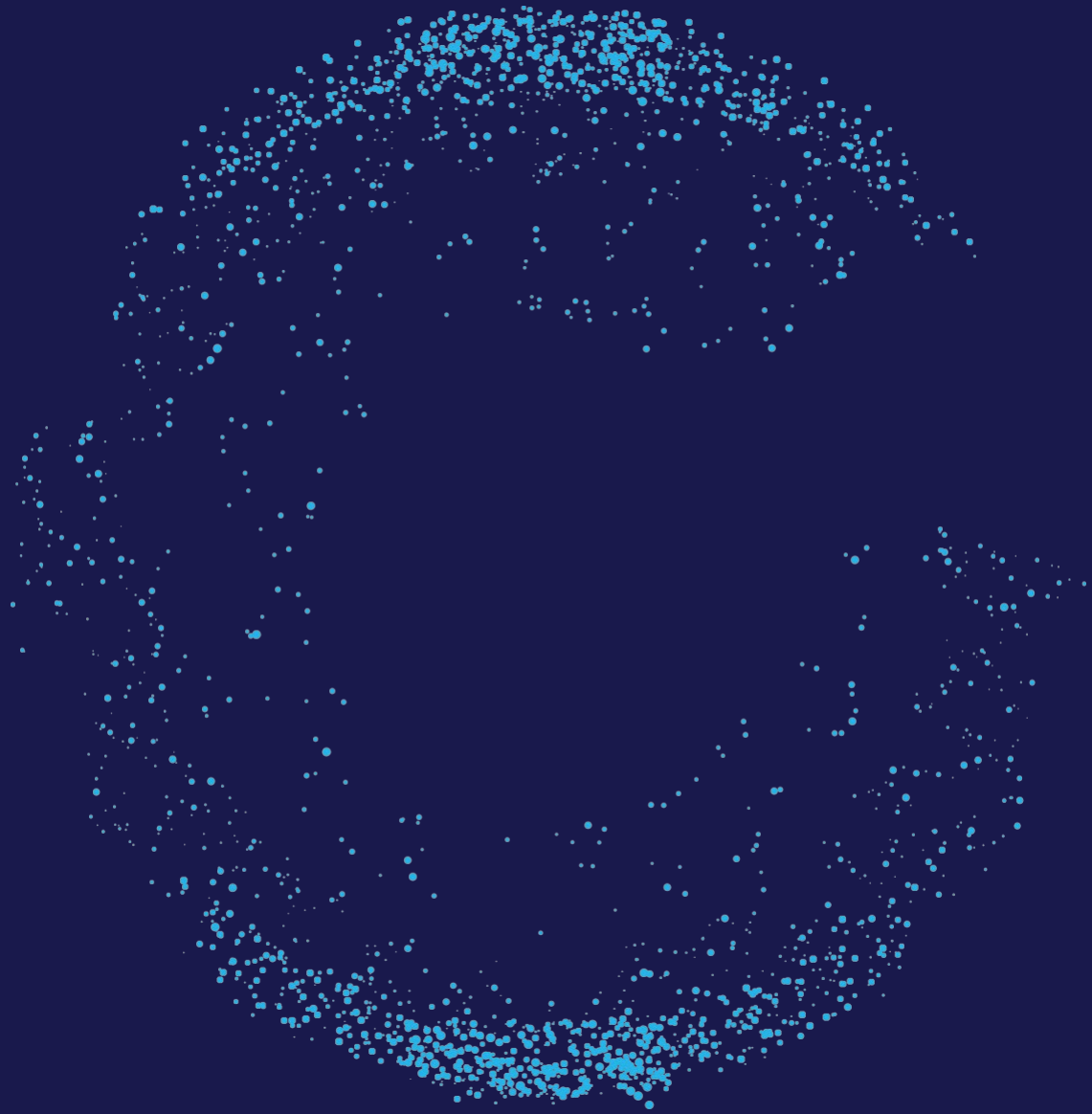


Education Services

Course Catalog



Transportation Management System

Revision Date: August 2026

About This Catalog

This catalog is your essential guide to Blue Yonder Transportation Management System (TMS) instructor-led training courses. Whether you are a new user or an experienced professional, the courses outlined in this catalog help you gain the knowledge and skills required for the successful adoption and effective use of Blue Yonder TMS.

The catalog provides a structured overview of available courses and their learning objectives, audience, and duration. For assistance or guidance in selecting the required courses, you can contact your Blue Yonder Customer Experience or Education Services team.

Contents

About This Catalog	2
About Blue Yonder Education Services	3
Blue Yonder Training Courses.....	3
Blue Yonder TMS Course Catalog—Overview	4
TMS Course Details	8
5295: Transportation Management Solution Foundation	8
5280: Transportation Manager.....	13
5290: Transportation Modeling Foundation	18
5262: Transportation Modeler Level I.....	22
5265: Transportation Modeler Level II	28

About Blue Yonder Education Services

Blue Yonder Education Services seeks to improve supply chain excellence by offering innovative, tailored, and cost-effective training solutions. It focuses on transforming training with adaptable, high-quality programs that help you achieve your business goals, deliver industry-leading performance, and drive economic growth. Blue Yonder Education Services' core offerings include:

- Product courses delivered in person or virtually, as instructor-led training
- Public schedule and private course events
- Applied coaching and mentoring services
- Digital subscriptions and online courses
- Certifications
- Skill gap analysis surveys and training need assessments
- Organizational change and end-user training advisory and professional services

Blue Yonder Training Courses

Designed to facilitate effective adoption and utilization of its software solutions, Blue Yonder training courses provide a structured, expert-guided learning experience.

Features and Benefits



Offer in-person or live virtual classroom training, delivered by a qualified Blue Yonder instructor, with standard or customized courses and hands-on exercises



Provide comprehensive training on specific Blue Yonder solutions and related business processes



Ensure learner engagement throughout the training program



Award learners with badges and certification, when applicable



Blue Yonder TMS Course Catalog—Overview

The Blue Yonder TMS catalog provides comprehensive training courses designed for different audiences in an organization. These courses combine learning concepts with practical exercises that help learners deepen their knowledge of TMS.

Course Name	Learning Objectives	Audience	Duration
Level 1: Foundation			
5295: Transportation Management Solution Foundation This training is exclusively available to customers who have purchased the Transportation Management Solution (on Platform and Network) product. It is crafted to specifically address the distinct features and functionalities inherent in this solution. Please confirm your product purchase to ensure compatibility with this training offering.	After completing this course, learners will be able to: • Define the key features and capabilities of Transportation Management Solution. • Describe the key operations of Transportation Smartbench that help perform various transportation activities. • Monitor data ingress-related messages and egress-related events. • Explain the master data entities of Transportation Management Solution. • Create a shipment. • Generate a load and tender it to a carrier. • Use the carrier network collaboration feature to provide tender response and update load status. • Manage freight audit and payment. • Describe the process of creating a tariff. • Create a delivery schedule. • Create docks and dock commitments. • Explain how the Routing Guide feature helps in optimizing shipments. • Configure the master data entities required for pallet creation and loading. • Familiarize with Logistics Ops Agent, the AI capability of Transportation Management Solution. • Explain how Transportation Management Solution efficiently supports ocean booking and booking revision.	Transportation Management Solution project team and end users	4 days

5280: Transportation Manager This training is available to customers who have purchased the Transportation Manager (On-Prem) product. It is crafted to specifically address the distinct features and functionalities inherent in the on-premise environments. Please confirm your product purchase to ensure compatibility with this training offering.	After completing this course, learners will be able to: • Define the terms used in Blue Yonder Transportation Manager. • Set up process and components of Transportation Manager. • Navigate through the Web and Smartbench user interfaces. • Create principal entities. • Create shipments. • Build and process loads. • Explain the key features of Transportation Smartbench. • Create a new account payable voucher for confirmed shipment. • Evaluate the effectiveness of different tariff structures on shipment costs. • Configure location constraints and business rules. • Create a delivery schedule. • Configure manual and automatic dock scheduling. • Set up routing guide rules. • Configure pallet types using the Transportation Manager user interface.	Transportation Manager project team and end users	4 days
---	--	--	---------------

5290: Transportation Modeling Foundation This training is exclusively available to customers who have purchased the Modeling (on Platform) product. It is crafted to specifically address the distinct features and functionalities inherent in Modeling on Blue Yonder Platform. Please confirm your product purchase to ensure compatibility with this training offering.	After completing this training, learners will be able to: • Describe Transportation Modeling and its features. • Navigate through Transportation Modeling user interface utilizing its functionalities. • Create and optimize starter models. • Define scenarios, verify data, and configure solver options. • Apply location constraints and add business hours, routing, and transit overrides. • Incorporate hubs into models. • Develop a tariff strategy using the access rating tool. • Design delivery schedules to streamline transportation planning. • Evaluate different strategies and parameters to optimize solve results. • Model continuous moves using strategy files and access rating tool.	Transportation Modeling project team and end users	4 days
5262: Transportation Modeler Level 1 This training is available to customers who have purchased the Modeler (On-Prem) product. It is crafted to specifically address the distinct features and functionalities inherent in the on-premise environments. Please confirm your product purchase to ensure compatibility with this training offering.	After completing this course, learners will be able to: • Describe Transportation Modeler and its features. • Navigate through Transportation Modeler user interface utilizing its functionalities. • Create and optimize starter models. • Define scenarios, verify data, and configure solver options. • Apply location constraints and add business hours, routing, and transit overrides. • Incorporate hubs into models. • Develop a tariff strategy using the access rating tool. • Design delivery schedules to streamline transportation planning. • Evaluate different strategies and parameters to optimize solve results. • Model continuous moves using strategy files and access rating tool. • Explain the functions of different reports generated post optimization.	Project team and end users of Transportation Modeler	4 days

Level 2: Advanced			
5265: Transportation Modeler Level II This training is available to customers who have purchased the Modeler (On-Prem) product. It is crafted to specifically address the distinct features and functionalities inherent in the on-premise environments. Please confirm your product purchase to ensure compatibility with this training offering.	After completing this course, learners will be able to: • Describe Transportation Modeler's advanced functions and entities. • Illustrate the advanced modeling techniques. • Configure carrier equipment availability penalties. • Describe how domiciles and equipment types are modeled to reduce costs. • Describe equipment type associations and model tractors and trailers. • Describe and model dock scheduling. • Configure performance-based ratings for optimizing load assignments. • Apply dynamic shipment splitting techniques to improve modeling flexibility. • Utilize containerization and axle balancing to manage capacity.	Project team and end users of Transportation Modeler	3 days



TMS Course Details

5295: Transportation Management Solution Foundation

Course Objectives

After completing this course, learners will be able to:

- Define the key features and capabilities of Transportation Management Solution.
- Describe the key operations of Transportation Smartbench that help perform various transportation activities.
- Monitor data ingress-related messages and egress-related events.
- Explain the master data entities of Transportation Management Solution.
- Create a shipment.
- Generate a load and tender it to a carrier.
- Use the carrier network collaboration feature to provide tender response and update load status.
- Manage freight audit and payment.
- Describe the process of creating a tariff.
- Create a delivery schedule.
- Create docks and dock commitments.
- Explain how the Routing Guide feature helps in optimizing shipments.
- Configure the master data entities required for pallet creation and loading.
- Familiarize with Logistics Ops Agent, the AI capability of Transportation Management Solution.
- Explain how Transportation Management Solution efficiently supports ocean booking and booking revision.

Audience

Transportation Management Solution project team and end users

Prerequisites

No prerequisites are required for this course.

Duration

4 days (in person or virtual)

Training Level

Beginner and intermediate

Lesson Name	Learning Objectives	Duration
01: Overview and Terminologies	After completing this lesson, learners will be able to: • Identify the role of Transportation Management Solution in optimizing end-to-end transportation operations. • Describe the key features and capabilities of Transportation Management Solution. • Explain the key terms related to Transportation Management Solution.	1 hour

02: Transportation Manager Web User Interface and User Security	After completing this lesson, learners will be able to: • Navigate the Transportation Manager Web user interface and access the main interaction points for managing shipments and loads. • Utilize search parameters effectively to refine search results and access specific information. • Configure user groups and authorization settings to control module access based on user roles.	1 hour
03: Transportation Smartbench – Overview	After completing this lesson, learners will be able to: ▪ Define the role of Transportation Smartbench (TSB) in supporting transportation workflows. ▪ Describe the key operations of TSB that help perform various transportation activities.	1.5 hours
04: Transportation Smartbench – Navigation	After completing this lesson, learners will be able to: ▪ Navigate Transportation Smartbench UI and use its key components to access and review transportation data. ▪ Create and manage search groups and saved searches within the search panel. ▪ Configure and execute entity and summary searches to retrieve and analyze transportation data.	2.5 hours
05: Transportation Smartbench – Results Panel	After completing this lesson, learners will be able to: ▪ Describe the core functionalities of the results panel in Transportation Smartbench. ▪ Explain how entity views, property views, and map views support detailed review and operational decision-making. ▪ Create asset assignments.	1.5 hours
06: Managing Transportation Data	After completing this lesson, learners will be able to: ▪ Describe how transportation-related data is ingested through Blue Yonder Platform. ▪ Explain the role of the Event Notification server in data egress. ▪ Monitor data ingress-related messages and egress-related events. ▪ Explain how message routing works.	1 hour

07: Setting Up Master Data	After completing this lesson, learners will be able to: ▪ Compare the master and transactional data entities. ▪ Outline the master data entities of Transportation Management Solution. ▪ Identify the APIs to set up master and transactional data through Blue Yonder Platform. ▪ Set up the different master data entities.	1.5 hours
08: Operational Life Cycle	After completing this lesson, learners will be able to: ▪ Explain the operational life cycle of a shipment from creation to delivery to financial settlement. ▪ Describe the load building workflow of a manifest load.	1.5 hours
09: Shipment Creation and Load Building	After completing this lesson, learners will be able to: ▪ Create a shipment. ▪ Generate a load. ▪ Tender the load to a carrier.	2.5 hours
10: Carrier Network Collaboration	After completing this lesson, learners will be able to: ▪ Explain how carrier network collaboration enables carriers to collaborate with shippers. ▪ Provide tender response to shippers. ▪ Explain the load tender process flow. ▪ Describe the process flows for exchanging documents, proof of deliveries, and freight bills. ▪ View the real-time status of a load.	2 hours
11: Managing Freight Audit and Payment	After completing this lesson, learners will be able to: ▪ Outline the components of the Financial Processing module. ▪ Explain the difference between accounts payable and accounts receivable vouchers. ▪ Create vouchers, invoices, freight bills, and general ledger mappings. ▪ Make voucher adjustments. ▪ Rectify an incorrect freight bill.	4 hours
12: Tariff Structures	After completing this lesson, learners will be able to: ▪ Identify the components of a tariff and describe their functions. ▪ Describe the process of creating a tariff. ▪ Explain how carrier and customer charges differ within a tariff system.	1 hour

13: Delivery Schedules	After completing this lesson, learners will be able to: ▪ Explain the concept of delivery schedules. ▪ Create a delivery schedule. ▪ Outline the delivery schedule components. ▪ Differentiate between elapsed days, days of week, and fixed date scheduling options.	1 hour
14: Dock Scheduling – Overview	After completing this lesson, learners will be able to: ▪ Define dock scheduling and explain its significance. ▪ Identify the components of a dock commitment gantt chart. ▪ Evaluate different strategies for avoiding dock congestion.	2.5 hours
15: Working with Dock Schedules	After completing this lesson, learners will be able to: ▪ Identify the different setup options for dock scheduling. ▪ Create a dock and dock commitment. ▪ View a dock commitment. ▪ Explain the location throughput capacity feature.	1 hour
16: Routing Guide	After completing this lesson, learners will be able to: ▪ Explain the purpose of using a routing guide. ▪ Describe the core components of a routing rule: criteria, restrictions, and priorities. ▪ Analyze the priority selection logic used to assign carriers. ▪ Utilize Data Upload Utility to upload the routing guide rules.	0.5 hours
17: Palletization	After completing this lesson, learners will be able to: ▪ Define palletization. ▪ Explain the benefits and significance of palletization in optimizing shipments. ▪ Configure the master data entities required for palletization. ▪ View the palletization results using the three-dimensional visualization in Transportation Smartbench.	1 hour
18: Logistics Ops Agent	After completing this lesson, learners will be able to: ▪ Explain the purpose of Logistics Ops Agent. ▪ Use the Backhaul Opportunity Explorer to identify and act on efficiency opportunities. ▪ Use the Unroutable Shipments Analyzer to identify and resolve routing exceptions.	1 hour

Hands-on Exercises: This section includes hands-on exercises for practicing the tasks covered in the lessons.

Additional Resources: This section includes the additional topic Ocean Booking that can be covered by the trainer based on customer's usage.



5280: Transportation Manager

Course Objectives

After completing this course, learners will be able to:

- Define the terms used in Blue Yonder Transportation Manager.
- Set up process and components of Transportation Manager.
- Navigate through the Web and Smartbench user interfaces.
- Create principal entities.
- Create shipments.
- Build and process loads.
- Explain the key features of Transportation Smartbench.
- Create a new account payable voucher for the confirmed shipment.
- Evaluate the effectiveness of different tariff structures on shipment costs.
- Configure location constraints and business rules.
- Create a delivery schedule.
- Configure manual and automatic dock scheduling.
- Set up routing guide rules.
- Configure pallet types using the Transportation Manager user interface.

Audience

Transportation Manager project team and end users

Prerequisites

No prerequisites are required for this course.

Duration

4 days (in person or virtual)

Training Level

Beginner and intermediate

Lesson Name	Learning Objectives	Duration
01: Overview and Terminology	After completing this lesson, learners will be able to: • Describe the significance of Transportation Manager. • Define the key terms used in Transportation Manager.	1 hour

02: Workflows	After completing this lesson, learners will be able to: • Identify the workflows involved in Transportation Manager. • Describe the setup process and components of the Transportation Manager system. • Explain the functionality of different Transportation Manager modules. • Describe the configuration of master data within the System Setup module.	1.5 hours
03: Navigation	After completing this lesson, learners will be able to: • Identify the main components of the Transportation Manager user interface. • Navigate through various Transportation Manager modules. • Customize the user interface settings for personalized user experience. • Utilize wildcard and search exclusion characters to optimize search operations.	1.5 hours
04: User Security	After completing this lesson, learners will be able to: • Outline the process for creating Transportation Manager users and user groups. • Explain how Transportation Manager supports user authorization and security settings. • Apply user group configurations for appropriate module access for different user types.	1 hour
05: Entities	After completing this lesson, learners will be able to: • Describe entities. • Define the key entities involved in the Transportation Manager system setup, such as customers, carriers, and tariffs.	1 hour
06: Setting Up Entities	After completing this lesson, learners will be able to: • Explain the process and sequence of setting up entities. • Demonstrate how to create an item and set its attributes.	1.5 hours
07: Operational Life Cycle	After completing this lesson, learners will be able to: • Explain the operational life cycle of Transportation Manager and its significance. • Assess the impact of different operational modules on the transportation workflow. • Utilize various modules in Transportation Manager to optimize load efficiency.	1.5 hours

08: Shipment Processing and Load Building	After completing this lesson, learners will be able to: • Create shipments using the Shipment Processing module. • Manually build a load plan in the Load Build module. • Identify the best carrier using rate shop.	1.5 hours
09: Load Processing and Load Confirmation	After completing this lesson, learners will be able to: • Execute the load processing steps. • Explain the steps required for tendering a load. • Describe how carrier sequential tendering helps automate the tendering process. • Confirm a load. • Describe how shipments and loads can be tracked.	1.5 hours
10: Transportation Smartbench	After completing this lesson, learners will be able to: • Describe the key features of Transportation Smartbench. • Perform routine operational life-cycle tasks using Transportation Smartbench. • Describe the functions of job server and how it helps with automation.	1.5 hours
11: Transportation Smartbench: Navigation	After completing this lesson, learners will be able to: • Navigate within Transportation Smartbench. • Customize entity grid layouts to meet user-specific needs. • Handle errors in the entity views. • Configure and execute summary type searches for load, trip, and booking attributes.	1.5 hours
12: Transportation Smartbench: Results Panel	After completing this lesson, learners will be able to: • Explain summary, entity, map, and other results panel views. • Create new asset assignments and manage their life cycle. • Create a map layout based on user-specific needs.	1.5 hours
13: Tariff Structures	After completing this lesson, learners will be able to: • Identify the main components of a tariff and their functions. • Describe the process of creating a tariff. • Explain how carrier and customer charges differ within a tariff system.	1 hour

14: Creating Tariff Structures	After completing this lesson, learners will be able to: • Calculate tariff charges based on provided distance or weight using rate codes. • Create a tariff and add services, conditions, and rate codes. • Formulate a tariff for a specific carrier. • Compare different types of tariffs and discuss their attributes. • Interpret the significance of zones and lanes in tariff calculations.	1.5 hours
15: Financials	After completing this lesson, learners will be able to: • List the components of the Financials module in the Transportation Manager system. • Explain the difference between Accounts Payable (A/P) vouchers and Accounts Receivable (A/R) vouchers.	1 hour
16: Financials: Creating Vouchers	After completing this lesson, learners will be able to: • Manually create a new A/P voucher for confirmed shipment. • Differentiate between the audit and autopay modes for invoice processing. • Generate a freight bill. • Automate the generation of batch A/P vouchers.	1.5 hours
17: Delivery Schedules	After completing this lesson, learners will be able to: • Explain the concept of delivery schedules. • Create a delivery schedule. • Set up a timetable entry for a delivery schedule specifying arrival and departure points. • Differentiate between elapsed days, days of week, and fixed date scheduling options. • Assign a delivery schedule to a tariff and examine its impacts on shipping operations. • Adjust a delivery schedule itinerary.	2 hours
18: Introduction to Dock Scheduling	After completing this lesson, learners will be able to: • Define dock scheduling and explain its significance. • Identify and label the components of a dock commitment Gantt chart. • Evaluate different strategies for avoiding dock congestion.	1 hour

19: Dock Scheduling	After completing this lesson, learners will be able to: • Illustrate the process of manual and automatic dock scheduling. • Set up location throughput groups to manage dock capacity. • Create and view dock commitments. • Configure a dock schedule in Transportation Smartbench. • Analyze how different equipment and commodity types can affect dock scheduling.	1.5 hours
20: Day in the Life	After completing this lesson, learners will be able to: • Explain a day in the life of a transportation planner. • Upload carriers using the data upload capability. • Upload shipments using the data upload capability. • Optimize shipment and analyze results. • Plan and tender a load in Smartbench. • Confirm a load.	1.5 hours
21: Routing Guide	After completing this lesson, learners will be able to: • Describe the components of routing guide. • Describe how priority rules for carrier selection are implemented. • Utilize data upload utility for uploading routing guide. • Review routing guide rules. • Set up routing guide rules.	30 minutes
22: Palletization	After completing this lesson, learners will be able to: • Describe palletization and its benefits. • Identify the master data entities required for effective palletization. • Compare different pallet types and their applications in optimization. • Distinguish between item types. • Configure and create pallet types. • Evaluate the effectiveness of different palletization strategies in reducing transportation costs.	30 minutes

Hands-on Exercises: This section includes hands-on exercises for practicing the tasks covered in the lessons.

Additional Resources: This section includes additional topics such as Architecture, Glossary, Fuel Surcharge Modeling, Procurement Bridge, and Ocean Booking that can be covered by the trainer based on customer's usage.

5290: Transportation Modeling Foundation

Course Objectives

After completing this training, learners will be able to:

- Describe Transportation Modeling and its features.
- Navigate through Transportation Modeling user interface utilizing its functionalities.
- Create and optimize starter models.
- Define scenarios, verify data, and configure solver options.
- Apply location constraints and add business hours, routing, and transit overrides.
- Incorporate hubs into models.
- Develop a tariff strategy using the access rating tool.
- Design delivery schedules to streamline transportation planning.
- Evaluate different strategies and parameters to optimize solve results.
- Model continuous moves using strategy files and access rating tool.

Audience

Transportation Modeling project team and end users

Prerequisites

No prerequisites are required for this course.

Duration

4 days (in person or virtual)

Training Level

Intermediate and advanced

Lesson Name	Learning Objectives	Duration
01: Overview	After completing this lesson, learners will be able to: • Explain the purpose and capabilities of Transportation Modeling in transportation planning. • Describe the key components of Transportation Modeling, including Optimization Engine and Access Rating Tool (ART). • Outline the data flow from input through processing to optimized transportation plans.	1 hour

02: User Interface	After completing this lesson, learners will be able to: - Identify the key components of the TModeling user interface. - Navigate the TModeling user interface to access sections and perform basic actions. - Use Scenario Overview, Scenario Data, Solver Options, and Map View to analyze results.	1.5 hours
03: Building a Starter Model	After completing this lesson, learners will be able to: - Differentiate projects, scenarios, models, plans, entities, relationships, and attributes. - Build a starter model by populating locations, shipments, geocodes, and map views. - Validate imported model data and identify common setup errors during starter model creation.	2 hours
04: Optimizing a Starter Model	After completing this lesson, learners will be able to: - Explain the optimization process within the TModeling solver engine. - Configure solver and strategy settings required for scenario optimization. - Optimize a scenario by validating data, defining solver settings, and interpreting results.	2.5 hours
05: Managing Data	After completing this lesson, learners will be able to: - Identify the key components of scenario data, including entities, attributes, and relationships. - Define how to create and manage entities, relationships, and attributes of a scenario. - Analyze data dependencies and hierarchy relationships.	2.5 hours
06: Location Constraints	After completing this lesson, learners will be able to: - Identify location constraints, including business hours, loading/unloading restrictions, handling time, and routing rules. - Apply location constraints to ensure accurate transportation planning.	2.5 hours
07: Introduction to Hub	After completing this lesson, learners will be able to: - Define the concept of a hub and its role in transportation optimization. - Navigate the Hub Detail table to view and manage hub records.	1.5 hours

08: Shipment Grouping and Ordering	After completing this lesson, learners will be able to: • Create shipments and identify their key attributes. • Describe shipment modeling enhancements, including commodity codes, consolidation rules, and routing constraints. • Apply business rules to shipments using order groups, forced routing, and merge in transit.	1.5 hours
09: Tariffs	After completing this lesson, learners will be able to: • Explain the concept of tariffs and their role in transportation cost calculation. • Identify the key components of the tariff hierarchy, including carrier, service, charges, rates, and lanes. • Describe the purpose and functionality of Access Rating Tool (ART).	1.5 hours
10: Delivery Schedules	After completing this lesson, learners will be able to: • Explain the concept and purpose of delivery schedules in transportation planning. • Identify the types of delivery schedules, including elapsed days, day of week, and fixed date. • Describe the key components of a delivery schedule, including itinerary, timetable, and business days. • Create and manage delivery schedules in Access Rating Tool.	1.5 hours

11: Introduction to Strategies	After completing this lesson, learners will be able to: • Explain the purpose of strategy files and how Optimizer uses them during optimization. • Identify the optimizer hierarchies, including plan, web, trip, load, and shipment. • Describe the key functions within a strategy file, including control, constraint, plan stack, log, and global parameter.	3.5 hours
12: Strategy Functions and Strategy File Editor	After completing this lesson, learners will be able to: • Explain the purpose of strategy functions and how they control optimization behavior. • Identify the types of strategies, including load build, load improvement, hub, and miscellaneous. • Create, edit, and manage strategy files using Strategy File Editor.	2.5 hours
13: Introduction to Parameters	After completing this lesson, learners will be able to: • Explain the purpose of the Parameter file and how it controls shipment optimization. • Describe the structure and key elements of parameter file editor, including parameters, values, and validation indicators. • Use parameter file editor to access, filter, and modify parameters.	1.5 hours
14: Modeling Carrier Equipment Availability Constraints	After completing this lesson, learners will be able to: • Explain the concept and purpose of carrier equipment availability (CEA) constraints. • Describe how CEA constraints are modeled at different levels such as carrier, tariff/service, and lane. • Explain how CEA constraints influence optimization decisions using penalties and resource limits.	2 hours
15: Continuous Move Modeling	After completing this lesson, learners will be able to: • Explain the concept of continuous moves (trips) and their role in transportation optimization. • Describe how trips are created and modeled using strategy functions and parameters.	1.5 hours

Hands-on Exercises: This section contains hands-on exercises for practicing the tasks covered in the lessons.

Additional Resources: This section includes glossary.

5262: Transportation Modeler Level I

Course Objectives

After completing this course, learners will be able to:

- Describe Transportation Modeler and its features.
- Navigate through Transportation Modeler user interface, utilizing its functionalities.
- Create and optimize starter models.
- Define scenarios, verify data, and configure solver options.
- Apply location constraints and add business hours, routing, and transit overrides.
- Incorporate hubs into models.
- Develop a tariff strategy using the access rating tool.
- Design delivery schedules to streamline transportation planning.
- Evaluate different strategies and parameters to optimize solve results.
- Model continuous moves using strategy files and the access rating tool.
- Explain the functions of different reports generated postoptimization.

Audience

Transportation Modeler project team and IT members

Prerequisites

No prerequisites are required for this course.

Duration

4 days (in person or virtual)

Training Level

Intermediate and advanced

Lesson Name	Learning Objectives	Duration
01: Transportation Modeler Overview	After completing this lesson, learners will be able to: • Identify the business benefits of Transportation Modeler. • Describe the key components of Transportation Modeler. • Explain transportation modeling techniques to create an optimized transportation plan that balances cost and service. • Compare different transportation scenarios.	1 hour

02: Transportation Modeler User Interface	After completing this lesson, learners will be able to: • Explain the basic functionalities of various pages and tables within Transportation Modeler. • Navigate through Detail Table to filter, import, export, and manipulate data. • Assess input and output data of solved scenarios. • Create entity relationships and attributes to categorize data.	1 hour
03: Building a Starter Model	After completing this lesson, learners will be able to: • Build a starter model by providing information on locations, shipments, geocodes, and map zones. • Analyze the role of entities, relationships, and attributes. • Create a scenario in Transportation Modeler. • Evaluate the effectiveness of a starter model by interpreting import results. • Identify errors using error logs. • Configure geocoding of location data to provide latitude and longitude coordinates. • Use the road map feature to view locations, shipments, loads, and trips.	2 hours
04: Introduction to Optimizing a Starter Model	After completing this lesson, learners will be able to: • Define optimization in the context of Transportation Modeler. • Describe the data requirements for performing optimization. • Demonstrate various data validation techniques to ensure data accuracy and readiness for optimization.	1 hour
05: Optimizing a Starter Model	After completing this lesson, learners will be able to: • Configure and optimize a starter model using the solver engine. • Adjust strategic parameters as necessary. • Analyze the optimization log and output summary to evaluate the effectiveness of optimization strategies. • Examine and interpret optimization results, including load and trip distances. • Create and execute a batch of scenarios from multiple projects.	1.5 hours

06: Data Validation	After completing this lesson, learners will be able to: • Explain the significance of data validation in ensuring effective modeling outcomes. • Describe the data validation techniques to assess and improve the accuracy of model inputs.	2 hours
07: Managing Data	After completing this lesson, learners will be able to: • Configure a basic model using the solver engine for optimization. • Evaluate the results from the optimization process. • Analyze the log and output data and identify areas for improvement. • Design multiple scenarios to compare outcomes and deduce the best modeling strategies.	1.5 hours
08: Location Constraints	After completing this lesson, learners will be able to: • Define location constraints in Transportation Modeler. • Describe the elements required to set location constraints.	1 hour
09: Setting Up Location Constraints	After completing this lesson, learners will be able to: • Create and assign business hours to various locations within a model. • Apply loading and unloading restrictions to specific location types in a transportation model. • Calculate handling times. • Evaluate routing restrictions for stops that must be first or last on a load. • Create transit override scenarios to reflect actual distances and transit times between locations. • Manage exceptions to regular business hours.	1.5 hours
10: Adding a Hub	After completing this lesson, learners will be able to: • Define a hub in Transportation Modeler. • Add a new hub to the transportation model. • Create and assign business hours to a newly added hub. • Analyze how incorporating a hub affects the optimization of the transportation model. • Create a hub scenario that maximizes load consolidation and efficiency in freight movement. • Visualize hubs and associated loads on a map.	1 hour

11: Introduction to Shipment Grouping and Ordering	After completing this lesson, learners will be able to: • Define shipment grouping and ordering in Transportation Modeler. • Describe the role of shipment grouping and ordering in optimization.	1 hour
12: Shipment Grouping and Ordering	After completing this lesson, learners will be able to: • Add new shipments to the shipment detail table. • Force direct delivery of shipments to their destination. • Apply Merge in Transit concept to shipments that can be combined for simultaneous delivery. • Utilize consolidation classes for shipments of same characteristics. • Explain how location group exclusions can prevent unwanted combinations of locations on a load.	1.5 hours
13: Tariff Strategy	After completing this lesson, learners will be able to: • Define the structure and components of a tariff. • Determine the most cost-effective carrier services considering various constraints.	1 hour
14: Configuring Tariff Strategy	After completing this lesson, learners will be able to: • Create tariff components in the access rating tool. • Evaluate the effectiveness of different tariff strategies in achieving transportation optimization. • Apply lane-specific tariff rates to real-world transportation scenarios. • Analyze delivery schedules and associated itineraries.	2 hours
15: Delivery Schedules	After completing this lesson, learners will be able to: • Describe delivery schedules and their significance in Transportation Modeler. • Create a detailed delivery schedule using access rating tool. • Differentiate between different types of delivery schedules. • Analyze the impact of delivery scheduling on freight movement across multiple transportation modes. • Modify existing delivery schedules and assess their impact on logistics efficiency. • Evaluate delivery schedule components.	2 hours

16: Strategies and Parameters	After completing this lesson, learners will be able to: • Identify the components and functions within a strategy file. • Identify the different global parameters. • Describe the functions of the parameter file. • Describe how the optimizer utilizes the optimizer plan hierarchy.	2 hours
17: Configuring Strategies and Parameters	After completing this lesson, learners will be able to: • Edit a strategy file using the strategy file editor. • Analyze the impact of changing global parameters within the parameter file. • Create a custom strategy file using the strategy file editor. • Incorporate functions such as plan stack and log functions in the strategy file. • Evaluate the effectiveness of different plan comparison functions. • Apply constraint functions to enforce constraints during optimization. • Examine the role of web rule functions. • Critique different strategies and recommend improvements based on objectives and constraints.	2 hours
18: Carrier Equipment Availability Constraints	After completing this lesson, learners will be able to: • List the three distinct levels at which carrier equipment availability can be modeled. • Describe how constraints interact with the tariff hierarchy. • Apply the optimization parameters to control distance and transit time behavior in modeling scenarios. • Analyze the impact of lane-level constraints on enforcing carrier equipment availability. • Calculate transit times considering traffic patterns. • Evaluate the effectiveness of penalties applied when constraints are violated. • Assess how penalties can affect the cost and feasibility of transportation plans.	2 hours

19: Continuous Move Modeling	After completing this lesson, learners will be able to: • Define continuous moves in the context of Transportation Modeler. • Explain how individual loads are linked. • Configure carrier and tariff settings effectively to facilitate continuous move modeling. • Utilize Rank parameter to prioritize trip consolidation by cost or distance savings. • Analyze the impact of different trip configurations on the efficiency and cost-effectiveness of continuous move models. • Assess strategies to minimize empty miles while maximizing asset utilization.	1.5 hours
20: Reporting Optimization Metrics	After completing this lesson, learners will be able to: • Define optimization metrics and list their primary purposes in Transportation Modeling. • Describe the process of configuring optimization metrics. • Explain the functions of different reports generated postoptimization. • Access and use the optimization metric detail table to view and analyze transport data metrics. • Apply the chart option to visualize optimization metrics for comparison between multiple transportation plans.	1 hour

Hands-on Exercises: This section contains hands-on exercises for practicing the tasks covered in the lessons.

5265: Transportation Modeler Level II

Course Objectives

After completing this course, learners will be able to:

- Describe Transportation Modeler's advanced functions and entities.
- Illustrate the advanced modeling techniques.
- Configure penalties in carrier equipment availability.
- Describe how domiciles and equipment types are modeled to reduce cost.
- Describe equipment type associations and model tractors and trailers.
- Describe and model dock scheduling.
- Configure performance-based ratings for optimizing load assignments.
- Apply dynamic shipment splitting techniques to improve modeling flexibility.
- Utilize containerization and axle balancing to manage capacity.

Audience

Transportation Modeler project team and IT members

Prerequisites

NA

Duration

3 days (in person or virtual)

Training Level

Advanced

Lesson Name	Learning Objectives	Duration
01: Introduction	After completing this lesson, learners will be able to: • Review the topics covered in the Level I course. • Describe Transportation Modeler's advanced functions and entities. • Describe advanced relationships required for Transportation Modeler.	1.5 hours
02: CEA Recap	After completing this lesson, learners will be able to: • Describe how penalties are used in modeling carrier equipment availability. • Configure carrier equipment availability. • Set up penalty structures. • Test constraint scenarios.	1 hour

03: Introduction to Domicile Modeling	After completing this lesson, learners will be able to: • Define domiciles. • Explain the significance of domicile modeling in Transportation Modeler.	1 hour
04: Domicile Modeling	After completing this lesson, learners will be able to: • Set up domicile constraints. • Describe rating requirements for modeling domiciles. • Identify the strategies used to reduce domicile penalty costs. • Describe how domicile vehicles are modeled.	2 hours
05: Introduction to Tractor and Trailer Modeling	After completing this lesson, learners will be able to: • Explain the role of trailer swapping and empty loads in Transportation Modeler. • Describe equipment type associations at domiciles. • Define tractors and trailers in Transportation Modeler.	1.5 hour
06: Tractor and Trailer Modeling	After completing this lesson, learners will be able to: • Describe how tractors and trailers are modeled in Transportation Modeler. • Configure multitrailer scenarios. • Add details to various tractor and trailer configuration tables.	1.5 hours
07: Introduction to Dock Scheduling	After completing this lesson, learners will be able to: • Describe dock scheduling. • Explain the role of dock scheduling in Transportation Modeler.	1 hour
08: Dock Scheduling	After completing this lesson, learners will be able to: • Explain how to model dock scheduling. • Set up and use dock scheduling. • View the results of dock scheduling.	2 hours
09: Performance Rating	After completing this lesson, learners will be able to: • Describe the functions of performance rating in Transportation Modeler. • Explain the role of lane preference, carrier performance, and lane performance in assigning loads.	1 hour

10: Modeling Performance Rating	After completing this lesson, learners will be able to: • Enable a performance-based rating system. • Evaluate carrier and lane performance in Transportation Modeler.	1.5 hours
11: Introduction to Dynamic Shipment Splitting	After completing this lesson, learners will be able to: • Describe dynamic shipment splitting in Transportation Modeler. • Explain the methods and rules of dynamic shipment splitting.	1.5 hours
12: Modeling Dynamic Shipment Splitting	After completing this lesson, learners will be able to: • Define the various shipment splitting strategies in Transportation Modeler. • Enable dynamic shipment splitting.	1 hour
13: Introduction to Containerization and Axle Balancing	After completing this lesson, learners will be able to: • Describe containerization, product packaging, and capacity degradation in Transportation Modeler. • Describe axle balancing and its role in Transportation Modeler.	2 hours
14: Containerization and Axle Balancing: Constraints and Parameters	After completing this lesson, learners will be able to: • Explain the containerization parameters that are used to control the load configurator verification. • Describe the containerization constraints impacting optimization in Transportation Modeler. • Describe the product loading factor and product loading detail percentage. • Calculate the product loading detail percentage and percentage utilization factor for the equipment used.	2 hours

Hands-on Exercises: This section contains hands-on exercises for practicing the tasks covered in the lessons.

