

Extended App Development Training for MindSphere Product Sheet



Building on the fundamentals, you will gain insights into advanced areas of development for MindSphere like back-end applications and background processes. You will become familiar with the DevOps workflow to be able to push an application to the MindAccess Operator Plan and to operate your application.

During the hands-on exercises, you will do everything from developing and deploying HTML and JavaScript front-end applications to visualizing your MindSphere data using the dashboard functionality. You will learn how to build a back-end application that uses Backing Services to enhance the functionality and how to run processes in the background.

Training Specifics	
Content	<ul style="list-style-type: none"> • Advanced backend application <ul style="list-style-type: none"> – Usage of Backing Services – JWT details / Token validation • Background processes <ul style="list-style-type: none"> – Application credentials / Token Management API – Tenant credentials • Local application development and remote debugging • Asset Management API advanced • Self-hosted applications • Operator workflow / MindSphere application lifecycle
Prerequisites	<ul style="list-style-type: none"> • First development experience with: <ul style="list-style-type: none"> – Node.js (JavaScript) – HTML – Angular • Laptop with stable connection to the internet (minimum of 10MBs upload/10MBs download) • Web browser (Chrome recommended) • Headset including microphone (recommended)
Training methods	<ul style="list-style-type: none"> • Interactive lectures • Hands-on exercises

Covid-19 provision	Siemens is working hard to meet delivery and performance dates, temporary delays in delivery and service performance cannot be ruled out as a result of the global outbreak of the novel coronavirus (2019-nCoV/SARS-CoV-2). Siemens retains the right to partial delivery/performance of services and shall be entitled to reasonable adjustments of delivery dates and schedules. Siemens shall also be entitled to an equitable adjustment for additional costs (if any) to complete delivery/performance.
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Instructor-led Training

Location	Location provided by Siemens.
Number of participants	Maximum of ten participants.
Duration	1x 8-hour session.
Included in price	Training is priced per person and includes training, training material, and lunch for non-Siemens (external) participants.
Out of scope	Participant's travel expenses and travel arrangements.
Availability	The schedule for upcoming trainings is provided online. Trainings are available on a first-come, first-serve basis.
Booking confirmation	Once a training is booked and availability is checked, a confirmation email with detailed information will be sent.

Virtual Instructor-led Training

Location	Virtual Instructor-led Training is delivered via web browser.
Number of participants	Maximum of ten participants.
Duration	2x 4-hour sessions.
Included in price	Training is priced per person and includes training and training material.
Availability	The schedule for upcoming trainings is provided online. Trainings are available on a first-come, first-serve basis.
Booking confirmation	Once a training is booked and availability is checked, a confirmation email with detailed information will be sent.

Packaged Virtual Instructor-led Training

Location	Virtual Instructor-led Training delivered via web browser.
Number of participants	Maximum of ten participants.
Duration	2x 4-hour sessions.
Included in price	Training is priced as a package for up to 10 participants and includes training and training material.
Availability	Training availability is based on demand and is subject to availability of trainer(s).
Booking confirmation	Training dates are confirmed by Siemens after order intake.

Onsite Training

Location	Location subject to agreement by Siemens at Siemens' sole discretion. Location, including specific address, must be agreed at least two weeks prior to training start date.
Number of participants	Maximum of ten participants.
Duration	1x 8-hour session.
Included in price	Training is priced as a package for up to 10 participants and includes training and training material.
Out of scope	Training delivered at a specific customer's site doesn't include: <ul style="list-style-type: none">• Travel time and expenses for trainer(s)• Organization of training room and catering• Shipping and usage of training racks
Availability	Training availability is based on demand and is subject to availability of trainer(s).
Booking confirmation	Training dates confirmed by Siemens after order intake.

Support

Online support	For questions and support regarding training programs, please contact your regional training team: https://training.plm.automation.siemens.com/courses/contacts.cfm .
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