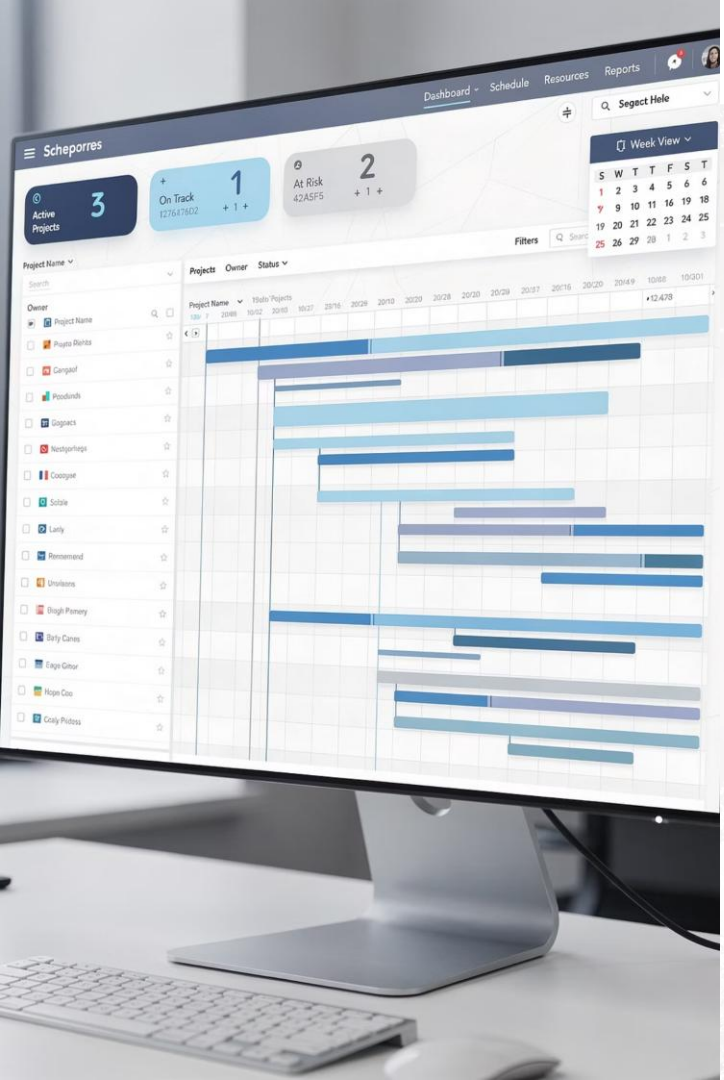

WMMUG
West Mountain
Maximo Users Group

Scheduling – Workload Planning

A guide to creating, managing, and optimizing planning and work schedules in Maximo Application Suite

MODULE 1

What We'll Cover Today

01

Planning & Scheduling Fundamentals

Understanding the processes and how Graphical Scheduler with Maximo 9.0 enhances your scheduling workflow

02

Interface

Understanding the views, controls, and data displays that power your scheduling decisions

03

Plans and Schedule Creation

Workflows for building, refining, and publishing production-ready plans &schedules

04

Best Practices

Proven techniques for efficient scheduling and successful tool adoption

A Good Way to Look at Maintenance Planning & Scheduling

Planning
reduces delays *during* jobs

Scheduling
reduces delays *between* jobs

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Increase your workforce without hiring??

The Leverage of Planning

3 Technicians without any “planning”

3 x 35% = 105%

Benefits of Planning & Scheduling

You will be able to realize a planning and scheduling strategy by seeing the benefits of using this valuable resource for extra TIME!

- Doc Palmer, “Maintenance Planning & Scheduling Handbook, 4th Ed”, 2019

Benefits of Planning & Scheduling

Increase your workforce without hiring??

The Leverage of Planning

1 Planner with 2 Technicians

1 x 0% + 2 x 55% = 110%

Good Ratio for
Planner to Technician
1 : 20-30

Productivity Factor
55% / 35% = 1.57
(57% improvement)

30 technicians x 1.57 =

47 technicians worth of work

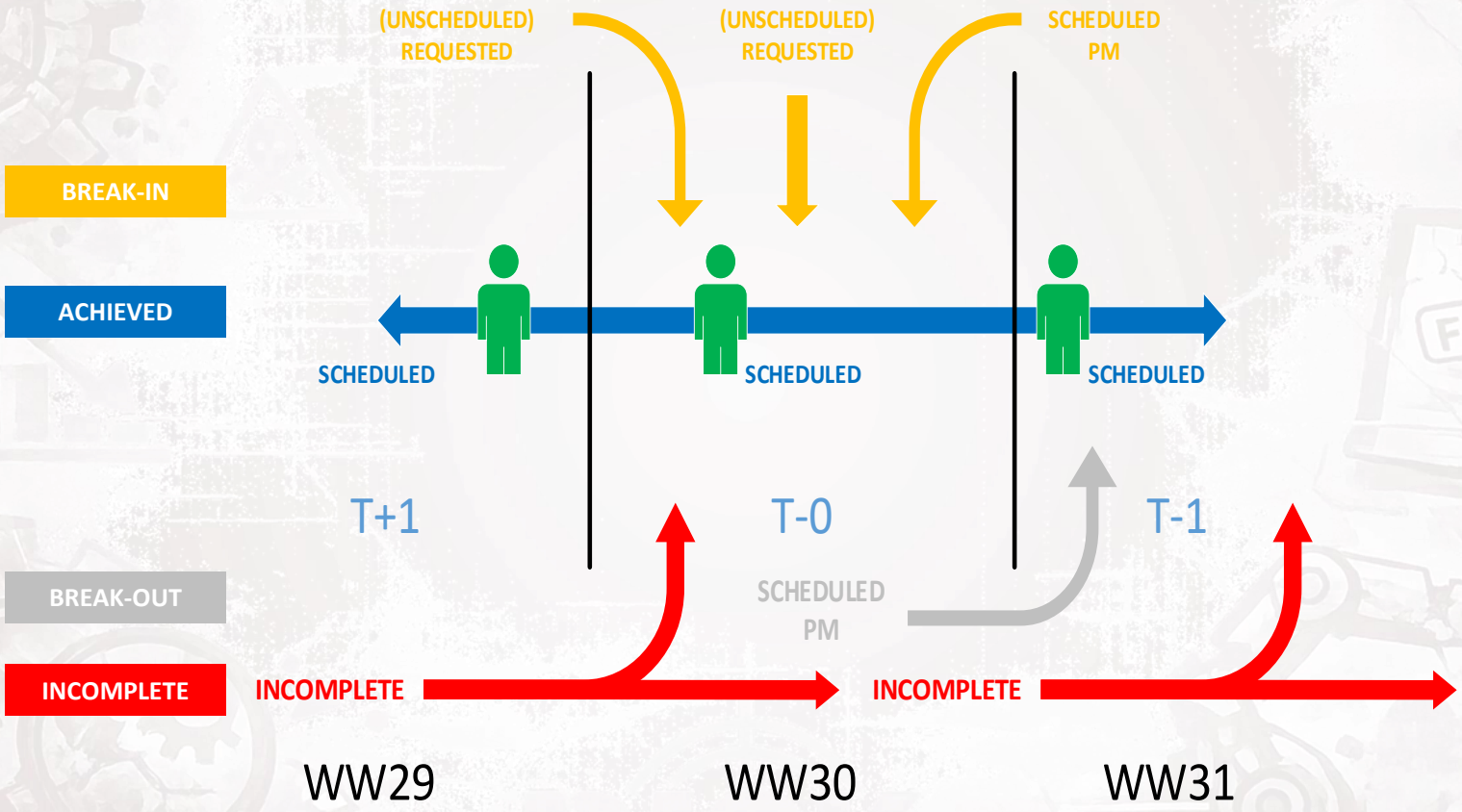
Scheduling Meetings

- **Last week's work and complete vs incomplete**
  - Did the mechanics complete their portion and not change status?
  - Does work need rescheduled in the current week or further out?
- **This week's work**
  - Do we feel we can achieve it?
  - Does anything need to be moved due to break-in work pushing? Identify those and input log notes to the effect
  - Have the hours been input from the mechanics? Are there any that need review?
- **Next week and beyond**
  - Work within the remaining backlog to identify barriers, material needs, reschedules etc.

Planning & Scheduling Terms

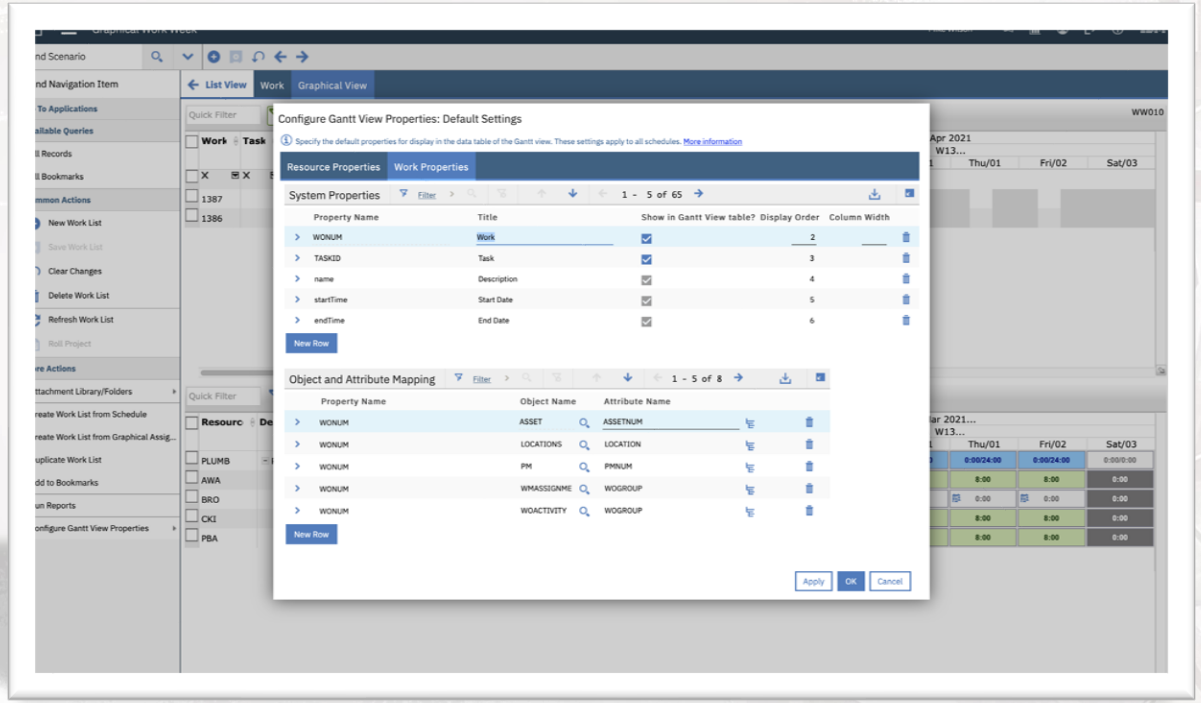
BREAK-IN	Work completed within the work week that was not scheduled previously or within the work week
ACHIEVED	Work that was planned & scheduled for the current work week and completed in that work week
BREAK-OUT	Work completed that was planned & scheduled in a particular work week and put into another work week without being rescheduled
INCOMPLETE	Work that was planned & scheduled for the current work week and not completed in that work week

Understanding Planning and Scheduling



Data and Preparation Before Scheduling

Effective scheduling begins with clean, complete data. Before opening Scheduler, verify that work orders contain accurate duration estimates, required craft codes, priority levels, and constraint dates. Incomplete data leads to scheduling errors and field confusion.



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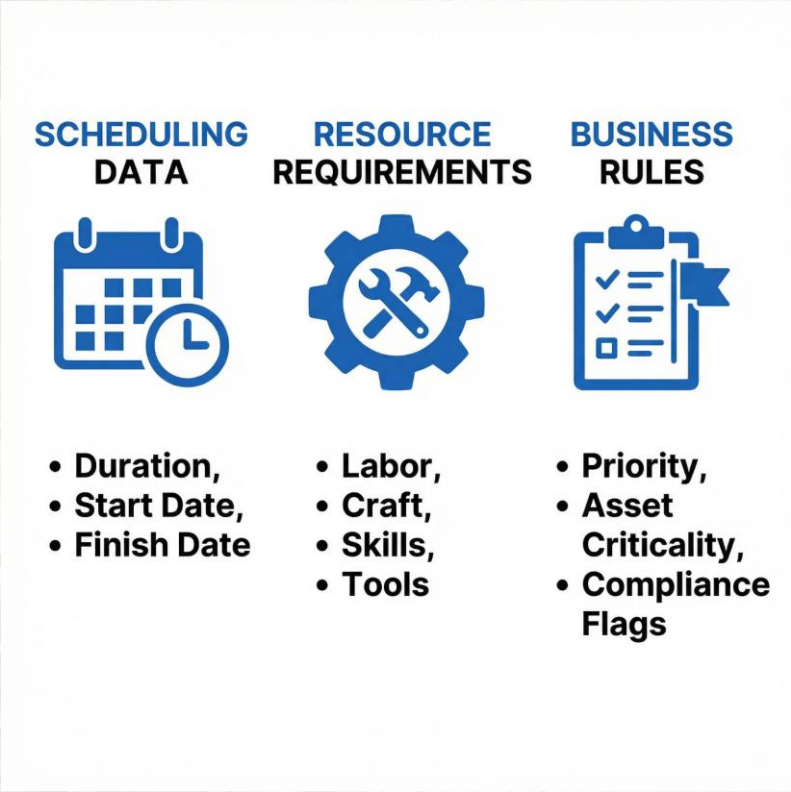
Understanding Planning & Scheduling Attributes



Scheduler reads dozens of work order fields, but six drive scheduling decisions:

- Estimated Duration
- Required Start Date
- Required Finish Date
- Priority Code
- Craft Requirement
- Assignment Status

Missing or conflicting values in these fields create scheduling conflicts. For example, a 10-hour work order with a same-day required start and finish date cannot be scheduled without violating constraints.

Essential Pre-Scheduling Checklist

1

Work Order Validation

Confirm each work order has approved status, realistic duration estimate, required craft/skill assignments, and defined priority.

Reject or return incomplete work orders to originators.

2

Resource Availability

Check labor calendars for vacation, training, or other absences.

Verify tool and equipment availability in Maximo.

Note any planned outages or maintenance windows that affect scheduling.

3

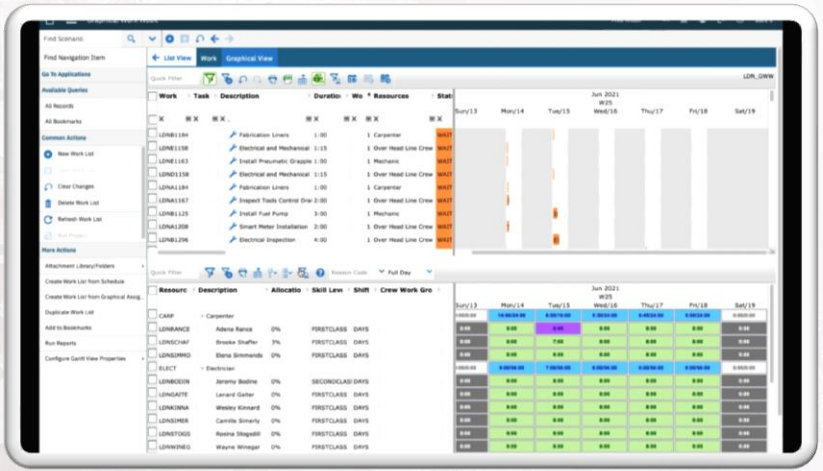
Constraint Review

Identify hard constraints (regulatory deadlines, shutdown windows) versus soft constraints (preferred dates, optimization targets).

Document constraint sources for reference during schedule adjustments.

Why Graphical Scheduler Matters

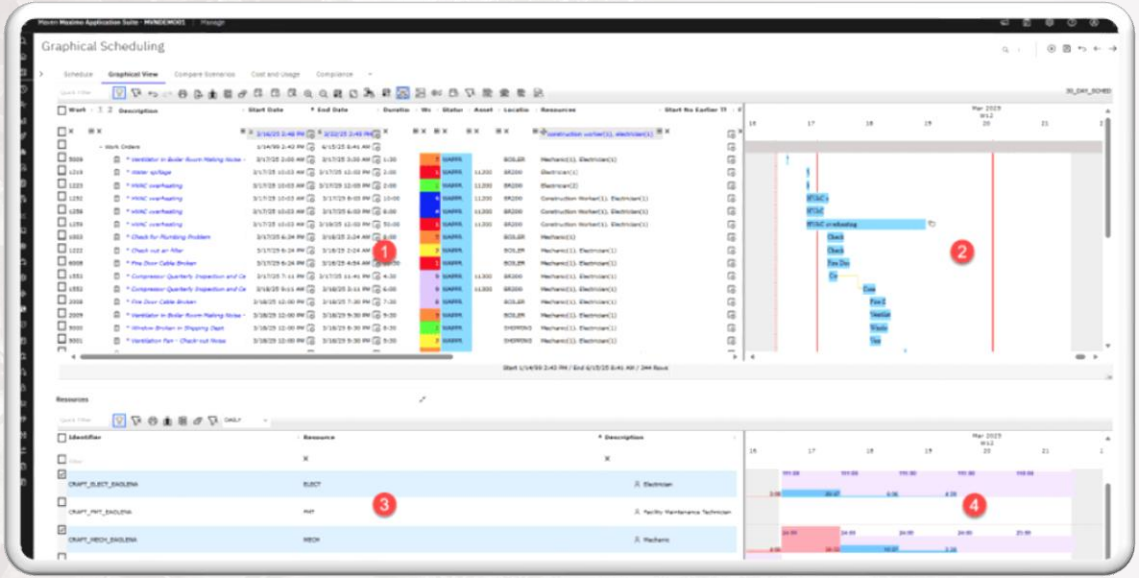
Work Orders **Scheduling** **Resources** **Reporting**



Graphical Scheduler transforms complex work order management into visual, drag-and-drop scheduling. It provides real-time visibility into resource availability, work conflicts, and schedule optimization opportunities—eliminating manual spreadsheets and reducing planning time by up to 60%.

Organizations transitioning from legacy tools gain immediate access to dynamic scheduling capabilities, constraint-based planning, and integrated Maximo data—all within a single, intuitive interface.

Gantt Chart: Visual Timeline View



The Gantt Chart provides a horizontal timeline where work orders appear as bars spanning their scheduled duration. Color indicates status (planned, in progress, complete). Dependencies show as connecting lines. The timeline scale adjusts from hours to months based on your zoom level.

Click and drag bar edges to adjust duration. Drag entire bars to reschedule. Right-click for quick actions: split work orders, add assignments, or view details.

KEY CONCEPT

The Scheduler Advantage

Visual Planning

See your entire schedule immediately with color-coded Gantt charts showing work orders, dependencies, and resource allocation across days, weeks, or months.

Constraint Awareness

The system automatically identifies conflicts: resource overallocation, asset unavailability, skill mismatches, and calendar restrictions—before schedules go live.

Real-Time Integration

Changes in Maximo immediately reflect in Scheduler. Updated work order priorities, resource reassignments, and status changes sync automatically.

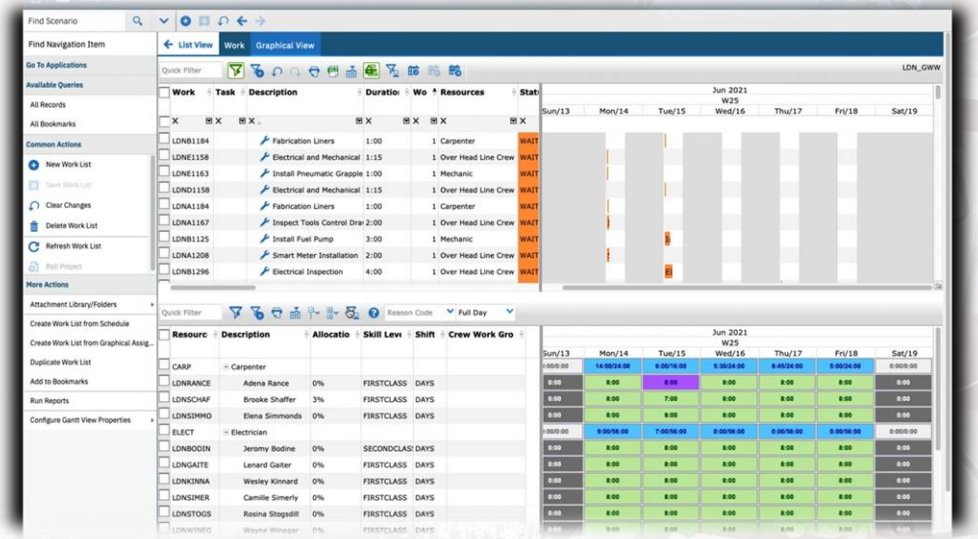
Assignment List: Your Work Queue

What You See

The Assignment List displays unscheduled and scheduled work orders with key metadata: work order number, description, priority, required start/finish dates, and estimated duration. Color coding indicates status and constraint violations.

How to Use It

Filter by site, status, priority, or craft. Sort by any column to identify urgent work. Drag work orders from this list onto the Gantt Chart to schedule them. The list updates dynamically as you assign work.



Pro Tip: Use the Quick Filter toolbar to create custom views. Save frequently used filters as named queries to streamline daily planning sessions. This reduces repetitive setup time by 70%.

Navigation Controls You'll Use Daily

Date Range Selector

Sets visible timeline span. Use presets (Today, This Week, This Month) or custom ranges. Affects both Gantt and Resource views simultaneously.

Zoom Controls

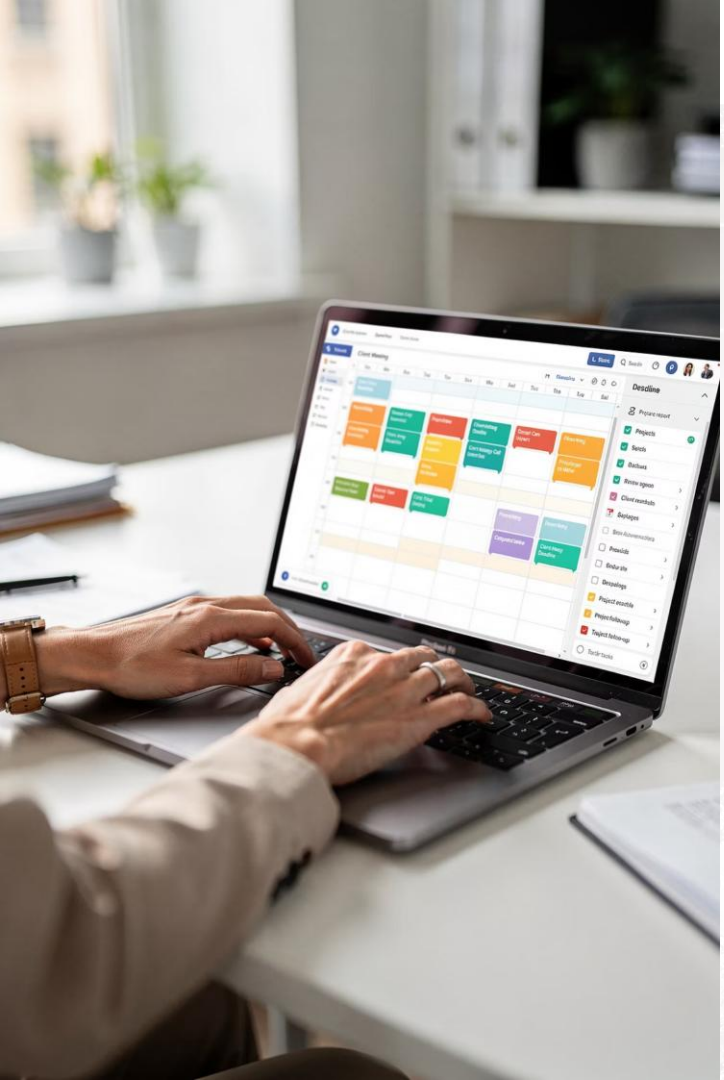
Adjusts timeline granularity from 15-minute increments to monthly overview. Keyboard shortcuts: Plus/Minus keys or Ctrl+Scroll for rapid adjustment.

Filter Toolbar

Narrows displayed work orders by site, status, priority, craft, or custom attributes. Filters apply across all views. Combine multiple filters for precision.

Refresh Button

Updates view with latest Maximo data. Auto-refresh occurs every 5 minutes by default. Manual refresh ensures critical changes appear immediately.



MODULE 4

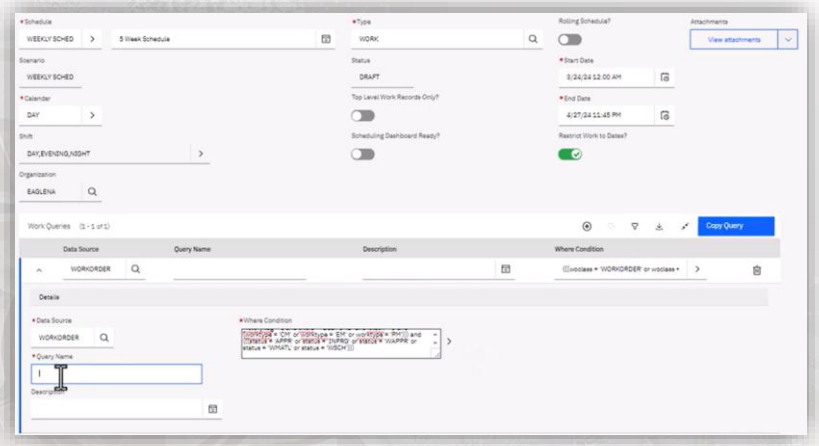
Creating Your First Schedule

Schedule creation follows a repeatable five-step workflow:

- ❑ Load work orders
- ❑ Assign resources
- ❑ Sequence work
- ❑ Validate constraints
- ❑ Publish

Each step builds on the previous, creating a conflict-free, optimized schedule ready for field execution.

Step 1: Load and Filter Work Orders



The Process

Navigate to Scheduler from Maximo's Planning or Work Order Tracking modules. Set your planning horizon using the Date Range selector—typically one to four weeks. Apply filters to limit the view to relevant work: specific sites, craft codes, or priority levels.

The Assignment List populates with matching work orders. Review the count—too many work orders (>200) slow performance; too few may indicate filter errors. Adjust filters until you see expected work volume.

Optimizing Resource Utilization

Load Leveling

Distribute work evenly across resources to avoid burnout and idle time. Target 100% utilization.

Use Resource Panel utilization indicators to identify imbalances.

Skill Matching

Assign work to resources with appropriate expertise.

Overqualified resources waste capacity; underqualified resources risk quality issues.

Balance skill development (stretch assignments) with schedule reliability (safe assignments).

Work Batching

Group similar work orders by location, asset type, or skill requirement.

Batching reduces travel time and tool changes.

Schedule all pump maintenance together rather than scattering across the week—improving efficiency by 15-25%.

Step 2: Assign Resources to Work Orders

1

Select Work Order

Click a work order in the Assignment List. Review required craft and estimated duration in the details panel.

2

Drag to Resource

Drag the work order from the list onto the appropriate resource lane in the Gantt Chart. Drop it at the desired start time.

3

Verify Assignment

Scheduler validates resource availability and skill match. Red indicators show conflicts; yellow shows warnings. Adjust as needed.

Step 3: Sequence Work Orders

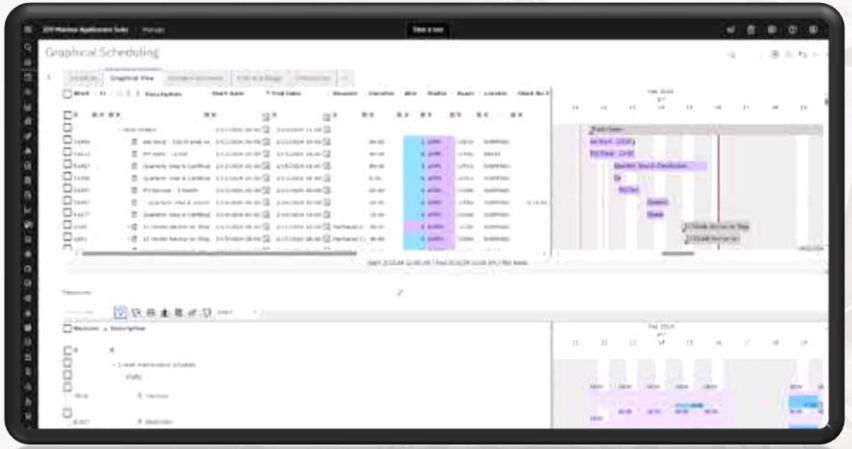
Sequencing establishes the order in which resources complete assigned work.

Scheduler respects three types of dependencies:

- Finish-to-Start (next task begins when previous finishes)
- Start-to-Start (tasks begin simultaneously)
- Finish-to-Finish (tasks must complete together).

Create dependencies by right-clicking a work order bar and selecting "Add Predecessor.“

Choose the preceding work order from the list. Scheduler automatically adjusts subsequent task timing to maintain dependency logic as you modify schedules.



Managing Schedule Conflicts

Resource Overallocation

Occurs when a resource is assigned more than 100% capacity in a period. Resolve by moving work to a different time, assigning to an alternate resource, or splitting the work order across multiple days.

Constraint Violations

Work scheduled before required start date or after required finish date. Resolve by adjusting work order timing, negotiating deadline changes with stakeholders, or expediting resource availability through overtime or contract labor.

Skill Mismatches

Resource lacks required qualifications for assigned work. Resolve by assigning to qualified resource, updating resource skill profile if certification was missed, or planning skill training before work execution.

Step 4: Validate Your Schedule

Run Validation Checks

Before publishing, run Scheduler's built-in validation. Access via the Tools menu: Validate Schedule. The system checks for overallocations, constraint violations, missing assignments, and dependency conflicts.

Review the validation report. Critical errors (red) must be resolved before publishing, schedules with critical errors cause field confusion and work stoppages. Warnings (yellow) are advisory but should be investigated.

- **Validation Best Practice:** Run validation incrementally as you schedule, not just at the end. Catching conflicts early prevents cascade effects where one error creates multiple downstream problems requiring extensive rework.

Common Validation Errors and Fixes

Duration Exceeds Availability

Work order duration is 10 hours, but resource has only 8-hour workday.
Fix: Split work order into two days or adjust duration estimate if overestimated.

Circular Dependencies

Work Order A depends on B, which depends on C, which depends on A, creates an impossible loop.
Fix: Remove one dependency link to break the cycle.

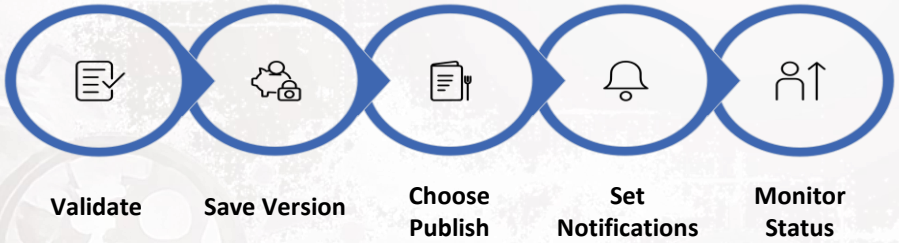
Assigned to Unavailable Resource

Resource is scheduled for vacation or other absence.
Fix: Reassign to available resource with same craft code or adjust work timing to post-absence date.

Step 5: Save and Publish Schedules

Saving creates a schedule snapshot in Maximo without affecting field resources. Publishing pushes assignments to work order records, updates resource calendars, and triggers notification workflows. Always save before publishing to preserve a rollback point.

Publishing Workflow



Save (Draft or Named): Stores schedule configuration in Scheduler without changing Maximo work order assignments. Resources don't see changes. Use for work-in-progress schedules, scenario planning, or before validation.

Publish: Writes schedule assignments back to Maximo work orders. Updates assignment records, triggers email notifications, and makes schedules visible in mobile apps. This is the final step that activates your schedule for field execution.

Post-Publishing Actions

Verify in Maximo

Open a sample work order in Maximo Work Order Tracking. Confirm Assignment tab shows correct resource, scheduled start, and scheduled finish matching your published schedule. Spot-check 3-5 work orders across different resources.

Communicate Changes

Email affected supervisors with schedule summary: number of assignments per crew, priority distribution, notable constraints. Provide Scheduler view link so supervisors can review full team schedules independently.

Monitor Execution

Over the next 24 hours, watch for status updates in Scheduler. Work orders moving to "In Progress" confirm field teams received and acknowledged assignments. Non-started work may indicate communication gaps.

Analyze

Data driven decisions about your asset portfolio aid planning & scheduling.

- Eliminating defects
- Identify manufacturer recommendations
- Cost analysis for plans
- Better alignment of resources
- Continuous improvement

Transitioning from Legacy Tools

Common Challenges

Organizations moving from spreadsheet-based scheduling or standalone tools face three primary hurdles: learning new terminology, trusting automated validation, and adapting workflows to integrated data.

Plan for a 4–6-week transition period.

- ❑ Week 1-2: parallel scheduling (maintain old tool as backup).
- ❑ Week 3-4: Scheduler becomes primary, legacy is reference only.
- ❑ Week 5-6: full cutover with legacy tool archived.

Success Factors

- Executive sponsorship and clear cutover date
- Dedicated training sessions for each scheduler
- Quick-reference guides at workstations
- Weekly check-ins during transition period
- Celebrate early wins and schedule quality improvements

Your Next Steps

Practice in Training Environment

Schedule 10-15 work orders using sandbox data. Experiment with different assignment methods, create dependencies, and practice validation workflows. Mistakes here have no consequences—this is your learning space.

Shadow Experienced Schedulers

Observe 2-3 planning sessions with schedulers already using the tool. Ask questions about decision-making logic, constraint prioritization, and conflict resolution strategies. Document tips and shortcuts you observe.

Create Your First Production Schedule

Select a small scope: one crew, one-week, routine maintenance only. Apply the five-step workflow: load, assign, sequence, validate, publish. Start conservative—complexity comes later after you've built confidence.

You now have the foundational knowledge to create effective schedules in IBM Maximo 9.0 Graphical Scheduler. Begin with simple schedules, progressively add complexity, and leverage the tool's validation features to build scheduling expertise. Your organization's improved schedule quality and resource utilization begins with your first published schedule.