

ORACLE ADVANCED SCHEDULER

KEY FEATURES

SCHEDULING TOOLS

- Interactive Scheduling UI accessible from Customer Service, Dispatch Center and Mobile Field Service
- Multiple Interactive Modes (Intelligent, Window to Promise, Assisted)
- Adjustable Resource selection and qualification preferences
- Autonomous Batch Scheduling (driven by customer defined queries)
- Interactive and Batch Optimization powered by geographical task sorting and clustering logic to further reduce travel and other costs
- Interactive Schedule Management features to block, unblock and optimize trips

FLEXIBLE TECHNICIAN QUALIFICATION

- Uses Oracle Territories, Contracts, and Installed Base to locate candidate Technicians
- Qualifies for Availability (per Calendar) and required Skills

CONFIGURABLE OPTION COSTING

- Schedule options costed and sorted to assist selection of best schedule option
- Costs to address business priorities, Customer Satisfaction as well as Productivity
- Adjustable Cost Weightings

MAP BASED TIME AND DISTANCE CALCULATIONS

- Support for uploading geo-spatial map data
- Certified Spatial Data available from Navteq for Europe, North America, Australia and World Markets
- Several Time/Distance calculation modes including detailed Street Level Routing and point-to-point estimates
- Default Travel time/distance for simple implementations

Oracle Advanced Scheduler (OAS) helps leading field service providers book appointments and create optimized schedules that meet tough customer service objectives while minimizing travel and other key operational costs. OAS is highly scalable and considers a wide variety of configurable constraints, business rules, service objectives, and cost factors. This has allowed OAS to be successfully deployed in large sophisticated field service businesses in many industries including high tech, industrial manufacturing, office equipment, medical equipment, local government, utilities, retail, security, and telecommunications. Oracle Advanced Scheduler is a key component of the Oracle E Business Suite Field Service Solution that also includes Field Service, Mobile Field Service, and Spares Management Products.

Overview

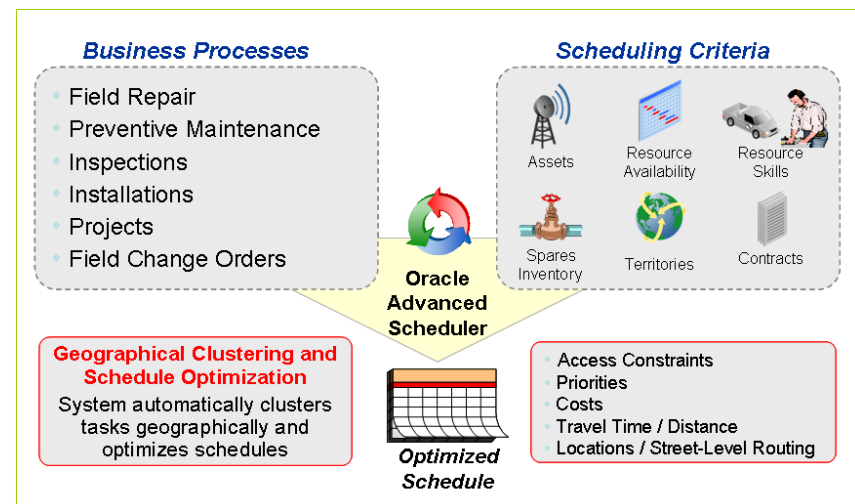


Figure 1: Oracle Advanced Scheduler Overview

Oracle Advanced Scheduler (OAS) is used to schedule tasks and book appointments for all types of planned and reactive field service work including installations, moves, repairs (break/fix), preventive maintenance, inspections, field change orders, and upgrades. OAS provides capabilities that increase the productivity and effectiveness of customer service agents, tech support engineers, field service dispatchers, field managers, field office administrators, and even technicians in the field. OAS supports the complete spectrum of field service business models from decentralized technician self-scheduling and district office dispatching to the centralized, tightly controlled

DISPATCH CENTER INTEGRATION

- Scheduler user interface built into the Dispatch Center for interactive scheduling
- Drag and drop scheduling in Gantt Chart
- Record Customer Confirmation while scheduling
- Schedule Management and Trip Optimization capabilities available in Dispatch Center

SPARES MANAGEMENT INTEGRATION

- Verifies technician has required parts
- Reserves spare parts if available in trunk stock
- Automatic creation of spares order if no qualified technician has required parts
- Cost of part shipment automatically applied to the schedule option cost

MOBILE FIELD SERVICE INTEGRATION

- Technicians can create personal tasks to notify scheduler of their non-availability during a certain time period.
- Technicians can create and schedule follow-up tasks while at the customer site

scheduling, dispatch, and work release.

OAS simultaneously considers many constraints and scheduling criteria including map based travel time and distance, overtime limits, skill requirements, parts requirements, customer access hours, service level objectives, and contractual obligations. This ensures the right technician with the right parts arrives at the customer site on time by traveling an optimized route. OAS's power comes from its high performance scheduling, geographical clustering, and trip optimization algorithms and its tight integration to Oracle Field Service, Oracle Spares Management, Oracle Mobile Field Service, Oracle Customer Service, Oracle Service Contracts, Oracle Asset Tracking, Oracle Order Management, Oracle Inventory and the CRM Foundation Modules.

Scheduling tools for many service business models

Oracle Advanced Scheduler (OAS) provides scheduling tools with great flexibility and varying degrees of automation in order to support most field service operational models. The Autonomous Scheduler is a query driven, batch scheduling engine that can be run periodically or initiated manually from the Field Service Dispatch Center. In some high volume, short response time SLA environments, Autonomous Scheduler is run every few minutes to quickly get work from the call center out to the field.

OAS's Interactive Scheduler UI is accessible from the Oracle Customer Service and the Oracle Field Service Dispatch Center allowing both customer service agents and dispatchers to schedule tasks and book customer appointments. OAS allows interactive adjustment of resource pool selection parameters, scheduling criteria, and scheduling assistance level (Window to Promise, Intelligent and Assisted), empowering these users to handle a wide variety of scheduling scenarios.

In addition, OAS can be accessed directly from Oracle Mobile Field Service so field technician can schedule follow up tasks while they are onsite with the customer. This is especially powerful in environments where technicians must frequently order replacement parts after diagnosis as Advanced Scheduler is fully integrated with Oracle Spares Management.

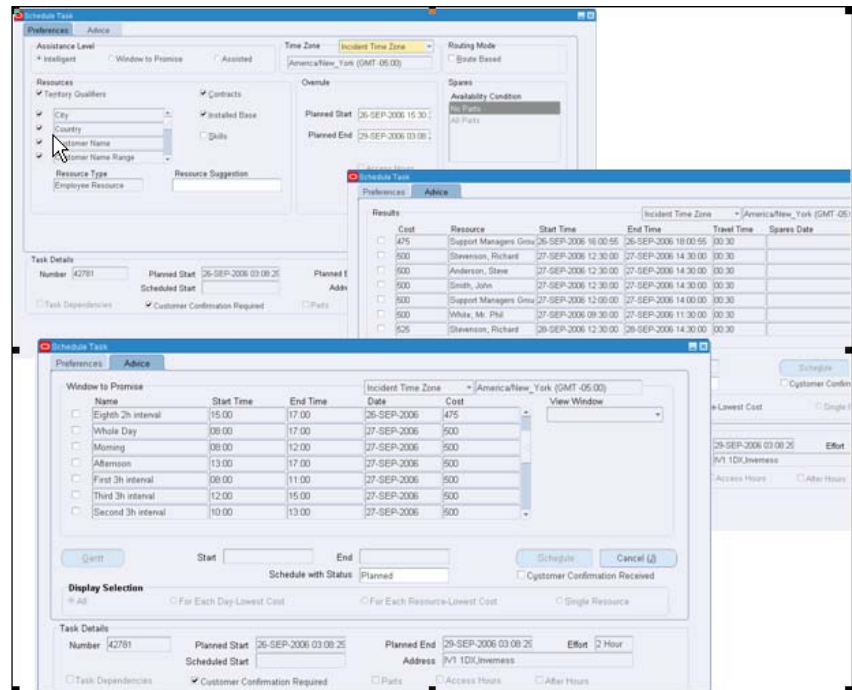


Figure 2: Interactive Scheduling UI

Geographical sorting and clustering

OAS's Autonomous Scheduler provides capability to sort the batch of tasks being scheduled by geographic proximity allowing it to create schedules where routes do not overlap and a single technician, if feasible, handles all work at a particular site. These schedules also keep technicians well dispersed so the field service organization can respond faster to emergency calls/outages.

Resource pool identification and qualification

Oracle Advanced Scheduler (OAS) leverages the Oracle Territories module so service providers can define simple to complex task assignment rules using both geographic (city, state, zip, etc.) and non-geographic (product, service type, problem code, etc.) qualifiers. These territories, along with the preferred and excluded technicians defined in Oracle Assets and Oracle Service Contracts, are used by Advanced Scheduler to identify the technician pool that will be considered when scheduling a specific task.

Once the technician pool has been identified, Advanced Scheduler qualifies the pool by automatically eliminating technicians who are not available (per their calendar) or do not have the skills required to execute the task.

Schedule option identification and costing

When identifying possible scheduling options, Oracle Advanced Scheduler (OAS) automatically applies constraints such as site access hours and overtime limits to insure only realistic options are considered. It then calculates a relative cost for each scheduling option using configurable cost factor weightings, which include customer service costs (such as violating contracted response times) as well as operational costs (such as travel distance and overtime). The configurability of these cost factor

weightings allows service providers to tailor the Advanced Scheduler to meet their unique business objectives.

Autonomous Scheduler automatically selects the lowest cost option while the interactive Scheduler UI presents scheduling options to the user sorted by relative cost or start date.

Travel time and distance calculation

Oracle Advanced Scheduler (OAS) utilizes detailed map data to accurately calculate travel distance and time. It first assigns a geo-code and street segment to the incident address (if not already assigned) and then determines the fastest route to get there considering road types (highway, thoroughfare, side street, 1 way street, etc.) and travel speeds. Service providers who do not require this level of accuracy (for just appointment booking or for all scheduling functions) can configure Advanced Scheduler to use point-to-point travel calculations or a default travel time.

Algorithms

Oracle Advanced Scheduler (OAS) uses sophisticated, high performance algorithms to determine the fastest route between two addresses, to geographically cluster tasks, to insert a task into the schedule, and to optimize the schedule once all tasks have been initially scheduled. These industry standard algorithms have been tuned to provide outstanding scheduling performance.

Scheduling tasks with spare part requirements

Oracle Advanced Scheduler (OAS) is integrated with Oracle Spares Management to insure tasks with part requirements are properly scheduled. After identifying the pool of qualified technicians, OAS interfaces to Oracle Spares Management to find out which technicians have the required parts, or, if not, when they can be delivered. OAS then uses this availability/delivery information to identify feasible scheduling options.

When costing scheduling options for technicians who do not have the required parts on-hand, Advanced Scheduler adds in the cost of shipping the required parts from stocking locations where they are found to the technician or customer site. When one of these options is selected, Advanced Scheduler automatically creates the required spares orders with coordinated delivery dates and times.

Functionality is also available to calculate the probability a part will be required for a particular product and task type. Parts Availability Conditions can then be defined and selected during scheduling so that dispatcher can control what types of parts are considered by the Advanced Scheduler (e.g. all parts, high priority parts, medium and high priority parts, no parts, etc.).

Schedule optimization and Optimization across Trips

Oracle Advanced Scheduler (OAS) provides a powerful optimization engine to refine technician schedules after an initial schedule has been created. An opportunity for schedule improvement exists because Scheduler, when initially inserting tasks, doesn't see tasks that haven't been created or scheduled yet. The optimization engine considers all scheduled tasks at once and reschedules and reassigns them to squeeze out additional travel and other costs. This optimization engine can be run in a batch mode for multiple

technicians across multiple days. An informative log file is generated which captures key parameters and optimization statistics. Trip Optimization can also be initiated interactively in the Dispatch Center for a selected set of technicians for a date range or for a specific technician's trip

Scheduling complex tasks

Oracle Advanced Scheduler (OAS) has the capability to handle complex field service tasks that are frequently encountered when scheduling planned work such as installations, inspections and preventive maintenance. When scheduling tasks requiring longer than a standard work shift to complete, OAS automatically breaks these tasks (called parent tasks) into smaller tasks (called child tasks) that fit into the defined technician shifts. OAS provides a Parent/Child Task UI so Dispatchers can manage these long tasks and reschedule or cancel work in response to actual progress (e.g. finishes early) and changes in technician availability (e.g. calls in sick).

Oracle Field Service and Oracle Advanced Scheduler provide functionality for handling tasks that require customer confirmation before the technician arrives on site. Confirmation requirements can be written into the Service Contract (in Oracle Service Contracts) and captured manually in the call center. Dispatch Center Task queries can be filtered to list only those tasks requiring customer confirmation. Confirmation can be recorded on the interactive Scheduler UI or in the Dispatch Center. To prevent wasted trips to the customer site, tasks without confirmation receipt are prohibited from being released/committed to field technicians.

Child Number	Scheduled Start	Scheduled End	Effort	Status	Assignee
37264	07-SEP-2006 09:00:00	07-SEP-2006 17:00:00	8 Hour	Planned	Emery, Mr. Matt
37265	08-SEP-2006 09:00:00	08-SEP-2006 17:00:00	8 Hour	Planned	Emery, Mr. Matt
37266	11-SEP-2006 09:00:00	11-SEP-2006 17:00:00	8 Hour	Planned	Emery, Mr. Matt
37267	12-SEP-2006 09:00:00	12-SEP-2006 11:00:00	2 Hour	Planned	Emery, Mr. Matt

Figure 3: Parent/Child Task Management UI

Releasing work to the field

Oracle Advanced Scheduler (OAS) provides functionality to automatically release batches of tasks to the field for execution. Depending on operating priorities, this process is used by field service providers to release several weeks of work or just work due to start in the next few hours.

Individual tasks or all tasks in a technician's trip can also be manually released/committed in the Dispatch Center. This flexibility allows service providers to use a variety of work management approaches to improve technician focus and

KEY BENEFITS

- Reduce Dispatch Costs for the service organization
- Improve Dispatcher to Technician ratio
- Increase Productivity of the Field Service Workforce
- Increased customer satisfaction
- Increase employee satisfaction

RELATED PRODUCTS

- Field Service
- Order Management
- Spares Management
- Inventory
- TeleService
- iSupport
- Mobile Field Service

RELATED SERVICES

Services available from Oracle Support Services:

- Update Subscription Services
- Product Support Services
- OnlineDBA

productivity while keeping schedules flexible.

Oracle E-Business Suite—The Complete Solution

Oracle E-Business Suite enables companies to efficiently manage customer processes, manufacture products, ship orders, collect payments, provide service, and more—all from applications that are built on unified information architecture. This information architecture provides a single definition of your customers, suppliers, employees, and products—all important aspects of your business. Whether you implement one module or the entire Suite, Oracle E-Business Suite enables you to share unified information across the enterprise so you can make smarter decisions with better information.



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