

# CURRENT LONGEST CHAIN

Progress Behavior

**A-dato**

High Performance Delivered

# Example Project

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The screenshot displays a project management application interface. At the top, there is a menu bar (File, Edit, View, Project, Window, Help) and a toolbar with icons for Save, Cards view, Print, Resource load, and Properties. Below the toolbar is a navigation bar with a 'Schedule view' dropdown, a date field set to '03-Oct-16', and a 'Tags' dropdown set to '0 - Today 9:44'. A search filter is also present.

The main area shows a Gantt chart with a task bar for 'Task 1' (ID 1) and a 'Project buffer' (ID 2). The task bar is highlighted in red and spans from Monday, October 3, 2016, to Monday, October 10, 2016. A resource 'Product Engineer' is assigned to this task, with a green bar indicating 0% completion. A green callout box with an arrow pointing to the 'Critical chain' property in the right-hand panel contains the text: 'CC is 10 days and CLC is also still 10 days'.

The right-hand panel displays the following properties and values:

Property	Value
Project start	Today
Calculated start	Today 9:00
Calculated finish	Fri 14 Oct 17:00
Due date	Fri 21 Oct
Due date performance	5 days early
Shortest path	10 days
Expected finish	Fri 21 Oct 17:00
Critical chain	10 days
Project buffer	5 days
Current longest chain	10 days
Longest chain compl.	0%
Curr. longest chain gap	
Controlling buffer	Project buffer
Buffer consumed	0%
Feeding chain	10 days
Feeding chain compl.	0%

At the bottom, there are tabs for 'Requirements (edit)', 'Team members', and 'Visible on My Activities page?'. The 'Requirements (edit)' tab is active, showing a table with the following data:

Resource/Skill	Estimated time	Units	Status	Estimated
S: Product Engineer [*Steve Horner:80h]	10 days/80h	100%	Not started	

# What if?

*Task Duration (workload) increased with 50 % - Estimated Time → 15 days*

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The screenshot displays a project management application interface. At the top, there is a menu bar (File, Edit, View, Project, Window, Help) and a toolbar with icons for Save, Cards view, Print, Resource load, and Properties. Below the toolbar is a navigation bar with a 'Schedule view' dropdown, a date field set to '03-Oct-16', and a 'Tags' field set to '0 - Today 9:44'. The main area is a Gantt chart showing a task named 'Task 1' with a duration of 15 days, starting on Monday, 03 Oct 2016, and ending on Friday, 21 Oct 2016. A red bar represents the task duration, and a blue bar represents the project buffer. A green box highlights the 'Task 1' bar, and a green arrow points from it to a text box that reads 'Critical Chain = 10 days CLC becomes 15 days'. Another green arrow points from this text box to the 'Current longest chain' property in the right-hand pane, which is highlighted with a dashed green box and shows a value of 15 days. The right-hand pane also shows other properties such as 'Project start', 'Calculated start', 'Calculated finish', 'Due date', 'Due date performance', 'Shortest path', 'Expected finish', 'Critical chain', 'Project buffer', 'Longest chain compl.', 'Curr. longest chain gap', 'Controlling buffer', 'Buffer consumed', 'Feeding chain', and 'Feeding chain compl.'. At the bottom, there is a 'Requirements' table with columns for 'Resource/Skill', 'Estimated time', 'Units', 'Status', and 'Estimated time to complete'. The table shows a requirement for 'S: Product Engineer [\*Steve Horner:120h]' with an estimated time of 15 days/120h, 100% units, and a status of 'Not started'. A green dashed box highlights the 'Estimated time' column in this table. The bottom right corner of the interface has a 'Visible on My Activities page?' checkbox which is checked.

Property	Value
Project start	Today
Calculated start	Today 9:00
Calculated finish	Fri 21 Oct 17:00
Due date	Fri 21 Oct
Due date performance	On time
Shortest path	15 days
Expected finish	Wed 2 Nov 13:00
Critical chain	10 days
Project buffer	5 days
Current longest chain	15 days
Longest chain compl.	-50%
Curr. longest chain gap	
Controlling buffer	Project buffer
Buffer consumed	100%
Feeding chain	15 days
Feeding chain compl.	-50%

Resource/Skill	Estimated time	Units	Status	Estimated time to complete
S: Product Engineer [*Steve Horner:120h]	15 days/120h	100%	Not started	

# What if?

*Expected Time to Complete → 15 days*

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The screenshot displays a project management application in 'Schedule view'. The main interface shows a Gantt chart for 'Task 1' (ID 1) with a duration of 15 days, starting on Monday, October 3, 2016, and ending on Monday, October 17, 2016. A resource named 'Steve Horner' is assigned to this task, with a 100% allocation. A red arrow points from the task bar to the resource bar. A green callout box with white text states: 'Critical Chain = 10 days' and 'CLC becomes 15 days'. Below the Gantt chart, the 'Requirements' table is visible, showing the resource 'S: Product Engineer [Steve Horner:120h]' with an 'Estimated time to complete' of '15 days/120h'. The 'Team members' table is also visible, showing 'Steve Horner' with 120 units booked. The 'Properties' pane on the right shows various project metrics, including 'Shortest path' (15 days), 'Expected finish' (Wed 2 Nov 13:00), and 'Critical chain' (10 days).

Property	Value
Project start	Today
Calculated start	Today 9:00
Calculated finish	Fri 21 Oct 17:00
Due date	Fri 21 Oct
Due date performance	On time
Shortest path	15 days
Expected finish	Wed 2 Nov 13:00
Critical chain	10 days
Project buffer	5 days
Current longest chain	15 days
Longest chain compl.	-50%
Curr. longest chain gap	
Controlling buffer	Project buffer
Buffer consumed	100%
Feeding chain	15 days
Feeding chain compl.	-50%

Resource/Skill	Estimated time	Units	Status	Estimated time to complete
S: Product Engineer [Steve Horner:120h]	10 days/80h	100%	Started	15 days/120h

Name	Units	Total booked
Steve Horner	120h	120h

# What if?

*ETTC is 5 days → 50 % Progress*

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The screenshot displays a project management application interface. At the top, there is a menu bar (File, Edit, View, Project, Window, Help) and a toolbar with icons for Save, Cards view, Print, Resource load, and Properties. Below the toolbar is a search filter and a date selector set to '03-Oct-16'. The main area shows a Gantt chart with columns for dates from Mon 03 Oct 2016 to Mon 20 Oct 2016. A task bar for 'Task 1' is highlighted in red, and a resource bar for 'Steve Horner' is highlighted in green. A properties panel on the right lists various project metrics, with 'Longest chain compl.' and 'Feeding chain compl.' both showing 50%. At the bottom, a 'Requirements' table is visible, with a row for 'S: Product Engineer [Steve Horner:40h]' showing an 'Estimated time to complete' of '5 days/40h'. A green dashed box highlights this value, and two green arrows point from it to the 'Longest chain compl.' and 'Feeding chain compl.' values in the properties panel.

Property	Value
Project start	Today
Calculated start	Mon 10 Oct 9:00
Calculated finish	Fri 14 Oct 17:00
Due date	Fri 21 Oct
Due date performance	5 days early
Shortest path	5 days
Expected finish	Wed 19 Oct 13:00
Critical chain	10 days
Project buffer	5 days
Current longest chain	5 days
Longest chain compl.	50%
Curr. longest chain gap	
Controlling buffer	Project buffer
Buffer consumed	0%
Feeding chain	5 days
Feeding chain compl.	50%

Resource/Skill	Estimated time	Units	Status	Estimated time to complete
S: Product Engineer [Steve Horner:40h]	10 days/80h	100%	Started	5 days/40h

# Rescheduling

## Based on actual progress

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Ad Vermeulen, A-dato - [Current Longest Chain Progress Example]

File Edit View Project Window Help

Save Cards view Print Resource load Release Properties

Design view Date 03-Oct-16

#	ID	Name	Prj duration	Size	Status	Mon 03 Oct 2016	Mon 10 Oct 2016	Mon 17 Oct 2016	Mon 24 Oct 2016
1	Task 1	[5 days]	Started						
2	Project buffer	5 days							

Steve Horner

LYNX assumes a remaining CC of 5 days, give already 5 days completion.

Messages (0) General Constraint Progress Resource requirements Dependencies Custom fields Visual Tracking Workpackage

Requirements (edit)

Resource/Skill	Estimated time	Units	Status	Estimated time to complete
S: Product Engineer [Steve Horner:40h]	10 days/80h	100%	Started	5 days/40h

Team members

Name	Units	Total booked

Visible on My Activities page?

Project properties

General Custom fields Project dates Scheduling Resource availability Critical chain

How do you want this project to be scheduled?

**Schedule engine**

- Schedule tasks 'as soon as possible'  
'as soon as possible' will schedule tasks forward from the project start date
- Schedule tasks 'just in time'  
'just in time' will schedule tasks backwards from the project end date
- Activate CCPM schedule engine  
CCPM provides a project management solution based on the Theory Of Constraints
  - Schedule feeding chains 'as soon as possible'
  - Schedule feeding chains 'just in time'

**Reschedule behavior for projects containing progress information**

- If the status is set to 'Not started', schedule the project using the original plan
- If the status is set to 'Not started', schedule the project based on the current progress

**Multi project behavior**

- Tasks should be scheduled in consecutive order
- Allow tasks to split to optimize resource allocation

**Resource load leveling**

- Auto balance resource requirements based on resource availability

Property	Value
Project start	Today
Calculated start	Today 9:00
Calculated finish	Fri 7 Oct 17:00
Due date	Fri 21 Oct
Due date performance	10 days early
Shortest path	5 days
Critical chain	5 days
Critical chain gap	
Project buffer	5 days
Resource hours	80h
remaining	40h



# After release again

## *Rescheduling Based on Actual Progress*

The screenshot displays a project management application interface. At the top, there is a menu bar with 'File', 'Edit', 'View', 'Project', 'Window', and 'Help'. Below the menu is a toolbar with icons for 'Save', 'Cards view', 'Print', 'Resource load', and 'Properties'. A search filter is located on the right side of the toolbar.

The main area shows a 'Schedule view' for the date '03-Oct-16'. It features a Gantt chart with two tasks: 'Task 1' and 'Project buffer'. 'Task 1' is highlighted in blue and has a duration of 5 days. A red bar indicates its progress, and a blue arrow points to the resource 'Steve Horner'. A green bar below it shows 0% completion. The Gantt chart spans from Monday, 03 Oct 2016 to Monday, 10 Oct 2016.

On the right side, a 'Property' panel is open, listing various project metrics:

Property	Value
Project start	Today
Calculated start	Today 9:00
Calculated finish	Fri 7 Oct 17:00
Due date	Fri 21 Oct
Due date performance	10 days early
Shortest path	5 days
Expected finish	Wed 12 Oct 13:00
Critical chain	5 days
Project buffer	5 days
Current longest chain	5 days
Longest chain compl.	0%
Curr. longest chain gap	
Controlling buffer	Project buffer
Buffer consumed	0%
Feeding chain	5 days
Feeding chain compl.	0%

At the bottom, there are tabs for 'Messages (0)', 'General', 'Constraint', 'Progress', 'Resource requirements', 'Dependencies', 'Custom fields', 'Visual', 'Tracking', and 'Workpackage'. The 'Requirements (edit)' tab is active, showing a table of resource requirements:

Resource/Skill	Estimated time	Units	Status	Estimated time to complete
S: Product Engineer [Steve Horner:40h]	10 days/80h	100%	Started	5 days/40h

Next to the requirements table is a 'Team members' section with a table:

Name	Units	Total booked
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There is also a checkbox labeled 'Visible on My Activities page?' which is checked.

# Update Feeding Chain duration to reflect progress of 5 days (50 %)

## *Rescheduling based on Actual Progress*

The screenshot illustrates the process of updating the feeding chain duration in a project management tool. A dialog box titled "Enter new duration of the feeding chain" is open, with the "Duration" field set to "10 days". The background shows a Gantt chart with a task "Task 1" and a "Project buffer" of 5 days. A "CCPM Properties" window is also visible, showing various project metrics. At the bottom, a task details panel for "Current Longest Chain Progress..." shows a progress bar at 50% completion, with a tooltip indicating "clc/cc: 5d/10d" and "bbp/pb: 0d/5d".