Maintenance Activity Order

11.2

February 2026

Maintenance Activity Order

A **Maintenance Activity Order** is a result of a **Maintenance Plan Instance**. While associating the **Maintenance Plan** with an entity, a **Maintenance Plan Instance** will be created and therefore, all **Maintenance Activities** there defined will be transformed into **Maintenance Activity Orders** along the Maintenance Calendar, obeying what is defined in each activity schedule.

```
graph LR
    A2 === L2[Maintenance Activity 1]
    A2 === L3[Maintenance Activity 2]
    A2 === L4[Maintenance Activity n]
    A2[Maintenance Plan] === A1[Maintenance Plan Instance]
    L6 --- A1
    L7 --- A1
    L8 --- A1
    L2 -.- L6[Maintenance Activity Order 1]
    L3 -.- L7[Maintenance Activity Order 2]
    L4 -.- L8[Maintenance Activity Order n]

classDef mermaid_businessdata color:#000, fill:#65CDE8, stroke:#65CDE8, stroke-width:0px, font-
size:100%;
classDef mermaid_nonbusinessdata color:#000, fill:#B7DEE8, stroke:#B7DEE8, stroke-width:0px, font-
size:100%;
classDef mermaid_entity color:#000, fill:#FB9F53, stroke:#FB9F53, stroke-width:0px, font-size:100%;
classDef mermaid_entitylinked color:#000, fill:#FCD5B5, stroke:#FCD5B5, stroke-width:0px, font-
size:100%;
classDef mermaid_context color:#000, fill:#B9CDE5, stroke:#B9CDE5, stroke-width:0px, font-
size:100%;
classDef mermaid_optional color:#000, fill:#B7DEE8, stroke:#65CDE8, stroke-width:1px, font-
size:100%, stroke-dasharray: 5 5;
class L6 mermaid_entity
class A1,A2,A3,A4,A5,A6,A7,A8,A9,A10,A11,A12,A13,A14,A15 mermaid_businessdata
class L1,L2,L3,L4,L5,L7,L8,L9,L10 mermaid_entitylinked
class C1,C2,C3,C4,C5,C6 mermaid_context
class N1,N2,N3,N4,N5,N6 mermaid_nonbusinessdata
```

Schedule Model

Planned **Maintenance Activity Orders** follow a schedule state model shown in the figure below.
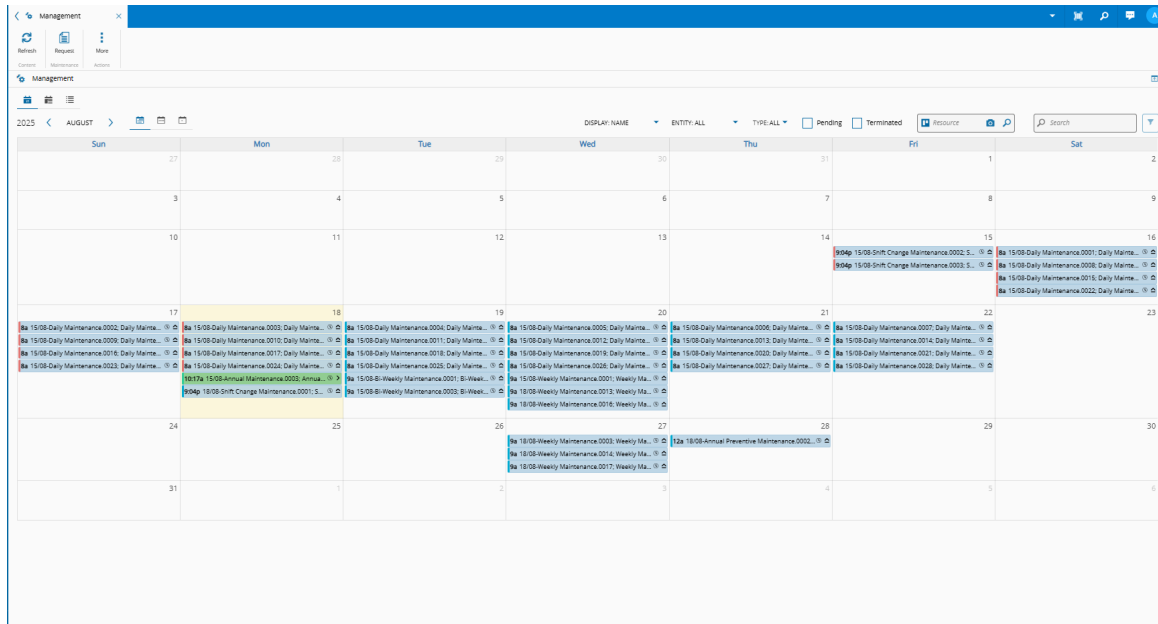
```
graph LR
    A1[Before Early Due] --> A2[Early Due]
    A2 --> A3[Due]
    A3 --> A4[Late Due]

classDef mermaid_mm_beforeearlydue color:#000, fill:#00aad0, stroke:#000, stroke-width:1px, font-
size:100%;
classDef mermaid_mm_earlydue color:#000, fill:#e5ca82, stroke:#000, stroke-width:1px, font-
size:100%;
classDef mermaid_mm_due color:#000, fill:#33cc99, stroke:#000, stroke-width:1px, font-size:100%;
classDef mermaid_mm_latedue color:#000, fill:#e17572, stroke:#000, stroke-width:1px, font-
size:100%;
class A1 mermaid_mm_beforeearlydue
class A2 mermaid_mm_earlydue
class A3 mermaid_mm_due
class A4 mermaid_mm_latedue
```
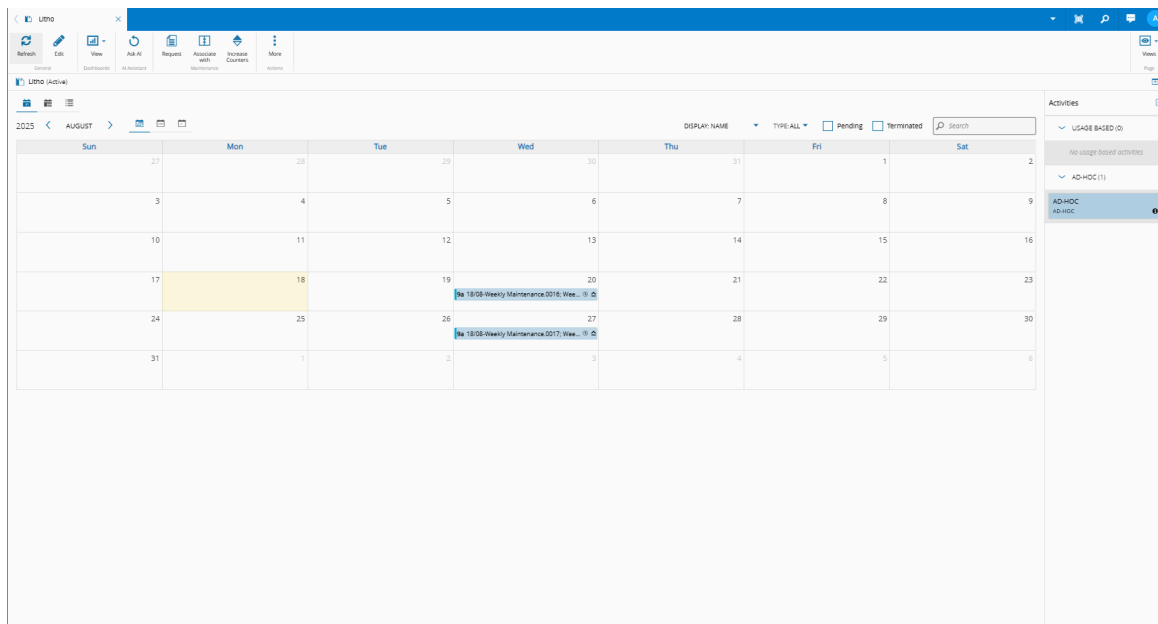
Manage MAOs

To view and manage **MAOs**, Critical Manufacturing MES presents a Management Page inside the Maintenance section, as well as a Maintenance View inside each entity that it is associated with. Additionally, there is a section called Upcoming Maintenance in the Resource View, allowing you to view and manage the scheduled **MAOs**.

You can access this view from the Maintenance Page in the main menu:

Or alternatively through the Maintenance View of specific entities:

Resource

Singulator_S&P 3500F-004

Singulator_S&P 3500F-004 (Active)

2025 < AUGUST >

DISPLAY: NAME   TYPE: ALL   Pending   Terminated   Include Sub-Resources   Search

Sun	Mon	Tue	Wed	Thu	Fri	Sat
27	28	29	30	31	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6

8a 15/08-Daily Maintenance.0022; Daily ...
8a 15/08-Daily Maintenance.0023; Daily ... | 8a 15/08-Daily Maintenance.002A; Daily ... | 8a 15/08-Daily Maintenance.0025; Daily ... | 8a 15/08-Daily Maintenance.0026; Daily ... | 8a 15/08-Daily Maintenance.0027; Daily ... | 8a 15/08-Daily Maintenance.0028; Daily ...

Activities

USAGE BASED (0)
No usage based activities

AD-HOC (1)
AD-HOC
AD-HOC

Material

0R0217#B-125

0R0217#B-125 (Active)

2025 < AUGUST >

DISPLAY: NAME   MPI : All   TYPE: ALL   Pending   Terminated   Search

Sun	Mon	Tue	Wed	Thu	Fri	Sat
27	28	29	30	31	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6

9a 18/08-Weekly Maintenance.0013; Wee ...
9a 18/08-Weekly Maintenance.0014; Wee ...

Activities

USAGE BASED (0)
No usage based activities

AD-HOC (2)
Test_78460
Test_78460
AD-HOC
AD-HOC

Container

FOUP#0044

FOUP#0044 (Active)

2025 < AUGUST >

DISPLAY: NAME   MPI : All   TYPE: ALL   Pending   Terminated   Search

Sun	Mon	Tue	Wed	Thu	Fri	Sat
27	28	29	30	31	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6

Activities
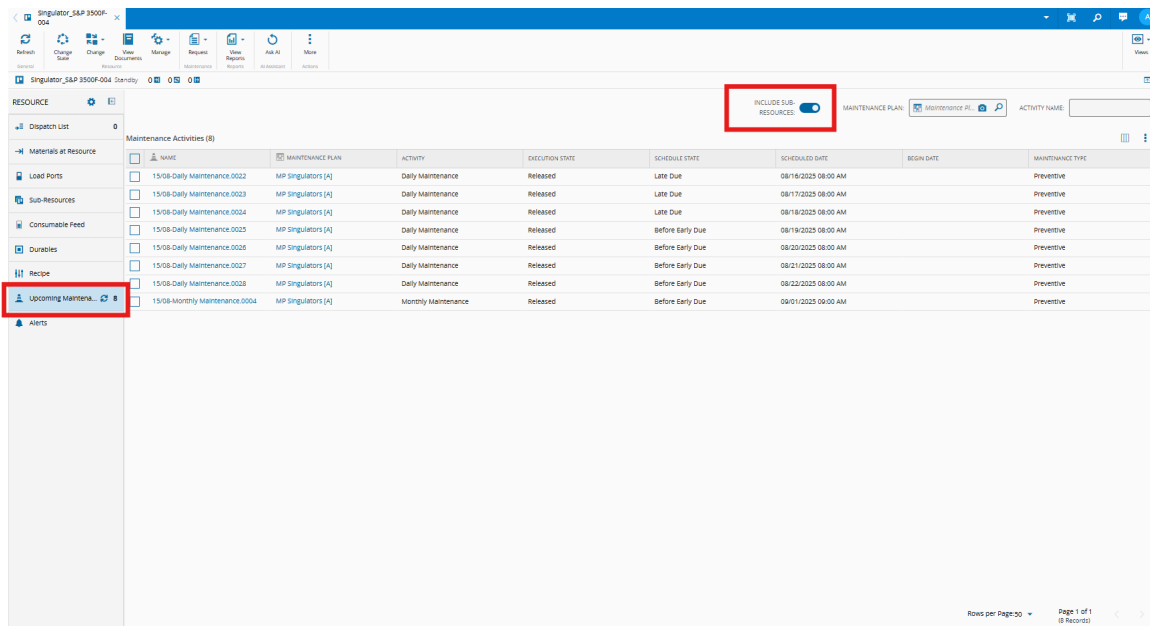
USAGE BASED (2)
15/08-Track-In Based.00... 0 o...
No description
18/08-Dock Based.0001 0.0 of 5
No description

AD-HOC (2)
AD-HOC
AD-HOC
AD-HOC
AD-HOC
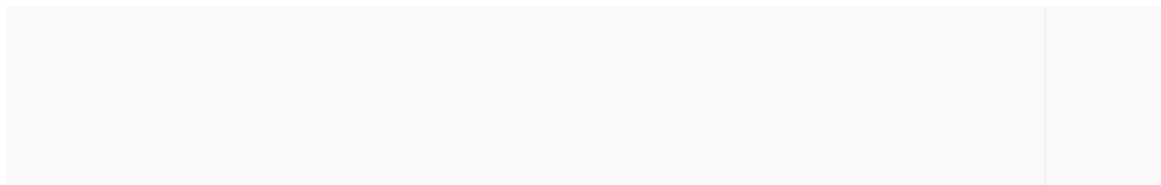
Resource View - Upcoming Maintenance

From the Resource View and inside the Upcoming Maintenance, MES will present not only the main
Resource MAOs, but also its Sub-Resources if the flag Include Sub-Resources is set to `true`.
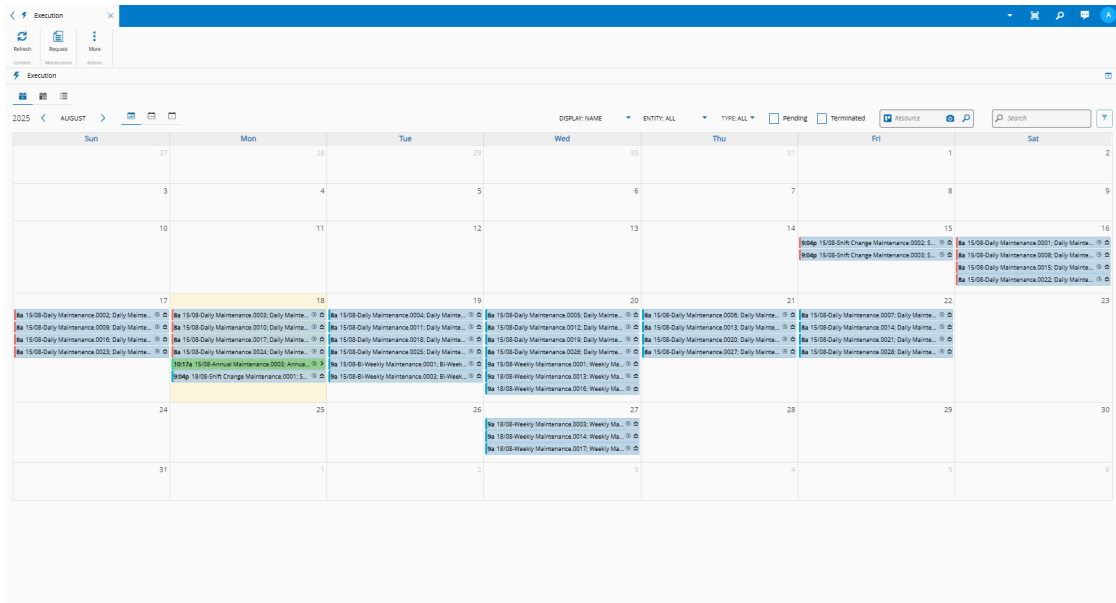

Execute MAOs

To execute **MAOs** associated by you (user), go to the Execution Page inside the Maintenance section.

> 🔥 **Tip**
>
> Ad Hoc MAOs will appear in the Execute Page after being requested in the Resource View (Request button) and approved. Usage Based MAOs will also appear in this page, after the cycles defined are met and MAO is approved.

> ℹ️ **Info**
>
> For more information about MAOs management and execution, go to Maintenance.

MAO Operations

MAO execution will be different according to what is defined in each **Maintenance Activity** in the **Maintenance Plan**. For example, if Manual approval is defined, then Approve button will appear in the **MAO**. Here are all the **MAO** operations available:

Operation	Description
Request Maintenance Activity Order	Request for an ad hoc MAO
Accept Maintenance Activity Order Reject Maintenance Activity Order	Accept or Reject MAO - Acceptance is defined to manual
Approve Maintenance Activity Order	Approve MAO - Approval is defined to manual
Begin Maintenance Activity Order Complete Maintenance Activity Order	Trigger MAO execution/Finalize MAO
Check-In Employee at Maintenance Activity Order Check-Out Employee from Maintenance Activity Order	Check-In/Out employee according to Personnel tab definition

Operation	Description
Join Maintenance Activity Orders/Separate Maintenance Activity Orders	Join or Separate MAOs according to what is defined in Contains tab
Perform Maintenance Activity Order	Execute MAO
Release Maintenance Activity Order	Release MAO - Release is defined to manual
Rework Maintenance Activity Order	Rework current MAO
Skip Maintenance Activity Order	Skip MAO before it has begun
Abort Maintenance Activity Order	Abort MAO after it has begun
Special Accept Maintenance Activity Order	Accept MAO by a user that doesn't have the MPI Owner Role, but has the Feature assigned to his role
Special Check-In Employee at Maintenance Activity Order Special Check-Out Employee from Maintenance Activity Order	Check-In/Out the MAO by a user that doesn't have the MPI Owner Role, but has the Feature assigned to his role
Special Rework Maintenance Activity Order	Rework MAO by a user that doesn't have the MPI Owner Role, but has the Feature assigned to his role
Special Update Maintenance Activity Order Schedule/Counters	Update MAO Counters/Schedule by a user that doesn't have the MPI Owner Role, but has the Feature assigned to his role
Update Maintenance Activity Order Schedule/Counters	Change MAO Counters/Schedule

Execution Workflow

You can see the execution workflow for the MAO below:

```
graph TD
    Start -->|Request| A1
    A1[Requested] ==>|Approve| A2[Approved]
    A1 -.->|Skip if AutoApproval| A2
    A2 ==>|Release| A3[Released]
    A2 -.->|Skip if AutoRelease| A3
    A4 ===>|Abort| A3
    A3 ===>|Begin| A4[In Progress]
    A4 -.->|Skip if AutoAccept| A6
    A4 ==>|Complete| A5[Waiting For Acceptance]
    A5 ==>|Accept| A6[Closed]
    A5 -->|Rework| A7[Reworked]
    A1 -->|Skip| A8[Skipped]
    A2 -->|Skip| A8[Skipped]
    A3 -->|Skip| A8[Skipped]
    A1 ---->|Reject| A9[Rejected]
    A1 ---->|Join| A10[ClosedAsJoined]
    A1 ---->|Cancel| A11[Canceled]

classDef mermaid_title color:#000, fill:#fafafa, stroke:#fafafa, stroke-width:0x, font-size:100%,
```

```
font-weight:200;
classDef mermaid_start color:#000, fill:#fafafa, stroke:#fafafa, color:#fafafa, stroke-width:0x,
font-size:100%, visibility: hidden;
classDef mermaid_mao_requested color:#000, fill:#fff, stroke:#00318a, color:#000, stroke-width:6px,
stroke-dasharray: 5 5, font-size:100%;
classDef mermaid_mao_approved color:#000, fill:#fff, stroke:#ffc000, color:#000, stroke-width:3px,
font-size:100%;
classDef mermaid_mao_released color:#000, fill:#fff, stroke:#92d050, color:#000, stroke-width:3px,
font-size:100%;
classDef mermaid_mao_inprogress color:#000, fill:#fff, stroke:#00b0f0, color:#000, stroke-
width:3px, font-size:100%;
classDef mermaid_mao_waiting color:#000, fill:#fff, stroke:#ff5800, color:#000, stroke-width:3px,
font-size:100%;
classDef mermaid_mao_closed color:#000, fill:#fff, stroke:#ff0000, color:#000, stroke-width:3px,
font-size:100%;
class Title mermaid_title
class Start mermaid_start
class A1 mermaid_mao_requested
class A2 mermaid_mao_approved
class A3 mermaid_mao_released
class A4 mermaid_mao_inprogress
class A5 mermaid_mao_waiting
class A6,A7,A8,A9,A10,A11 mermaid_mao_closed
```

> ℹ️ **Info**
>
> For more information about MAO operations, go to Maintenance Activity Order.

To wrap up the main entities and concepts, let's focus on Maintenance Roles.

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