

Training program: "Development on the bpm'online platform"

Target audience: This training program is intended for developers who are just starting their work with bpm'online platform and require basic knowledge on configuring custom solutions, as well as knowledge on the web service deployment and accomplishing of complicated tasks on the platform.

Training summary: Participants will receive basic knowledge on the bpm'online architecture, deployment and administration. Participants will also study bpm'online development environment deployment, integration with version control system and using file system for development. Finally, participants will learn how to set up bpm'online configurations, create new objects, lookups, pages, sections, details and program server and client logic. Business process development and typical customizations using JavaScript will be covered as well.

Duration: The training takes place over 2 days with a total of 8 hours per day.

Program

Time	Subject
Day one	
9:00	Introduction. Organizational issues.
9:15	Licensing the training participant users. Demo and commercial mode.
9:30	Basic administration for developers <ul style="list-style-type: none"> ▪ Introduction ▪ Adding users ▪ Types of user roles: organizational and functional ▪ User membership in roles, connections between roles ▪ Administration of objects by operations, records, columns ▪ Operations permissions ▪ Typical mistakes of access permission setup
10:45	Bpm'online 7.x architecture <ul style="list-style-type: none"> ▪ Bpm'online infrastructure: application server, DBMS, Redis session storage server, SVN ▪ Application server structure, WebAppLoader and WebApp ▪ Fault tolerance options ▪ Advantages of the cloud deployment option
11:10	Coffee break
11:30	Deploying local development environment <ul style="list-style-type: none"> ▪ System requirements ▪ Setup procedure ▪ Application folder structure ▪ Web.config setup. Common setup issues and how to resolve them ▪ Development in the file system
12:10	Logic levels of interaction with user <ul style="list-style-type: none"> ▪ Database ▪ Server core ▪ Client core ▪ Configuration
12:25	Bpm'online packages. Workspaces <ul style="list-style-type: none"> ▪ Packages and their purpose ▪ Object properties and structure ▪ Package primary components: schemas, external assemblies, data, SQL scripts ▪ Package dependencies. Recommendations on setting up dependencies
12:45	SVN integration setup <ul style="list-style-type: none"> ▪ Connecting a local folder ▪ Registration of SVN repositories ▪ SVN integration FAQ
13:00	Coffee break
13:20	Workshop: creating a new package and storing in SVN
13:50	Schemas, metadata, code generation <ul style="list-style-type: none"> ▪ General structure ▪ Schemas. Creating and editing different types of schemas ▪ Metadata ▪ Resources ▪ Core generation and compilation

Time	Subject
14:00	Lunch
15:00	Questions and answers. "Homework" assignment: creating users, roles and access permission setup. Creating a new package.
15:40	Bpm'online data model. Configuration objects <ul style="list-style-type: none"> Objects and their structure Object designer Object components Relationships between objects and database tables Workshop: creating a lookup object using the object designer
16:20	Data binding <ul style="list-style-type: none"> Introduction to data binding Data binding setup specifics Common data binding errors Workshop: binding a registered lookup and its contents
16:40	Coffee break
17:00	Handling object events
17:15	Object replacement mechanism Workshop: creating a replacing object
17:30	Questions and answers. "Homework" assignment: creating objects, using of replacing objects

Time	Subject
Day two	
9:00	Questions and answers
9:10	Reading data. Working with EntitySchemaQuery <ul style="list-style-type: none"> EntitySchemaQuery purpose and operation Root schema. Direct and reverse joins ESQ properties ESQ access permissions ESQ and caching Adding columns, joining schemas, filtering
9:50	Workshop: applying server ESQ in C#
9:10	Workshop: applying client ESQ in JavaScript
9:20	Alternative ways of accessing data (Select, Insert, Delete and Update classes, using of CustomQuery and StoredProcedure classes)
9:40	Questions and answers
10:00	Coffee break
10:20	Introduction to business process engine <ul style="list-style-type: none"> Processes and process schemas Process execution modes Creating a process using the designer Process elements that interact with users Process debugging
12:10	Introduction to the technologies used in the client <ul style="list-style-type: none"> AMD concept Modules Module definition Client module types Bpm'online client module specifics
12:30	MVVM template and its implementation in bpm'online <ul style="list-style-type: none"> MVVM operation principle Binding mechanism. Binding properties and events Module messages. Working with sandbox Message subscriptions and publishing Data exchange between the modules
12:50	Client schemas. Client schema designer <ul style="list-style-type: none"> Client schemas and their structure Client schema types Client schema designer
13:00	Coffee break
13:20	Typical configuration tasks

Time	Subject
	<ul style="list-style-type: none">▪ Adding new fields to pages▪ Adding actions and buttons to sections and pages Workshop: resolving common configuration issues
14:00	Lunch
15:00	Typical configuration tasks <ul style="list-style-type: none">▪ Implementation of calculated fields on pages▪ Validation of field values▪ Applying business rules▪ Filtering lookup field values Workshop: resolving common configuration issues
15:40	Coffee break
17:00	Transition of changes between environments. FAQ and common errors. "Homework" assignment. Questions and answers