Mo.net
Training Directory

March 2023

Contents

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Welcome to the Mo.net Training Directory

Mo.net is our award-winning financial modelling platform used by clients around the world to perform mission critical modelling & calculations across the life insurance enterprise.

While a key differentiator of the Mo.net platform is the ease by which new users can quickly become productive, we are keen to ensure that all users make the most of the platform. To support our clients, we have developed a range of training courses covering the different parts of the platform and accommodating different levels of expertise & experience.

This guide details the range of courses currently on offer and also explains how to book the courses.

Course Types

We offer a range of courses to accommodate different training needs.

Scheduled Courses

Some of our most popular courses are scheduled to run at various times during the year. Please contact us for the latest schedule of courses.

On Demand Courses

All courses can be run at a mutually convenient date and location for up to 8 delegates. At least one months' notice is required to arrange an on demand course. Please contact us with your specific requirements.

Bespoke Courses

We can create courses tailored to specific client needs combining the content of several standard courses. These can be delivered at a mutually convenient date and location for up to 8 delegates. At least 6 weeks' notice is required to arrange a bespoke course. Please contact us with your specific requirements.

Course Delivery

All courses can be delivered from our UK-based training centre or on-site at a client office, Most courses can also be delivered online, although some adaptations to course

content and / or exercises may be required. Please contact us with your specific requirements.

Certificates of Attendance

We will issue certificates of attendance to all delegates who attend our courses, regardless of type or format. Attendance at our training courses may count towards CPD, but delegates are encouraged to check this before making a booking.

Choosing the Right Course

We appreciate that attendance at a training course requires a significant investment in time and money. The guidelines below are designed to help delegates and their companies decide which courses are best for them.

Why Attend One of Our Courses?

Delegates may consider attending one of our courses for a variety of reasons:

- Develop, refresh or update their Mo.net skills & knowledge
- Understand how to get the most out of Mo.net
- Have an opportunity to learn from our Mo.net experts
- Network with other Mo.net users and understand how they have implemented solutions using Mo.net
- Work towards Mo.net certification

Which is the Right Course for Me?

Selecting the most appropriate course will come down to the required learning outcomes and the current level of experience of the delegates. For each course we have detailed the course description, the outcomes of the course, and the pre-requisite knowledge / experience for the course.

If you are in any doubt about the suitability of any course, please contact the training team at Software Alliance.

How to Book?

To book a scheduled, on demand, or bespoke training course with us, please email a member of the training team at Software Alliance with your requirements.

training@softwarealliance.net

Booking Information

Please familiarise yourself with the following information before making a booking with us.

Who Can Attend?

Employees of any current licensee of Mo.net can attend any of our training courses. This includes individual members of the Mo.net Developer Network who hold a current MDN licence.

Making a Booking

To book any of our courses, please contact a member of the training team with the following information:

- Name of course or courses that you would like to book
- Date of the course (if scheduled), or preferred date (if on demand)
- Format of the course – in person or online
- Location for in person courses – our training centre, onsite at your office, or another location
- List of delegate names and levels of experience with Mo.net. (The list of delegates can be changed before the course starts)

Bookings are accepted on a first come, first served basis. In the event of a course being over-subscribed, we will operate a waiting list and these delegates will be given priority for the next available course date.

Bookings must be received within 4 weeks of the course date for scheduled courses & on demand courses, and 6 weeks of the course date for bespoke courses.

All bookings will be acknowledged within 48 hours; however, acknowledgement of the booking is not a guarantee that the course will take place.

Course Fees

The current list of course fees is available on our website or directly from the training team. Fees for bespoke courses will be confirmed after review of your course requirements.

What's Included in the Course Fee?

Each course fee includes a printed course handbook, any supplementary materials, plus all refreshments and lunch.

Course Timings

All courses typically follow the approximate timings below.

09:15 - 09:30	Registration
09:30 - 12:30	Course
12:30 - 13:30	Lunch
13:30 - 16:30	Course

Delegate Numbers

Based on our own experience, the ideal number of delegates is between 4 and 8. If the number of delegates booked on a scheduled course is less than 4 then we reserve the right to defer the course until enough delegates can attend.

Training Personnel

Each course will be supervised by one of our training consultants, all of whom have extensive experience of developing, running, and support Mo.net solutions in the real world. Some courses include a second trainer, where the syllabus requires specific skills & experience, such as those courses designed for IT personnel.

Cancellation Policy

We reserve the right to cancel or defer any course if the minimum number of delegates is not achieved. We will provide at least 2 weeks' notice of any course cancellation or deferment.

Technology Considerations

We recommend that delegates use their own laptops for all courses. This will allow delegates to review course materials and practise exercises after the course has concluded.

We can supply laptops for delegates if required. Please let the training team know if laptops are required at time of booking.

We can also supply additional temporary licences if required, for example if your existing licences are tethered to specific machines in the office.

Where courses require the use of 3rd party tools, we will provide access to these tools in advance of the course dates so that delegates can arrange for them to be installed on their laptops in advance. If these tools cannot be installed on corporate devices, we will be happy to provide laptops with the tools pre-installed.

Contact Information

To book any course or for any other information or questions, please contact a member of the training team:

training@softwarealliance.net

Mo.net Certification Programme

Mo.net Certification, achieved through the Software Alliance training and assessment programme, is an objective, vendor-approved measure of Mo.net competency. The certification has been designed for Mo.net professionals to evidence their skills & knowledge, and to demonstrate their capability to employers or clients alike.

Certification Approach

All delegates who attend a Software Alliance course are eligible to undertake a post-course assessment, which validates the level of understanding achieved. Each course contributes to one or more certification levels (see below).

Certification Levels

The different certification levels are as follows:

- **Mo.net Certified Solutions Associate**
  The candidate can demonstrate a thorough understanding of the Mo.net platform as a user, and undertake basic changes to model assumptions, data, and logic.
- **Mo.net Certified Solutions Developer**
  The candidate can demonstrate a good level of capability in developing Mo.net models from scratch and making extensive changes to existing models.
- **Mo.net Certified Solutions Expert**
  The most advanced level of certification for candidates who are confident in building complex modelling solutions, which utilise some of the more advanced features of the Mo.net platform.
- **Mo.net Certified Integration Engineer**
  The candidate can demonstrate the skills necessary to integrate Mo.net with other parts of the enterprise.

Certification Paths

The table below outlines the courses & assessments that need to be completed to obtain each of the Mo.net certifications.

Course	Associate	Developer	Expert	Integration
Introduction to Mo.net	X	X	X	X
Model Development with Mo.net	X	X	X	
Advanced Modelling with Mo.net		X	X	
Data Integration with Mo.net		X	X	X
Stochastic Modelling with Mo.net			X	
Asset Liability Modelling with Mo.net			X	

Course	Associate	Developer	Expert	Integration
Migrating Spreadsheet Models to Mo.net			X	
Integrating with the Mo.net Quotations Service				X
Introduction to the Operational Modelling Centre				X
Administering Mo.net Environments				

Introduction to Mo.net

This is our entry-level course for delegates with little or no experience of Mo.net.

Duration

2 days

Objectives

By the end of the course delegates will have created a new individual projection model from a template project. Delegates will also have set up test data, debugged the model, analysed model results, filtered and grouped results, and performed some basic profit testing.

Pre-requisites

Delegates must:

- Be comfortable with the basics of the Windows operating system including managing files & the concepts of drives & folders
- Be able to use Excel spreadsheets, including entering basic formulas into cells

Syllabus

Introduction

- Overview of the Mo.net Platform
- Design, philosophy, and architecture
- The modelling ecosystem

Installing Mo.net Model Development Studio

- System requirements
- Obtaining installation media
- Obtaining your Mo.net licence
- Installing Mo.net Model Development Studio
- Activating your Mo.net licence

Creating a New Mo.net Project from a Template

- Reviewing the available templates
- Creating a new project
- The model development workspace
- Projects, models, inputs, parameters, functions, tasks, and bases
- Updating properties
- Running the basic model
- Analysing results

Making Changes to the Basic Project Template

- Changing an input
- Changing an assumption
- Changing an assumption table
- Changing a function
- Interacting with results – dependencies & precedents

Projection Tasks

- Creating an individual projection task to run a model
- Connecting to an input dataset
- Running the task
- Reviewing task results
- Reviewing the run report

Grouping and Filtering

- Grouping results
- Results Tree
- Filtering data

Working with Bases

- Creating a basis
- Using a basis in a projection task
- Modifying a basis

Analysing Results

- Mo.net Excel Reporting
- PowerBI

Project Maintenance

- Creating a backup
- Restoring a backup
- Reviewing project changes

Project Comparison

- Comparing objects

Distributing Work

- Single vs multi-threaded
- Using the Mo.net Worker Service
- Using HPC

Project Documentation

- Using the Mo.net Documentation Service

Getting Help

- Application help
- Application manuals
- Template / project specific documentation
- Helpdesk

Model Development with Mo.net

This is the fundamental course for those delegates who have some experience of using Mo.net to run models, but now want to embark on building their first models using the platform.

Duration

2 days

Objectives

By the end of this course delegates will have developed a liability projection model from scratch.

Pre-requisites

Delegates must:

- Be comfortable with the basics of the Windows operating system including managing files & the concepts of drives & folders
- Be able to use Excel spreadsheets, including entering basic formulas into cells
- Have used Mo.net to run existing models

Syllabus

Introduction

- Overview of the Mo.net Platform
- Design, philosophy, and architecture
- Model Development Lifecycle (MDLC)
- Functional and non-functional requirements
- The modelling ecosystem
- Projects, models, inputs, parameters, functions, tasks, and bases

Creating a New Mo.net Project from Scratch

- Project requirements
- Creating a new model
- Creating, sorting, and ordering inputs
- Creating, sorting, and ordering parameters
- Creating a new table
- Defining table properties
- Setting a parameter using Table Lookup
- Creating functions
- Using intellisense & tooltips
- Code snippets
- Looking up a value from a table
- Referencing the table directly
- Using a table parameter
- Using multiple column lookups

Testing the Model

- Running the model

- Inspecting results
- Precedents and dependents
- Logging and log messages
- Dealing with runtime errors

Project Organisation & Management

- Naming conventions
- Project organisation - Folders / structure
- System variables & functions
- Order of calculation overview (Initialise / InitRecord / Execute)
- Copying and pasting models and model objects
- Viewing model objects alongside each other
- Backing-up and restoring the project
- Generating project documentation

Projection Tasks

- Adding an individual projection
- Projection properties
- Adding a group projection - Code templates
- Obtaining results for each record (t=periodIF and full results)
- Debugging approach

Best Practice Model Development

- Model design
- Coding standards
- Hints and tips
- Things to avoid

Getting Help

- Tutorials
- Sample projects
- Helpdesk

Advanced Modelling with Mo.net

This course is designed for delegates who already have some experience of developing Mo.net models and wish to extend their skills by learning some of the advanced modelling features of the Mo.net platform.

Duration

2 days

Objectives

By the end of this course delegates will have developed & tested a Mo.net liability model from scratch using may of the more advanced features of the platform.

Pre-requisites

Delegates must:

- Have at least 6 months experience developing and / or updating Mo.net models

Syllabus

Sub-Models and Dynamic Sub-Models

- Inheritance
- Creating and using a sub model
- Creating and using a dynamic sub-model
- Linking models together

Controlling Model Execution

- Using wildcards
- Using data connections for tables
- Setting up and using a run control table
- Performing multiple model runs (model.run)

Advanced Mo.net Functions

- Array functions
- Rebasing techniques
- Functions with more than one argument
- Forcing all values to be recalculated
- Bespoke logging

Performance Optimistion

- Performance optimisation and profiling
- Designing efficient and scalable models
- Dynamic projections
- Group projection settings

Using Mo.net Models with Other Applications

- External components
- References and 3rd party components
- Compiling models for Excel
- Calling Mo.net tasks from other systems e.g. Python / VB.NET / C#
- Debugging with Visual Studio

Data Integration with Mo.net

An introduction to the data conversion functionality of Mo.net. This course will be suitable for a Mo.net users or developers who want to carry out data conversions, data validation, or grouping of input data.

Duration

1 day

Objectives

By the end of this course delegates will be able to create a new data conversion task using Mo.net Model Development Studio and use this to confidently convert their own data into different formats, perform validation of input data and results, and perform grouping of data in order to generate model points.

Pre-requisites

Delegates must:

- Be comfortable with the basics of the Windows operating system including managing files & the concepts of drives & folders
- Have used Mo.net to run existing models

Syllabus

Introduction

- Overview of Mo.net data conversion functionality
- Differences between data conversion and projection tasks
- Data validation in Mo.net
- Data grouping in Mo.net

Creating a Data Conversion Model

- Creating a new model
- Specifying inputs
- Defining outputs
- Using parameters
- Testing the model

Creating a Basic Data Conversion Task

- Creating a new task
- Selecting the data conversion model
- Attaching input data
- Running the model
- Reviewing output

Extending the Data Conversion Model

- Handling field name differences
- Dealing with missing fields
- Converting data types
- Ordering columns
- Investigating errors

Grouping Data

- Defining grouping variables
- Generating grouped data

Data Validation

- Creating a data validation model task
- Handling validation errors
- Creating a data validation task
- Reporting validation errors

External Data Sources

- Creating a data connection
- Using input data from SQL Server
- Converting SQL Server data
- Validating SQL Server data
- Writing converted data to SQL Server
- Data connection management

Model Point Generation

- The concept of model points
- Using advanced grouping to generate model points
- Validating model points

More Advanced Concepts

- Using data conversion models in group projection tasks
- Running data conversions as an external task

Stochastic Modelling with Mo.net

This course is designed for users who are already experienced in developing deterministic liability models using Mo.net and wish to use more advanced features of Mo.net to develop a stochastic liability model.

Duration

1 day

Objectives

By the end of the course delegates will be able to design, develop and run a basic liability model to perform a simple stochastic modelling analysis.

Pre-requisites

Delegates must:

- Be confident in developing and running models in Mo.net Model Development Studio
- Have attended the Advanced Modelling with Mo.net course (or have equivalent knowledge)

Syllabus

Introduction

- Basic concepts of stochastic modelling
- From deterministic to stochastic models
- Scenario based modelling

Running Liability Models Under Different Scenarios

- Sourcing economic data
- Amending a deterministic model to use scenario-based data
- Reviewing results

Economic Models

- Economic scenario generators
- Random Walk Model
- Wilkie Model
- Timbuk1 Model
- The Smith Model (TSM)
- Excel-based scenario Generators

Running a Mo.net Model Stochastically

- Running liability products stochastically
- Setting up stochastic runs
- Running the model stochastically under various economic models
- Comparison and interpretation of stochastic results
- Implementing management decisions
- Dynamic feedback
- Pricing of guarantees
- Deflators

Practical Considerations for Stochastic Modelling

- Performance optimisation of stochastic models
- Model point generation
- Distributing stochastic models

Asset Liability Modelling with Mo.net

This course is designed for users who are already experienced in developing liability models using Mo.net and wish to build their first asset liability model.

Duration

1 day

Objectives

By the end of the course delegates will have built a simple asset model, simple liability model, and the interactions between the models to create a basic ALM.

Pre-requisites

Delegates must:

- Be confident in developing and running models in Mo.net Model Development Studio
- Have attended the Advanced Modelling with Mo.net course (or have equivalent knowledge)
- Have attended the Stochastic Modelling with Mo.net course (or have equivalent knowledge)

Syllabus

Introduction

- Overview of ALM models
- Asset modelling
- Monte Carlo simulations
- Liability modelling
- Business applications for ALM models

ALM Modelling with Mo.net

- How to structure an ALM model in Mo.net
- Modelling assets in Mo.net
- Asset types
- Spot rates, running yields and overall returns
- Using external liabilities
- Drawbacks

Stochastic Projections

- Scenarios and stochastic projections
- Stochastic parameters
- Investment strategies
- Modelling investment strategy
- Future purchase and sale of assets
- Analysing results

Using ALM for Business Applications

- ALM reporting
- Managing credit rates
- Proportional asset sales
- Changing investment strategy
- Changing asset mix

- Balance sheet and revenue account preparation

Practical Considerations

- Memory considerations
- Performance considerations
- Annual or monthly projections
- Distributed processing

Migrating Spreadsheet Models to Mo.net

This course is designed for users who are already experienced in developing & running models using Mo.net and now wish to convert existing spreadsheet-based models to Mo.net projects.

Duration

1 day

Objectives

By the end of the course delegates will have the necessary skills to convert a spreadsheet-based model to a Mo.net project.

Pre-requisites

Delegates must:

- Be confident in developing and running models in Mo.net Model Development Studio
- Have attended the Advanced Modelling with Mo.net course (or have equivalent knowledge)

Syllabus

Introduction

- Why migrate spreadsheet models to Mo.net
- Basic principles of model migration

Understanding the source model

- Understanding the source spreadsheet and existing business use case
- Identifying inputs, parameters, tables, calculations, and results
- Differences between Excel functions and Mo.net

Migrating the model

- Developing skeleton Mo.net project
- Migrating elements from source to Mo.net
- Migrating VBA
- Differences between VBA and VB.NET
- What not to migrate

Testing

- Important of testing - unit / incremental testing
- Regression testing the model
- Developing a test harness

Examples

- Examples of models that convert well to Mo.net

- Examples of models that don't convert well to Mo.net

Excel Model Adapter

- Using EMA Analyse to help understand the source model
- Documenting a source spreadsheet using EMA

Integrating with the Mo.net Quotations Service

This course is designed for users who are comfortable building Mo.net models and solutions and are now looking to deploy calculations & models "as-a-service" to be consumed by other enterprise applications.

Duration

1 day

Objectives

By the end of the course delegates will have amended an existing liability model to enable it to be published to the Mo.net Quotations Service. Delegates will have worked through the process of deploying and publishing a service package and looked at different ways of calling the Quotations Service. Finally, users will be able to audit requests to the Quotations Service and download a request for debugging.

Pre-requisites

Delegates must:

- Be confident in developing and running models in Mo.net Model Development Studio
- Have attended the Advanced Modelling with Mo.net course (or have equivalent knowledge)

Syllabus

Introduction

- Overview of the Mo.net Quotations Service
- Front office use case
- Back office use case
- Other use cases
- RESTful and WCF services

Designing and Developing Quotations Service Models

- Developing models for Mo.net Quotations Service use
- Considerations about input data and assumptions
- Quotations Service results

Adapting a Mo.net Project to Work with Quotations Service

- Understanding the basic project & model
- Adding a group projection task
- Building a service package for MQS
- Service package content

Introducing Enterprise Service Manager

- Overview of ESM
- Uploading a service package to MQS
- Publishing a service package

Calling the Quotations Service

- RESTful consumption
- WCF consumption
- Consuming a service package
- GUIDs, model versions and dates

Service Management and Monitoring

- Monitoring service usage
- Auditing MQS
- Updating an assumptions pack
- Using cached assumptions
- Updating a service package
- Debugging an MQS request in MDS

Advanced Features

- Using a load balancing service
- Using SSL certificates

Introduction to the Operational Modelling Centre

This course is designed for users of Mo.net who are new to the Operational Modelling Centre.

Duration

1 day

Objectives

By the end of the course delegates will be confident in preparing existing models for use with OMC, uploading service packages to OMC, viewing / amending assumptions, attaching datasets to a task, creating, and running a simple job, analysing results, and performing basic administration tasks.

Pre-requisites

Delegates must:

- Be confident in developing and running models in Mo.net Model Development Studio

Syllabus

Introduction

- Overview of OMC
- Typical OMC use case

Preparing a Mo.net Project for Use with OMC

- Pre-requisites for running a model / task in OMC
- Preparing a model for use with OMC
- Creating an OMC service package

Getting Started with OMC

- Logging into OMC
- Walkthrough of the OMC environment
- Uploading a service package into OMC
- Viewing tables
- Viewing a basis
- Overview of collections

Data Integration with OMC

- Uploading a data pack to OMC
- Using input / assumption data in a database
- Associating a data pack with a task

Running Jobs

- Creating a job
- Running a job
- Using worker pools
- Monitoring job execution

Processing Results

- Analysing results
- Downloading results
- Modifying a job
- Changing an assumption table
- Updating a basis

Reporting

- OMC Reporting
- System reports
- User reports

Administration Tasks

- OMC Platform administration
- Auditing activity
- Collection management
- Data management
- Job templates
- Other settings

Administering Mo.net Environments

The course is designed for members of the actuarial and / or IT community who are responsible for administering the Mo.net environment.

Duration

2 days

Objectives

By the end of this course delegates will be comfortable installing, configuring, and managing various components of the Mo.net platform.

Pre-requisites

Delegates must:

- Have a good understanding of the components of the Mo.net platform in use in their development / operational environments
- Be comfortable with the Windows operating system including services, permissions, and PowerShell

Syllabus

Platform Installation

- System requirements
- Obtaining installation media
- Standard installations
- Custom installations
- Unattended installations

Licences

- User licences
- Service context
- Machine licences
- Activations and deactivations
- Offline licence activation
- Licence callback
- Self-service licence management

Database integration

- Benefits of using databases
- On premise database
- Cloud-based databases
- Databases for inputs
- Databases for parameter sets
- Databases for results
- Mo.net Quotations Service database integration

Source control

- Benefits of source control
- Personal source control
- Collaborative source control
- Using Git
- Using Azure DevOps / TFS

Identity services

- Identity Service Manager
- Overview of the Identity Service schema

- Identify Service permissions for Mo.net components
- Configuring Mo.net Development Studio to work with Identity Services
- Auditing access
- Identity Services reporting
- Active directory integration

Worker Services

- Service accounts and permissions
- Licensing considerations
- Infrastructure considerations
- Firewall considerations
- Ports
- Configuration optimisation
- Azure based workers
- Hybrid worker environments

HPC

- Benefits of HPC
- On premise HPC packs
- Using Azure HPC
- Hybrid HPC environments

Further Information

For more information regarding the Mo.net Financial Modelling Platform and to discuss your specific training requirements, please contact us.

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