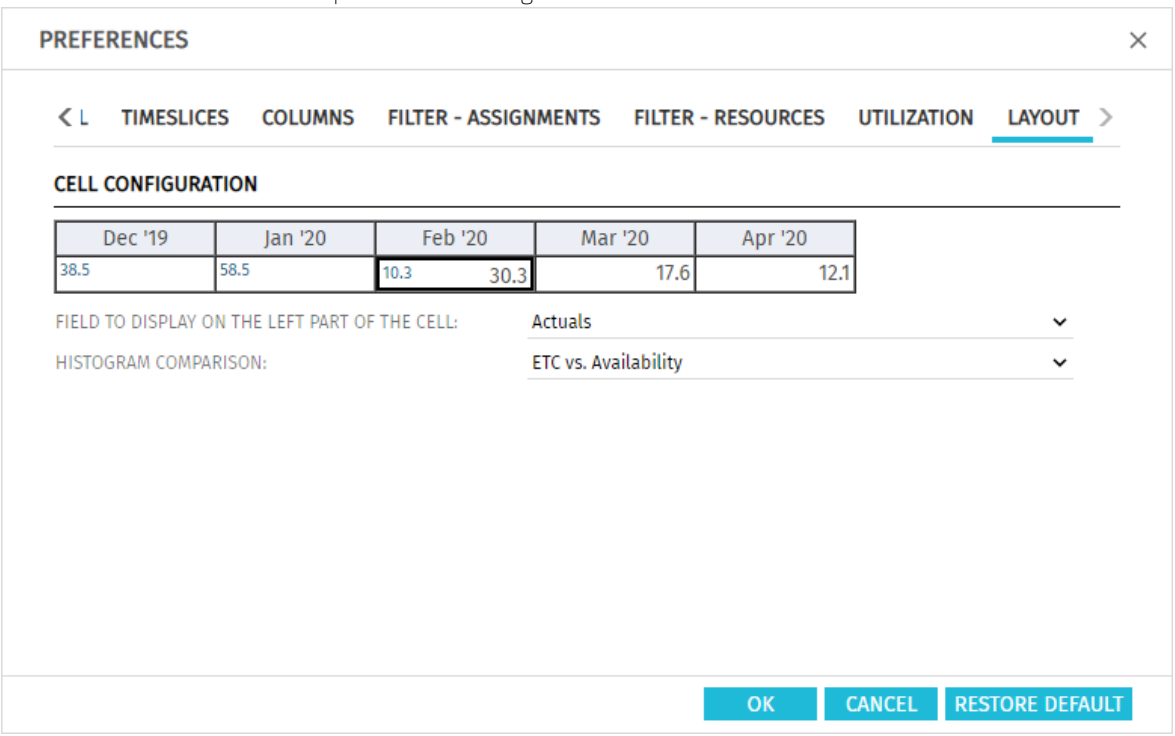
## 7.6 Layout

These options are available for all four view modes.

### 7.6.1 Assignments Modes

For the **Assignments** modes, you can select a read only value to display on the left part of the cell.

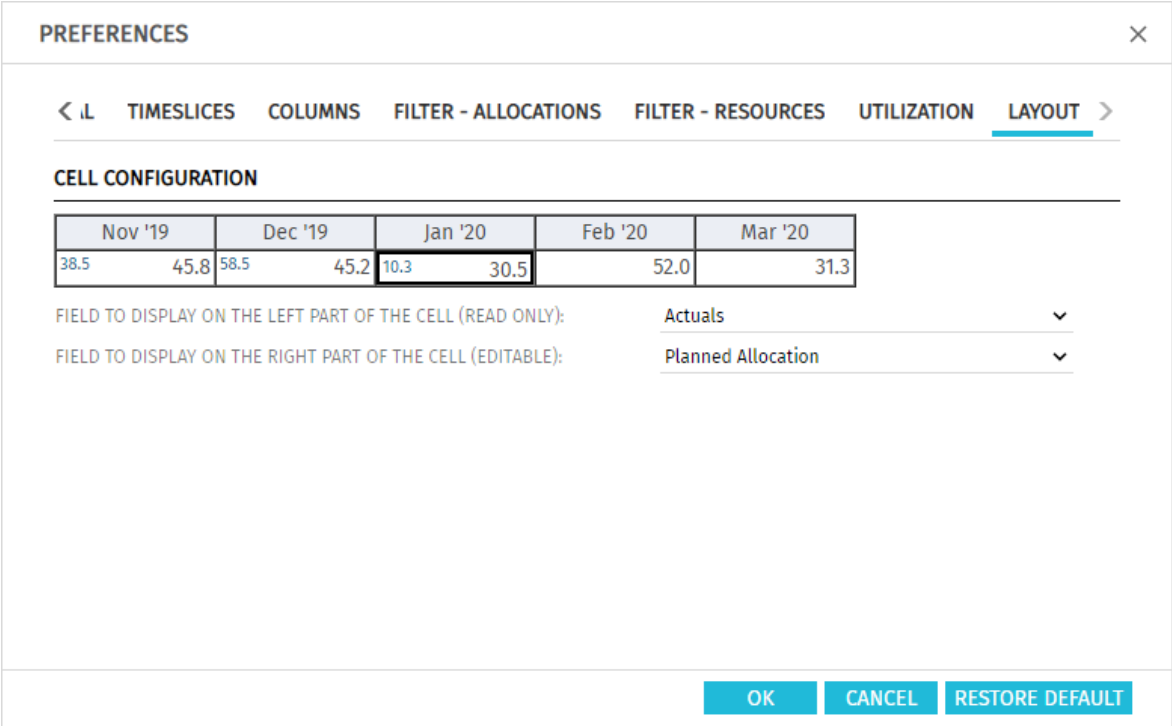
When you open the **Preferences** for a single investment in **Assignments by Investment** mode, you can also select the values to compare in the histogram.




- **Field to Display on the Left Part of the Cell:** Empty, ETC, Actuals, Availability or custom time scaled monetary value.
  Please note that this setting only affects the right hand side assignment grid.
  The totals for assignments (**Estimated Effort**, **Actuals**, **Total Effort** or custom time scaled monetary values) displayed in the left hand side hierarchic list can be displayed or hidden via the **Columns** tab. (see "7.3 Columns" on page 76).
  To display aggregated values for these fields on each level of aggregation (task, project phase, investment, role/resource) set **Calculate Sums** to **On** or to **Filtered** in the **General** tab (see "Calculate Sums" on page 71).
- **Histogram Comparison (Assignments by Investment mode for a single investment):** select one.
  - **ETC vc. Availability:** Colored column displays **ETC**, dotted line displays **Availability**.
  - **Effort vs. Planned Allocation:** Colored column displays total effort (**Actuals** + **ETC**), dotted line displays **Planned Allocation**.
  - **Effort vs. Hard Allocation:** Colored column displays total effort (**Actuals** + **ETC**), dotted line displays **Hard Allocation**.

### 7.6.2 Allocations Modes

For the **Allocations** modes, you may select up to two display values here, one of which is editable:




- **Field to Display on the Left Part of the Cell (Read Only):** Empty, Planned Allocation, Hard Allocation, ETC, Actuals, Actuals + ETC, Requested or Availability.
- **Field to Display on the Right Part of the Cell (Editable):** Planned Allocation or Hard Allocation

Please note that both of these settings only affect the right hand side allocation grid.

The totals for allocations (**Planned Allocation**, **Hard Allocation**, **Actuals**) displayed in the left hand side hierarchic list can be displayed or hidden via the **Columns** tab. (see "7.3 Columns" on page 76).

To display aggregated values for the fields on each level of aggregation (investment or role/resource), set **Calculate Sums** to **On** or to **Filtered** in the **General** tab (see "**Calculate Sums**" on page 74).

In **Allocations by Resource** mode, totals per role/resource will also be calculated and displayed with the **Show Utilization** option selected in the **General** tab (see "**Show Utilization**" on page 74).

## 7.7 Apply Changes, Cancel or Restore Defaults

Use the buttons below the settings to apply changes, discard changes or load the current defaults:

- Click **OK** to apply changes.
- Click **Cancel** to discard changes.
- Click **Restore Default** to load the current default settings entered by a member of the **ARP Admin** group. These settings will only be applied once you click **OK**. Click **Cancel** to abort.
- Members of the **ARP Admin** group may set the current **Preferences** as default settings for all users (see section "8.9.2 Set as Default" on page 93).

# 8 Administration

This chapter describes the administration of itd Advanced Resource Planning:


- 8.1 Requirements (page 85)
- 8.2 Supported Locales (page 85)
- 8.3 User and Administrator Groups (page 86)
- 8.4 Other Administration Rights (page 87)
- 8.5 User Access Rights (page 88)
- 8.6 Integration and Invocation (page 92)
- 8.7 Single or Multiple Investment Mode (page 92)
- 8.8 Changing Text Labels (page 92)
- 8.9 Administrative Preference Settings (page 93)
- 8.10 Defining Actions (page 94)
- 8.11 Configuring List and Filter Fields (page 96)
- 8.12 itd AE Preferences Lookup Settings (page 100)
- 8.13 Properties File (Database Access and Memory Usage) (page 106)
- 8.14 Troubleshooting (page 108)


## 8.1 Requirements

Starting with version 7.7.0, itd Advanced Resource Planning requires Clarity PPM 15.7 or higher.

## 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)
- 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

The **ARP Users** group grants users the following rights:

- Instance Access Rights
  - Access itd Advanced Resource Planning and itd Allocation Editor pages and portlets.

Add users to this group to grant them access to either of the itd Advanced Resource Planning or the itd Allocation Editor applications.

Please note that users may also be able to use these applications if they have general page and portlet access rights. In this case, these users will be added to the **ARP Users** group when accessing either application in order to keep track of who is using the applications 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 88.

### 8.3.2 ARP Admin Group

The **ARP Admin** group grants users the following administrative rights:

- Instance Access Rights
  - Access itd Advanced Resource Planning and itd Allocation Editor pages and portlets.
  - Edit and define itd Advanced Resource Planning and itd Allocation Editor pages and portlets.
- Global Access Rights
  - Full rights for **itd AE Actions** (define menu actions, see "8.10 Defining Actions" on page 94)
  - 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 96.)
  - 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:** 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.)
  - **User Preferences:** System Settings (see "8.9.1 System Settings" on page 93)
  - **User Preferences:** set defaults, also available with the **Portlet – Edit** right (see "8.9.2 Set as Default" on page 93.)
  - Administrator URL Parameters: `&flushCaches=true` (apply newly added fields, see "8.11 Configuring List and Filter Fields" on page 96.)
  - Administrator URL Parameters: `&systemProperties=reload` (reload properties file, see "8.13 Properties File (Database Access and Memory Usage)" on page 106.)

## 8.4 Other Administration Rights

This section describes other rights required for the administration of itd Advanced Resource Planning in addition to membership in the **ARP Admin** group.

### 8.4.1 itd AE Preferences Lookup Access

Some application settings are managed via the **itd AE Preferences** lookup. The ID of this lookup is **PL.ITD.AE.LKP.PREFERENCES**. Editing it requires the global **Administration – Application Setup** right, which Clarity PPM application administrators have by default.

See "8.12 itd AE Preferences Lookup Settings" on page 100 for details.

### 8.4.2 Properties File Access (Database Access and Memory Usage)

Some database access and memory usage settings are managed via the `pl_itd_ae.properties` file. This file is used for both itd Advanced Resource Planning and the itd Allocation Editor. It is stored in the Plugins' config directory, which defaults to `${clarity.home}/META-INF/pl_itd_ae/config`. The file may be edited by system administrators with access to Clarity PPM files. It controls the amount of results returned by database queries, the amount of data contained in the applications' caches as well as load batch sizes when **Calculate Sums** is set to **On** or **Filtered**.

See "8.13 Properties File (Database Access and Memory Usage)" on page 106 for details.

## 8.5 User Access Rights

This section lists access rights required for application features by view mode.

### 8.5.1 Assignments by Investment Access Rights

The following table lists all assignment related actions available in the **Assignments by Investment** mode of itd Advanced Resource Planning and the required access rights for resources and investments.

The list starts with the lowest level of access, which is required to view assignment data.

| Actions | Resource Access Rights | Investment Access Rights |
|---|---|---|
| • View assignments including investments, project phases, tasks, milestones, dependencies and assigned roles and resources | • None, all assignments for all visible investments will be displayed | • View[1] |
| • View roles and resources with utilization | • Resource – View | • None, all roles and resources for which the user has access rights will be displayed |
| • Edit assignments<br>• Edit investments (project name, project structure with project phases, tasks and milestones, start and finish of NPIOs) | • None | • Edit[2] |
| • Create assignments for team members (assign roles and resources with existing team entries in the investment via drag-and-drop from the resource utilization view to tasks) | • Resource - View | • Edit[2] |
| • Create new team entries with assignments (assign roles and resources without team entries in the investment via drag-and-drop from the resource utilization view to tasks or NPIOs) & multi-role assignments | • Resource - Soft Book | • Edit[2] |
| • Allocate from Estimates | • Resource – Hard Book[3] | • View (no resource right required with **Edit**)[3] |

[1] Viewing assignments requires the respective investment type's **View** right (e.g., **Project – View**).
[2] Editing assignments and investments and creating team entries and assignments requires the respective investment type's **Edit** right (e.g., **Project – Edit**).
[3] With the **Edit** right for an investment type (e.g., **Project – Edit**), no resource right is required for the **Allocate from Estimates** action.

### 8.5.2 Assignments by Resource Access Rights

The following table lists all assignment related actions available in the **Assignments by Resource** mode of itd Advanced Resource Planning and the required access rights for resources and investments.

The list starts with the lowest level of access, which is required to view roles and resources and their utilization.

| Actions | Resource Access Rights | Investment Access Rights |
|---|---|---|
| • View roles and resources with utilization | • None, all roles and resources with team entries for visible investments will be displayed.[1] | • View[2] |
| • View assignments including investments and tasks as well as team entries without assignments | • None[1] | • View[2] |
| • Edit assignments | • None[1] | • Edit[3] |
| • Create assignments for roles and resources with existing team entries in a project for associated tasks | • None[1] | • Edit[3] |
| • Create new team entries with assignments (create assignments for roles and resources in tasks belonging to a project without team entries for those roles and resources) | • Resource – Soft Book | • Edit[3] |
| • Allocate from Estimates | • Resource – Hard Book[4] | • View (no resource right required with **Edit**)[4] |

[1] Optionally, the view will only display roles and resources for which the user has the **Resource – View** right. In this case, **View** rights for associated investments will still be required as well (see "8.12.4 Configure Assignments by Resource View Rights" on page 86).
[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)].

### 8.5.3 Allocations by Investment Access Rights

The following table lists all allocation related actions available in the **Allocations by Investment** mode of itd Advanced Resource Planning and the required access rights for resources and investments.

The list starts with the lowest access level, which is required to view team entries of investments and associated allocations.

| Actions | 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. | • View[1] |
| • Add new roles and resources[2]<br>• Replace allocation via drag-and-drop from the role/resource view[2] | • Resource – Soft Book<br>• Resource – Hard Book[3] | • Edit<br>• View |
| • Edit Planned Allocation<br>• Allocate from Estimates<br>• Accept Hard Allocation | • Resource – Hard Book[4] | • View (no resource right required with **Edit**)[4] |
| • Move team entry without hard allocation (change start or finish date) | • Resource – Hard Book[4] | • View (no resource right required with **Edit**)[4] |
| • Move team entry with hard allocation (change start or finish date)<br>• Edit Hard Allocation<br>• Commit Planned Allocation | • Resource – Hard Book[4] | • View[4] |
| • 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] These actions are available with both combinations of access rights listed here.
[3] **Resource – Hard Book** includes **Ressource – Soft Book**.
[4] 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**).

### 8.5.4 Allocations by Resource Access Rights

The following table lists all allocation related actions available in the **Allocations by Resource** mode of itd Advanced Resource Planning and the required access rights for resources and investments.
The list starts with the lowest access level, which is required to view team entries of roles and resources and associated allocations.

| Actions | Resource Access Rights | Investment Access Rights |
|---|---|---|
| • View team entries of roles and resources and associated allocations | • None, all roles and resources with team entries for visible investments, their team entries and associated allocations will be displayed.[1] | • View[1] |
| • Edit Planned Allocation<br>• Allocate from Estimates<br>• Accept Hard Allocation | • Resource – Hard Book[2] | • View (with **Edit**, only **Resource – View** is required)[2] |
| • Move team entry without hard allocation (change start or finish date) | • Resource – Hard Book[2] | • View (with **Edit**, only **Resource – View** is required)[2] |
| • Move team entry with hard allocation (change start or finish date)<br>• Edit Hard Allocation<br>• Commit Planned Allocation | • Resource – Hard Book[2] | • View[2] |
| • Create Requisition | • None[3] | • Project – Create/Edit Requisition |

### 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 may optionally edit scenario data instead of the plan of record.
This requires only scenario rights and no resource or investment rights.
For details about required access rights for generally accessing scenarios as well as viewing and editing specific scenarios, see section "6.11 Scenario Comparison" on page 67.

[1] Optionally, all roles and resources for which the user has the **Resource – View** right will be displayed instead. In this case, no investment right will be required (see "8.12.5 Configure Allocations by Resource View Rights" on page 87).
[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)].

## 8.6 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 86).

## 8.7 Single or Multiple Investment Mode

itd Advanced Resource Planning supports a single investment mode and a multiple investment mode. Which mode is evoked when itd Advanced Resource Planning is opened depends on the type of the portlet page it was opened from.

- The single investment mode is evoked when itd Advanced Resource Planning is opened from the portlet page of an investment. In this mode, itd Advanced Resource Planning displays a single investment and associated data.

  For investments with parent objects, displaying and editing the parent structure is optional, depending on the **Hide Parent Hierarchy Levels in Single Investment Mode** option on the **System Settings** tab of the **Preferences**, which is only accessible to members of the **ARP Admin** group (see "8.9.1 System Settings" on page 93).

  In the single investment mode, in the **Assignments by Investment** view mode only, users may graphically compare assignments with the planned or hard allocation of associated team entries in the histogram instead of ETC and capacity. For details about using this feature, see section "4.10.7 Assignments and Allocations in Single Investment Mode" on page 49. For details about the **Preferences** for this feature, see section "7.6.1 Assignments Modes" on page 83.
- The multiple investment mode is evoked 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 will be displayed, depending on your filter settings.

## 8.8 Changing Text Labels

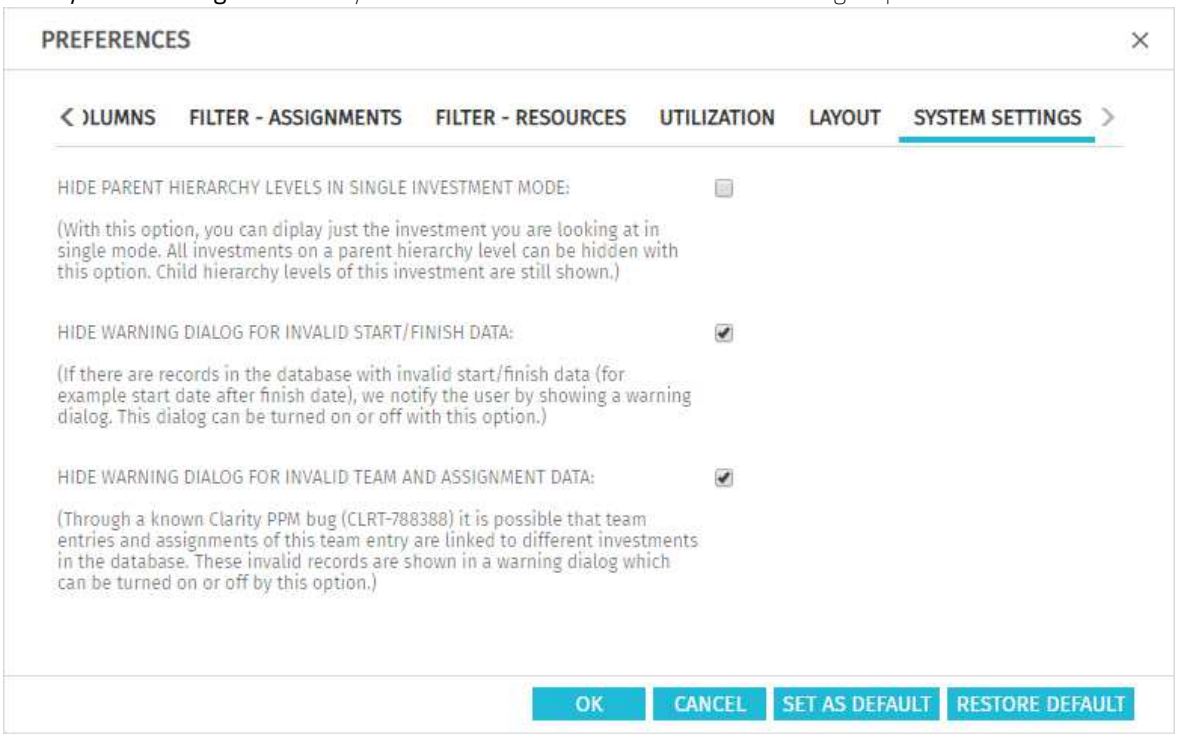
You can change any text labels displayed in itd Advanced Resource Planning and the itd Allocation Editor via a custom lookup. Please contact us if you wish to do so.

## 8.9 Administrative Preference Settings

In the **Preferences**, members of the **ARP Admin** group have access to the **System Settings** tab and may set the current preference settings as default for all users.

### 8.9.1 System Settings

The **System Settings** tab is only available to members of the **ARP Admin** group.




- **Hide Parent Hierarchy Levels in Single Investment Mode:** this option only applies to single project mode and is therefore not available in multi investment mode (see "8.7 Single or Multiple Investment Mode" on page 92).
- **Hide Warning Dialogs:** these options are global and are always available.

### 8.9.2 Set as Default

Members of the **ARP Admin** group and other users with the **Portlet – Edit** right have access to the **Set as Default** button in the **Preferences**.

Click **Set as Default** to save the current settings as defaults for all users:

- When a user first opens itd Advanced Resource Planning, his **Preferences** will be set to the current defaults.
- Clicking **Restore Default** will reset a user's **Preferences** to the current defaults.
- For users who have already been working with itd Advanced Resource Planning, changing the defaults has no effect unless these users apply the new defaults by clicking **Restore Default**.

# 8.10 Defining Actions

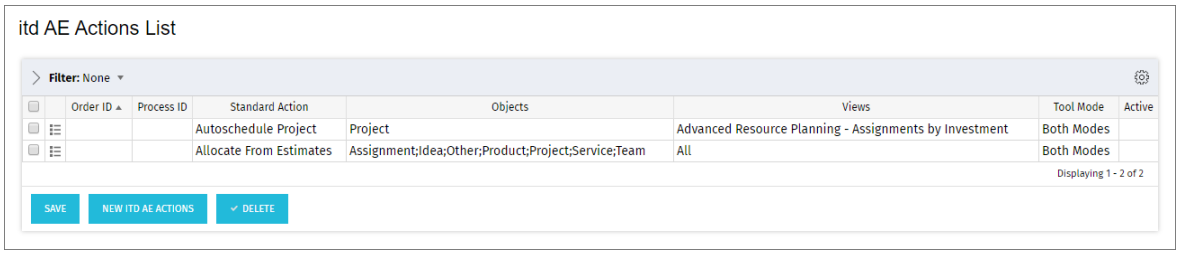
Members of the **ARP Admin** group may disable standard actions and add custom actions (context menu options) available in itd Advanced Resource Planning.

## 8.10.1 Accessing the Action Configuration

To access the action configuration, select **Home – Custom Objects – itd AE Actions List**.

## 8.10.2 Action Overview

The action list provides an overview of defined actions.

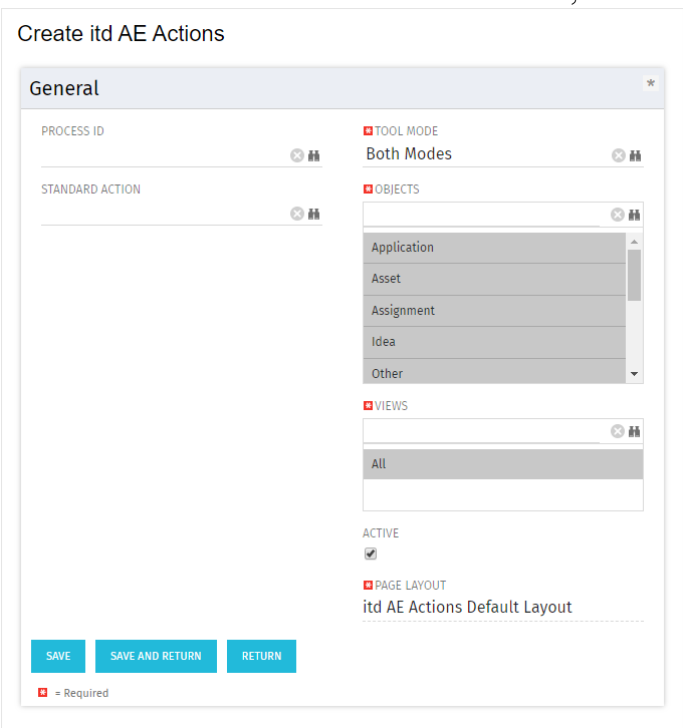



The displayed examples for deactivating standard actions are described on the following page in section „8.10.4 Examples for Deactivating Standard Actions".

- **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 on which applications and view modes the action will appear.
- **Tool Mode:** this column shows on which tool mode the action will appear (single or multiple)
- **Active:** use this column to deactivate or activate actions.

## 8.10.3 Adding a Custom Action or Removing a Standard Action

Click **New itd AE Actions** to create a new action object.



- Select a **Process ID** to add a process action or select a **Standard Action** to remove.
- **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 **Tool Mode**, **Objects** and **Views** the action should be visible.

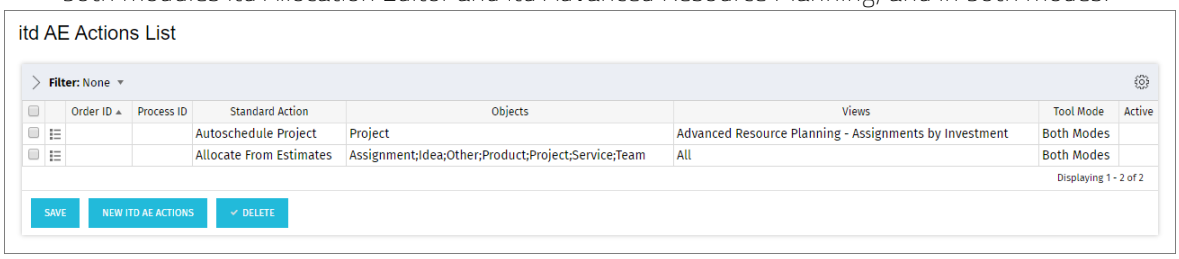
    Consider that each condition has to be fulfilled to make the action visible.
- **Standard Action:** remove a standard action completely or for selected tool modes (single or multiple investments), object types or views (applications and view modes).
  - Select the action to remove under **Standard Action**.
  - Deselect the **Active** option to remove the action altogether. To remove the action for individual tool modes, object types and views, select or remove the appropriate items.
  - **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.
  - You can reset to the default for an action by deleting the associated **itd AE Actions** item.

### 8.10.4 Examples for Deactivating Standard Actions

The following examples deactivate these standard actions:

- **Autoschedule Project** in itd Advanced Resource Planning (Assignments by Investment) in both modes (single and multiple investment).
- **Allocate from Estimates** for all investment types, team entries and assignments in all views (for both modules itd Allocation Editor and itd Advanced Resource Planning) and in both modes.




| Order ID | Process ID | Standard Action | Objects | Views | Tool Mode | Active |
|---|---|---|---|---|---|---|
| | | Autoschedule Project | Project | Advanced Resource Planning - Assignments by Investment | Both Modes | |
| | | Allocate From Estimates | Assignment;Idea;Other;Product;Project;Service;Team | All | Both Modes | |

### 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

Members of the **ARP Admin** group may add list and filter fields to itd Advanced Resource Planning and to the itd Allocation Editor in the attribute configuration list. For list fields, you may also determine whether they are editable.

Using the `&flushCaches=true` URL parameter to update the applications with newly added fields also requires membership in the **ARP Admin** group.

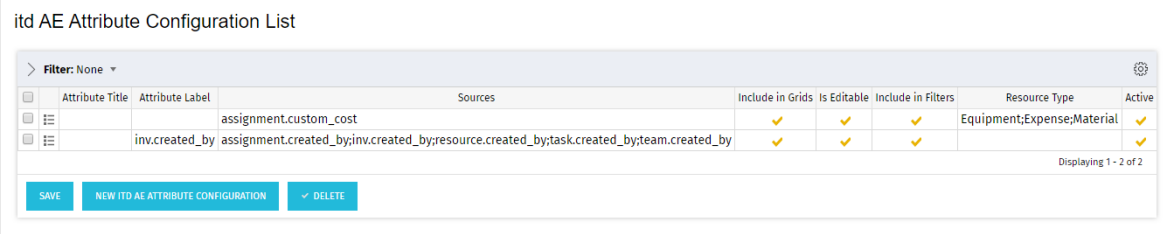
## 8.11.1 Accessing the Attribute Configuration List

Open the attribute configuration list via **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 may edit, deactivate or remove fields and add new fields.




| Attribute Title | Attribute Label | Sources | Include in Grids | Is Editable | Include in Filters | Resource Type | Active |
|---|---|---|---|---|---|---|---|
| | | assignment.custom_cost | ✓ | ✓ | ✓ | Equipment;Expense;Material | ✓ |
| | inv.created_by | assignment.created_by;inv.created_by;resource.created_by;task.created_by;team.created_by | ✓ | ✓ | ✓ | | ✓ |

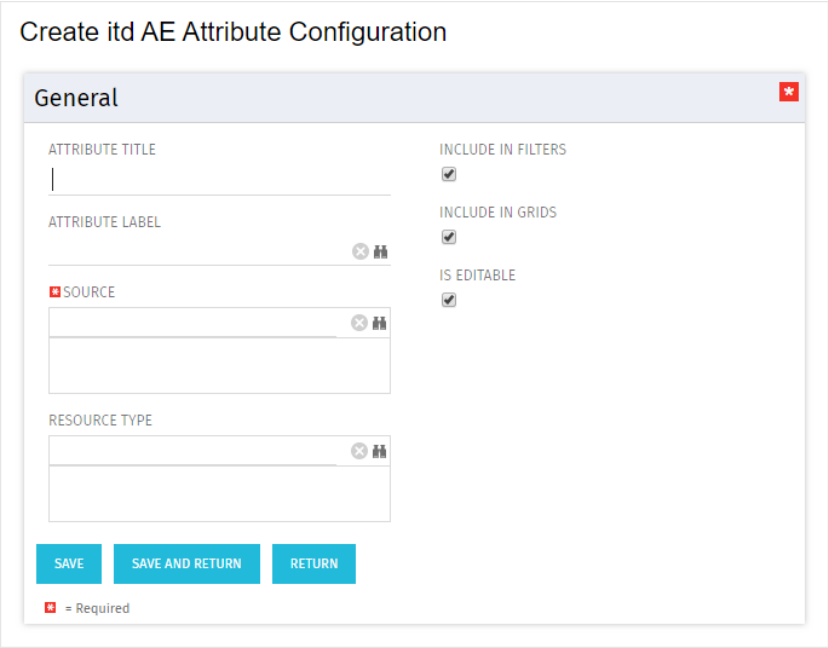
Displaying 1 - 2 of 2

Each field has five properties to control where it is available in itd Advanced Resource Planning:

- **Include in Grids:** field may be added to displayed 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 98).
  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 98).
  This also applies to a small number of Clarity PPM default attributes.
- **Resource Type:** this only applies to custom time scaled monetary values (**time-varying** attribute type, see "4.5.1 Integrating a Custom Time Scaled Monetary Value" on page 36).
  Defines for which resource types the value will be displayed and editable.
- **Active:** deselect this to remove a field from the selection of columns and filter fields without deleting the associated configuration.

### 8.11.3 Adding Fields

Click **New itd AE Attribute Configuration** to add a new field.




- **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 following section for details.
- **Source:** field or fields to display. You may 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, a random source field will automatically 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**.
    It will be restricted to views where the label field's object is available:
    - **Assignments by Investment:** investments & sub-types, tasks, assignments
    - **Assignments by Resource:** resources, tasks, assignments
    - **Allocations by Investment:** investments & sub-types, team entries
    - **Allocations by Resource:** resources, team entries

    Examples:
    - A field with label `Project.field` will be restricted to the **by Investment** views.
    - A field with label `Resource.field` will be restricted to 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 previous page for the remaining 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 99)**
- Formula (see "8.11.6 Restrictions for Calculated and Formula Attributes" on page 99)**
- 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 "4.5.1 Integrating a Custom Time Scaled Monetary Value" on page 36)

* 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 – Availability Rate
- Resource – Show Resources in Sub-departments

### 8.11.7 Supported Attributes

You may add most Clarity PPM standard attributes as well as any custom attribute of supported objects and types (see "8.11.4 Supported Object Types" and "8.11.5 Supported Attribute Types" on page 98).

### 8.11.8 Adding Additional Clarity PPM Standard Attributes

Please contact us if you wish to add a Clarity PPM standard attribute that isn't currently supported.

### 8.11.9 Updating itd Advanced Resource Planning

After adding new attributes, you may need to reset the cache for itd Advanced Resource Planning to make them available in the application.

Please note that this requires membership in the **ARP Admin** group.

To do this, call the portlet with the `&flushCaches=true` URL parameter:

- https://{ca.ppm.url}/niku/nu#action:pl.itd.ae.page.assignment.editor&flushCaches=true

## 8.12 itd AE Preferences Lookup Settings

Some application settings are managed via the **itd AE Preferences** lookup:

- The ID of this lookup is **PL.ITD.AE.LKP.PREFERENCES**.
- Editing it requires the global **Administration – Application Setup** right.
- Clarity PPM application administrators have this right by default.

This section describes the settings for itd Advanced Resource Planning.

Some of these settings also apply to the itd Allocation Editor, which is indicated under **Scope**.

Details about this are described in the "Administration" chapter of the associated manual.

### 8.12.1 Hide Preferences Tabs

**Scope:** itd Advanced Resource Planning and itd Allocation Editor

**Lookup Value ID:** 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)

- general: General
- time_slice: Timeslices
- visible_columns: Columns
- filter_layout_config: Filter / Filter – Assignments / Filter – Allocations
- utilization_layout_config: Filter – Resources
- utilization: Utilization
- layout: Layout
- query_limits: Query Limits

**Effect:**

- Hide **Preferences** tabs listed in **Description**

### 8.12.2 Hide Toolbar Buttons

**Scope:** itd Advanced Resource Planning and itd Allocation Editor

**Lookup Value ID:** hidden_toolbar_buttons

**Initial Setting:** active with **Description = expand_all, collapse_all**

**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: 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**

### 8.12.3 Restrict Time Slice Periods in the Preferences and in the Toolbar

**Scope:** itd Advanced Resource Planning and itd Allocation Editor

**Lookup Value ID:** preference_tab_time_slice

**Initial Setting:** deactivated with **Description = timeslice_mode: month, year, quarter**

**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: 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.

### 8.12.4 Configure Assignments by Resource View Rights

**Scope:** itd Advanced Resource Planning, Assignments by Resource

**Lookup Value ID:** 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:** set **Lookup Value Name = 0** OR set **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 roles and resources with team entries for investments for which the user has the respective **View** right.
- With this setting, only roles and resources for which the users 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 **SINGLE_INV** to the **Description**.

### 8.12.5 Configure Allocations by Resource View Rights

**Scope:**

- itd Advanced Resource Planning, Allocations by Resource
- itd Allocation Editor, Allocations by Resource

**Lookup Value ID:** 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:** set **Lookup Value Name = 0** OR set **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 roles and resources with team entries for investments for which the user has the respective **View** right.
- With this setting, all roles and resources for which the users has the **Resource – View** right and associated team entries will be displayed instead. In this case, no investment rights are required.
- The setting may be activated for single investment mode and multiple investment mode independently by adding either or both of **SINGLE_INV** and **SINGLE_INV** to the **Description**.
- The setting will apply both to itd Advanced Resource Planning and the itd Allocation Editor.

### 8.12.6 Initially Load Investment Structure in Investment Modes

**Scope:**

- itd Advanced Resource Planning, Assignments/Allocations by Investment
- itd Allocation Editor, Allocations by Investment

**Lookup Value ID:** calc_inv_has_children_flag

**Initial Setting:** active (lookup value doesn't exist)

**Activate:** set **Lookup Value Name = 1** OR set **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, project 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.

### 8.12.7 Consider Actuals for Remaining Availability

**Scope:** itd Advanced Resource Planning, Assignments by Investment/Resource

**Lookup Value ID:** consider_actuals_for_remaining

**Initial Setting:** deactivated with **Lookup Value Name = 1**

**Activate:** set **Lookup Value Name = 1** AND set **Active = true**

**Deactivate:** set **Lookup Value Name = 0** OR set **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** availability displayed for that period.
- When the histogram is not displayed, actuals entered for a period will be subtracted from the remaining availability displayed for that period.
- **Example:** 20 hrs actuals and 80 hrs ETC entered for a month with total availability 160 hrs.
  - With this setting, the displayed **Remaining** availability will be 60 hours.
  - Without this setting, the displayed **Remaining** availability will be 80 hours.

### 8.12.8 Hide Description Tooltips

**Scope:** itd Advanced Resource Planning, Assignments by Investment/Resource

**Lookup Value ID:** hide_description_tooltip

**Initial Setting:** inactive (lookup value doesn't exist)

**Activate:** create lookup value with **Lookup Value Name = 1** AND **Active = true**

**Deactivate:** set **Lookup Value Name = 0** OR set **Active = false**

**Effect:**

- By default, when hovering over an investment name In the **Assignments by Investment** or **Assignments by Resource** view, the associated description will be displayed in a tooltip.
- With this setting, these tooltips may be deactivated.

### 8.12.9 Filter Utilization by Custom Assignment Field in Assignments Modes

**Scope:** itd Advanced Resource Planning, Assignments by Investment/Resource

**Lookup Value ID:** 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:** set **Lookup Value Name = 0** OR set **Active = true** OR remove **Description**

**Effects:**

- **Assignments by Investment:** the utilization displayed in the **Resources** list will be filtered.
- **Assignments by Resource:** per role and resource, the total utilization will be displayed, but the utilization used to determine the remaining availability displayed per resource will be filtered and a role or resource will be displayed as under- or overbooked based on the filtered utilization.

### 8.12.10 Editable Resource Types

**Scope:** itd Advanced Resource Planning, Assignments by Investment/Resource

**Lookup Value ID:** 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:** set **Lookup Value Name = 0** OR set **Active = false** (will apply default) OR remove elements from **Description**

**Possible Elements:** (default: all)

- labor
- equipment
- material
- expense

**Effect:**

- **ETC** column and **ETC** in assignment grid only editable for resource types listed in **Description**

### 8.12.11 Keep Task Duration

**Scope:** itd Advanced Resource Planning, Assignments by Investment

**Lookup Value ID:** default_keep_task_duration

**Initial Setting:** active (lookup value doesn't exist)

**Activate:** set **Lookup Value Name = 1** OR set **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 project phase via the **Start** column will also change the **Finish**, such that the duration of the task or project phase will be retained.
- If you deactivate this setting, changing the start date of a task or project phase won't change the finish. Create a lookup value with **Lookup Value Name = 0**, **ID = default_keep_task_duration** and **Active = true** to do this.

### 8.12.12 Show Raw Availability in Utilization Panel

**Scope:** itd Advanced Resource Planning, Allocations by Investment

**Lookup Value ID:** raw_avail_in_utilization

**Initial Setting:** deactivated with **Lookup Value Name = 1**

**Activate:** set **Lookup Value Name = 1** AND set **Active = true**

**Deactivate:** set **Lookup Value Name = 0** OR set **Active = false**

**Effect:**

- The utilization panel in the **Allocations by Investment** mode shows the raw availability instead of the effective availability for roles (in non histogram mode).
- The raw availability is the total availability of all resources with this primary role.
- The effective availability is the remaining availability of resources with this primary role.
- The effective availability is calculated by subtracting the allocations (**Planned** or **Hard** depending on display value) of resources with this primary role from the raw availability.
- Colors are always based on the effective availability.
- The histogram is not changed by this option.

### 8.12.13 Include Sub-Roles in Role Availability

**Scope:** itd Advanced Resource Planning, Allocations by Investment/Resource

**Lookup Value ID:** 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:** set **Lookup Value Name = 0** OR set **Active = false**

**Effect:**

- By default, the availability of a role is calculated based only on associated resources.
- Activating this lookup value adds the **Role Availability** setting to the **Utilization** tab of the user preferences for the **Allocations by Investment** and **Allocations by Resource** view modes.
- Any user can then enable the inclusion of sub-roles in the calculation of role availabilities there.
- The **Role Availability** setting will be saved per user.

### 8.12.14 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.

Please note that this requires membership in the **ARP Admin** group.

To do this, call the portlet with the `&flushCaches=true` URL parameter:

- https://{ca.ppm.url}/niku/nu#action:pl.itd.ae.page.assignment.editor&flushCaches=true

## 8.13 Properties File (Database Access and Memory Usage)

Some database access and memory usage settings are managed via the `pl_itd_ae.properties` file. This file is used for both itd Advanced Resource Planning and the itd Allocation Editor. It is stored in the Plugins' config directory, which defaults to `${clarity.home}/META-INF/pl_itd_ae/config`.

The file may be edited by system administrators with access to Clarity PPM files. It controls 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**.

This section describes the settings available in the properties file.

### 8.13.1 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 edited via the `pl.itd.ae.query.limit.*` properties:

```
# Query limits
pl.itd.ae.query.limit.resources=50
pl.itd.ae.query.limit.investments=150
pl.itd.ae.query.limit.assignments=500
```

### 8.13.2 Cache Sizing

The server-side caching mechanism we use (Guava Caches) allows for the definition of the Cache's maximumSize().

You may edit these values via the `pl.itd.ae.cache.maximum.size.*` properties:

```
# Cache control values
pl.itd.ae.cache.maximum.size.clarity.system.attributes=1
pl.itd.ae.cache.maximum.size.loading.pattern.lookup=1
pl.itd.ae.cache.maximum.size.investment=10
pl.itd.ae.cache.maximum.size.nipo.effort.task=100
pl.itd.ae.cache.maximum.size.nipo.assignments=100
pl.itd.ae.cache.maximum.size.investment.team=100
pl.itd.ae.cache.maximum.size.investment.curve=10
pl.itd.ae.cache.maximum.size.clarity.team.curve=10
pl.itd.ae.cache.maximum.size.global.rights.by.user=100
pl.itd.ae.cache.maximum.size.object.permission.by.user=40
pl.itd.ae.cache.maximum.size.translation.cache=20
pl.itd.ae.cache.maximum.size.static.lookup=300
pl.itd.ae.cache.maximum.size.calender=1
pl.itd.ae.cache.maximum.size.project.hpd.factor=1
```

**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.

### 8.13.3 Load Batch Sizing

With **Calculate Sums** set to **On** or **Filtered** in the **General** tab of the **Preferences** (see "**Calculate Sums**" on page 71), aggregated values will be calculated and displayed for all visible aggregation levels (task, investment, role/resource). These data will be loaded from Clarity PPM curves. Curves will be loaded in batches to save heap space.

You may configure the size of these batches. You may edit these values via the `pl.itd.ae.cache.max.batch.size.for.curve.*` properties:

```
# batch size for curve
pl.itd.ae.cache.max.batch.size.for.curve.task=100
pl.itd.ae.cache.max.batch.size.for.curve.resource=100
pl.itd.ae.cache.max.batch.size.for.curve.investment.resource=100
pl.itd.ae.cache.max.batch.size.for.curve.investment=100
```

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.

### 8.13.4 Updating itd Advanced Resource Planning

After changing the properties file, reload the file in itd Advanced Resource Planning to update the application.

Please note that this requires membership in the **ARP Admin** group.

To do this, call the portlet with the `&systemProperties=reload` URL parameter:

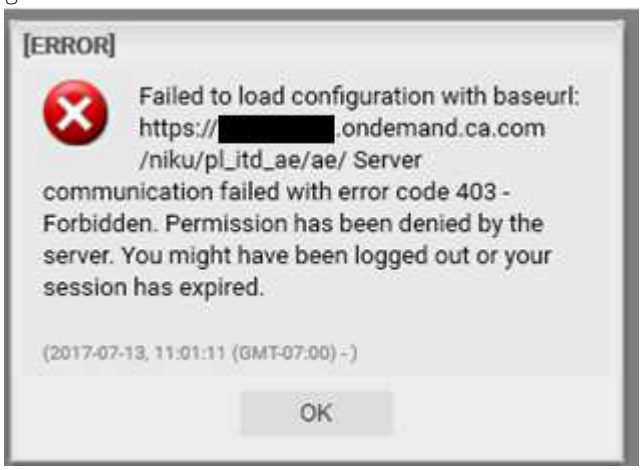
- https://{ca.ppm.url}/niku/nu#action:pl.itd.ae.page.assignment.editor&systemProperties=reload

## 8.14 Troubleshooting

This section provides solutions for known issues with itd Advanced Resource Planning.

### 8.14.1 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:** reference to the `pl_itd_ae` component 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 line `<component id="pl_itd_ae" active="true" type="plugin"/>` in `components.xml` file or reinstall the itd Advanced Resource Planning application.

The latter is the only viable solution for SaaS systems.