# xuml-tool

Runtime 2020.7 xuml-tool 1.0.0 The xUML Runtime Tool **xuml-tool** is a tool that provides means to work with xUML repositories. You can

- unpack a repository to a chosen directory
- deploy a repository
- run a repository
- dump some info on the repository
- specify dedicated xUML service settings for deployment

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**Related Pages:**


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## System Requirements

This tool works on Linux and xuml-tool 1.4.0Windows operating systems, though not all commands are available on Windows.

| Command | Linux | Windows |
|---|---|---|
| `unpack` | ✓ | ✓ |
| `deploy` | ✓ | ✓ |
| `run` | ✓ | ✗ |
| `dump-info` (and all `show` commands) | ✓ | ✓ |
| `validate` | ✓ | ✗ |

On Linux, you need at least

- Linux kernel 4.19
- GLibc 2.28

## Common Options

All commands of the xuml-tool accept the following common options:

| Option | Description | Allowed Values | | Example |
|---|---|---|---|---|
| `-h`<br>`--help` | Show either the help of the xuml-tool (including a list of all available commands), or the help of the selected command. | | | `xuml-tool deploy --verbose . /hello_world.rep /opt /xuml_services` |
| `--help-all` | Show the complete help of the xuml-tool: all options, all commands. | | | |
| `-log`<br>`--log-level` | Set the log level for the used command. This option excludes the usage of `--mute` and `--verbose`. | off | No logging. | |
| | | critical | Only log critical errors. | |
| | | error | Log all errors. | |
| | | warning | Log errors and warnings. | |
| | | **info** | Log errors, warnings, and some general information (default). | |
| | | debug | Log errors, warnings, general and debug information. | |
| | | trace | Log a complete trace. | |

| | | | |
|---|---|---|---|
| `-m`<br>`--mute` | Disable all logging.<br>This option excludes the usage of `--log-level` and `--verbose`. | | |
| `-v`<br>`--verbose` | Enable debug logging.<br>This option excludes the usage of `--log-level` and `--mute`. | | |

# Commands

## unpack

xuml-tool 1.0.0Unpack a given repository file to the destination directory.
The repository will be unpacked to a sub-directory in the destination directory. The name of the sub-directory is derived from the repository file name.

| Parameters / Options | Mandatory | Description | Allowed Values | | Example |
|---|---|---|---|---|---|
| Path to a repository file. | ✓ | | a valid path | | `xuml-tool unpack ./hello_world.rep .` |
| Path to a parent directory to extract the repository to. | ✓ | | | | |
| `--create-directories` | | xuml-tool 1.5.0Create missing directories instead of aborting the command. | **`0`** | Do not create missing directories (default). | |
| | | | `1` | Create missing directories during the command. | |
| `--tmp-files-policy` | | xuml-tool 1.5.0Specify whether to keep or remove temporary files used during the execution of this command. | `leave` | Keep the temporary files. | |
| | | | **`remove`** | Remove the temporary files (default). | |
| `--service-directory-name` | | xuml-tool 1.6.0Specify the name of the deployment directory for the service. If not existent yet, the directory will be created automatically.<br>If this option is not specified, the repository will be unpacked to the default directory **bridge_<name of the service>**. | a valid directory name | | |

## deploy

xuml-tool 1.0.0Deploy a given repository to a given destination.
The repository will be unpacked to a sub-directory in the destination directory.The name of the sub-directory is derived from the composite service name.

> Repositories that have been deployed with this command satisfy xUML Runtime requirements and can be run by starting the xUML Runtime as described on xUML Runtime Command Line Options.
>
> They do not satisfy Bridge requirements, though, and cannot be managed with a Bridge. Do not use `deploy` to deploy a repository to a Bridge data directory.

| Parameters / Options | Mandatory | Description | Allowed Values | Example |
|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Path to a repository file. | ✓ | | a valid path | | `xuml-tool deploy ./hello_world.rep /opt/xuml_services` |
| Path to a parent directory to extract the repository to. | ✓ | | | | |
| `--server-hostname` | | Specify a value for setting `${server_hostname}`. Upon deploying to a Bridge, this setting is replaced automatically by the configured external host name. When deploying with xuml-tool, it must be set explicitly.<br>`${server_hostname}` can also be specified by environment variable **`XUMLT_SERVER_HOSTNAME`**.<br>Refer to xUML Service Settings below for an explanation of how to provide setting variables for deployment. | **`localhost`** | Default value if not specified. | |
| | | | a valid external host name | | |
| `--existing` | | Specify what to do if the repository being deployed is already existent in the target directory. | `remove` | Remove the repository from the target folder if already existent, and deploy the new repository. xuml-tool 2.0.1Does not delete the files specified with the `--keep` option. | |
| | | | `delete` | | |
| | | | `redeploy` | xuml-tool 2.0.1Replace the complete repository, all files. Can only be used if the name of the service has not changed. | |
| | | | `overwrite` | Overwrite files of an already existing repository. | |
| | | | **`abort`** | Abort deployment if the repository is already existent (default). | |

| | | | | |
|---|---|---|---|---|
| `--forced-ps-owner-id` | | xuml-tool 1.4.0Set this value as a fix persistent state ower ID for this service.<br><br>The owner ID can also be specified by environment variable **`XUMLT_FORCED_PS_OWNER_ID`** .<br>Refer to xUML Service Settings below for an explanation of how to provide setting variables for deployment. | a positive integer | |
| `--global-variables-file` | | xuml-tool 1.5.0Replace global variables in setting values with the values specified in the given file. The file is a JSON file containing key /value pairs like<br><br>`{`<br>`  "VAR_NAME": "variable value",`<br>`....`<br>`}`<br><br>You need to manually create this file. | a valid JSON file containing the variable names and values | |
| `--create-directories` | | xuml-tool 1.5.0Create missing directories instead of aborting the command. | **`0`** | Do not create missing directories (default). |
| | | | `1` | Create missing directories during the command. |
| `--tmp-files-policy` | | xuml-tool 1.5.0Specify whether to keep or remove temporary files used during the execution of this command. | `leave` | Keep the temporary files. |
| | | | **`remove`** | Remove the temporary files (default). |
| `--service-directory-name` | | xuml-tool 1.6.0Specify the name of the deployment directory for the service. If not existent yet, the directory will be created automatically.<br>If this option is not specified, the repository will be deployed to the default directory **bridge_<name of the service>**. | a valid directory name | |

| | | | | |
|---|---|---|---|---|
| `--keep` | | xuml-tool 1.6.0Prevent certain files from being overwritten by the deployment.<br><br>xuml-tool 2.0.1This option takes a file path relative to the instance home. It can be given multiple times, thus protecting multiple files.<br><br>ⓘ This option cannot be used together with `--existing abort`.<br><br>If the protected file path already exists, it will not be overwritten. If it does not exist, it will be copied from the source. | a valid path | `xuml-tool deploy ./hello_world.rep /opt/xuml_services --existing overwrite --keep /opt/xuml_services/hello_world/repository/resources/hello.db` |

Refer to xUML Service Settings below for an explanation of how to provide setting variables for deployment.

## run

xuml-tool 1.0.0Deploy and run a given repository.
This command uses the `deploy` command described above in combination with Runtime command **bridgeserver** (see xUML Runtime Command Line Options).

| Parameters / Options | Mandatory | Description | Allowed Values | Example |
|---|---|---|---|---|
| Path to a repository file or to a deployed repository. | ✓ | • For repository files: Provide the path to the repository file to be deployed and started. The deploy target directory is derived from the configuration file specified with `--server-config`.<br>• For deployed repositories: Provide the path to the service directory of the service to be started. Usually this will be a directory name starting with **bridge_...**. | a valid path | `xuml-tool run ./hello_world.rep --server-config config.json --server-hostname scheer-acme.com` |
| `--server-config` | ✓ | Provide the path to an an xUML Runtime configuration file containing Runtime command line options. The contents of such a file are described on xUML Runtime Command Line Options.<br><br>This file must at least contain a minimal configuration consisting of<br><br>• the path to a license file ( `license`)<br>• the path to the bridgeserver binary directory (`dirs.binary`)<br>• the path to the data directory (equivalent of the Bridge data directory) (`dirs.data`) | a valid path to a configuration file | |
| `--server-hostname` | | Specify a value for setting `${server_hostname}`. Upon deploying to a Bridge, this setting is replaced automatically by the configured external host name. When deploying with | **localhost** | Default value if not specified. |

| | | | | | |
|---|---|---|---|---|---|
| | | xuml-tool, it must be set explicitly.<br><br>`${server_hostname}` can also be specified by environment variable **`XUMLT_SERVER_HOSTNAME`**.<br>Refer to xUML Service Settings below for an explanation of how to provide setting variables for deployment. | a valid external host name | | |
| `--existing` | | Specify what to do if the repository being deployed is already existent in the target directory. | `remove`<br>`delete` | Remove the repository from the target folder if already existent, and deploy the new repository. | |
| | | | `overwrite` | Overwrite files of an already existing repository. | |
| | | | **`abort`** | Abort deployment if the repository is already existent (default). | |
| `--keep` | | xuml-tool 1.6.0Prevent certain files from being overwritten by the deployment.<br><br>xuml-tool 2.0.1This option takes a file path relative to the instance home. It can be given multiple times, thus protecting multiple files.<br><br>This option cannot be used together with `--existing abort`.<br><br>If the protected file path already exists, it will not be overwritten. If it does not exist, it will be copied from the source. | | | `xuml-tool run ./hello_world.rep /opt/xuml_services --existing overwrite --keep /opt/xuml_services/hello_world/repository/resources/hello.db` |
| `--create-directories` | | xuml-tool 1.5.0Create missing directories instead of aborting the command. | **`0`** | Do not create missing directories (default). | `xuml-tool run ./hello_world.rep --server-config config.json --server-hostname scheer-acme.com` |
| | | | `1` | Create missing directories during the command. | |
| `--controller-only` | | xuml-tool 2.0.1Start only the controler service of the specified service instance. | | | |

| | | | | | |
|---|---|---|---|---|---|
| `--forced-ps-owner-id` | | xuml-tool 1.4.0Set this value as a fix persistent state ower ID for this service.<br><br>The owner ID can also be specified by environment variable **`XUMLT_FORCED_PS_OWNER_ID`** .<br>Refer to xUML Service Settings below for an explanation of how to provide setting variables for deployment. | a positive integer | | |
| `--global-variables-file` | | xuml-tool 1.5.0Replace global variables in setting values with the values specified in the given file. The file is a JSON file containing key /value pairs like<br><br>`{`<br>`  "VAR_NAME": "variable value",`<br>`....`<br>`}`<br><br>You need to manually create this file. | a valid JSON file containing the variable names and values | | |
| `--service-directory-name` | | xuml-tool 1.6.0Specify the name of the directory the service has been deployed to. This option needs to be specified if the service has not been deployed to the default directory **bridge_<name of the service>** (see option `--service-directory-name` for deploy. | a directory containing a deployed service | | |
| `--tmp-files-policy` | | xuml-tool 1.5.0Specify whether to keep or remove temporary files used during the execution of this command. | `leave` | Keep the temporary files. | |
| | | | **`remove`** | Remove the temporary files (default). | |

## dump-info

xuml-tool 1.3.0Display all information on a repository. This command prints the information returned by

- `show-addons`
- `show-modules`
- `show-notes`
- `show-services`
- `show-settings`
- `show-ui`

in one command.

| Parameters / Options | Mandatory | Description | Allowed Values | Example |
|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Path to a repository file or to a deployed repository. | ✅ | • For repository files: Provide the path to the repository file to be analyzed.<br>• For deployed repositories: Provide the path to the service directory of the service to analyzed. Usually this will be a directory name starting with **bridge_...**. | a valid path | | `xuml-tool dump-info ./hello_world.rep --format json-pretty --include-passwords=0` |
| `--format` | | Specify in which format the information should be displayed. | human-readable | Display the results in a human-readable way. This format is not meant for any kind of automatic parsing. It may change anytime in the future. | |
| | | | **json** | Display the results in compressed JSON (default). | |
| | | | json-pretty | Display the results in pretty JSON. | |
| `--include-passwords=1` | | Specify if passwords should be printed in clear text. | `0` | Hide passwords. | |
| | | | **`1`** | Display passwords (default). | |

## show-addons

xuml-tool 1.5.0Display the add-ons used by the repository.

| Parameters / Options | Mandatory | Description | Allowed Values | | Example |
|---|---|---|---|---|---|
| Path to a repository file or to a deployed repository. | ✅ | • For repository files: Provide the path to the repository file to be analyzed.<br>• For deployed repositories: Provide the path to the service directory of the service to analyzed. Usually this will be a directory name starting with **bridge_...**. | a valid path | | `xuml-tool show-addons ./hello_world.rep --format json-pretty` |
| `--format` | | Specify in which format the information should be displayed. | **`human-readable`** | Display the results in a human-readable way (default). This format is not meant for any kind of automatic parsing. It may change anytime in the future. | |
| | | | `json` | Display the results in compressed JSON. | |

| | | | | | |
|---|---|---|---|---|---|
| | | | `json-pretty` | Display the results in pretty JSON. | |

### Output

```
{
  "addons": [
    "Flows",
    "Functions",
    "XML_Function",
    "SOAP_AddOn",
    "REST_AddOn",
    "URL_AddOn",
    "JWT_AddOn",
    "Memory_AddOn",
    "Filesystem_AddOn",
    "LOG_AddOn",
    "JSON_AddOn",
    "Startup_AddOn",
    "PState_AddOn",
    "MongoDB_AddOn"
  ]
}
```

## show-modules

xuml-tool 1.3.0Display information on the modules inside the repository.

| Parameters / Options | Mandatory | Description | Allowed Values | | Example |
|---|---|---|---|---|---|
| Path to a repository file or to a deployed repository. | ✓ | • For repository files: Provide the path to the repository file to be analyzed.<br>• For deployed repositories: Provide the path to the service directory of the service to analyzed. Usually this will be a directory name starting with **bridge_...**. | a valid path | | `xuml-tool show-modules ./hello_world.rep --format json-pretty` |
| `--format` | | Specify in which format the information should be displayed. | **`human-readable`** | Display the results in a human-readable way (default). This format is not meant for any kind of automatic parsing. It may change anytime in the future. | |
| | | | `json` | Display the results in compressed JSON. | |
| | | | `json-pretty` | Display the results in pretty JSON. | |

### Output

```
{
  "modules": [
    {
      "compilationDate": "2021-09-03T11:00:12+02:00",
      "compilerVersion": "7.17.0",
      "name": "Idea_Management",
      "source": "Idea_Management.xml",
      "type": "composite",
      "version": "1.0.0"
    }
  ]
}
```

| Output | | Description | Values / Example | |
|---|---|---|---|---|
| `modules` | | Array containing model details within this repository as an array element each. | | |
| | `compilationDate` | Compilation timestamp. | `"2021-10-04T09:37:05+02:00"` | |
| | `compilerVersion` | Version of the xUML Compiler used for compilation. | `"7.18.0-rc-9d5770a"` | |
| | `name` | Name of the module. | `"REST_AccessSupportManagerExample"` | |
| | `source` | Name of the module source file. | `"accessSupportManager.xml"` | |
| | `type` | Module type. | `composite` | Module is a service composite. |
| | | | `library` | Module is a library. |
| | `version` | Module version. | `"7.0.0"` | |

## show-notes

xuml-tool 1.3.0Display the documentation and model notes from a repository.

| Parameters / Options | Mandatory | Description | Allowed Values | | Example |
|---|---|---|---|---|---|
| Path to a repository file or to a deployed repository. | ✅ | • For repository files: Provide the path to the repository file to be analyzed.<br>• For deployed repositories: Provide the path to the service directory of the service to analyzed. Usually this will be a directory name starting with **bridge_...**. | a valid path | | `xuml-tool show-notes ./hello_world.rep --format json-pretty` |
| `--format` | | Specify in which format the information should be displayed. | **`human-readable`** | Display the results in a human-readable way (default). This format is not meant for any kind of automatic parsing. It may change anytime in the future. | |
| | | | `json` | Display the results in compressed JSON. | |

| | | | | | |
|---|---|---|---|---|---|
| | | | `json-pretty` | Display the results in pretty JSON. | |

### Output

```
{
  "notes": [
    {
      "doc": "<html>\n<head>\n</head>\n<body>...</body>\n</html>",
      "name": "xuml_base_1689229053.html"
    }
  ]
}
}
```

| Output | | Description | Values / Example | |
|---|---|---|---|---|
| `notes` | | Array containing the service notes within this repository as an array element each. | | |
| | `doc` | Service documentation text. | `"<html>\n  <head>\n\t\t<style>\n\t\t\tp {padding:0px; margin:0px;}[...]` | |
| | `isIndex` | Origin of the documentation. | `true` | Model notes from main service. |
| | | | `false` | Model notes from library or module. |
| | `name` | File name of the documentation in the repository. | `"accessSupportManager_1031998347.html"` | |

## show-services

xuml-tool 1.3.0Display all information on services contained in a repository.

| Parameters / Options | Mandatory | Description | Allowed Values | | Example |
|---|---|---|---|---|---|
| Path to a repository file or to a deployed repository. | ✓ | • For repository files: Provide the path to the repository file to be analyzed.<br>• For deployed repositories: Provide the path to the service directory of the service to analyzed. Usually this will be a directory name starting with **bridge_...**. | a valid path | | `xuml-tool show-services ./hello_world.rep --format json-pretty` |
| `--format` | | Specify in which format the information should be displayed. | **`human-readable`** | Display the results in a human-readable way (default). This format is not meant for any kind of automatic parsing. It may change anytime in the future. | |
| | | | `json` | Display the results in compressed JSON. | |
| | | | `json-pretty` | Display the results in pretty JSON. | |

## Output


```
{
  "services": [
    {
      "endpoints": [
        {
          "descriptor": "/e2e.rest.descriptors/xUMLControllerService.xUML
Runtime API.yaml",
          "name": "xUML Runtime API",
          "path": "/api",
          "version": "1.2.0"
        }
      ],
      "name": "xUMLControllerService",
      "port": 21113,
      "type": "control"
    },
    {
      "endpoints": [
        {
          "descriptor": "/e2e.rest.descriptors/RESTService.
ConfigurationRest.yaml",
          "name": "ConfigurationRest",
          "path": "/rest/configuration",
          "version": "0.1.2"
        },
        {
          "descriptor": "/e2e.rest.descriptors/RESTService.IdeaProcessRest.
yaml",
          "name": "IdeaProcessRest",
          "path": "/rest/process/IdeaProcess",
          "version": "0.1.2"
        }
      ],
      "name": "RESTService",
      "port": 11113,
      "type": "rest"
    },
    {
      "endpoints": [
        {
          "name": "ConfigurationRest",
          "path": "/rest/configuration"
        },
        {
          "name": "IdeaProcessRest",
          "path": "/rest/process/IdeaProcess"
        }
      ],
      "name": "RESTService",
      "port": 51113,
      "type": "shadow",
      "wsdl": "/Idea_Management?wsdl"
    }
  ]
}
```


| Output | Description | Values / Example |
|---|---|---|
| `services` | Array containing the service definitions within this repository as an array element each. | |
| `endpoints` | Array of service endpoints (HTTP based services). | |
| `descriptor` | Descriptor of the service (available for REST services only). | `"/e2e.rest.descriptors /xUMLControllerService.xUML Runtime API. yaml"` |

| | | | |
|---|---|---|---|
| `name` | Name of the service endpoint. | `"xUML Runtime API"` | |
| `path` | Path of the service endpoint. | `"/api"` | |
| `version` | Version of the service endpoint (available for REST services only). | `"1.2.0"` | |
| `name` | Name of the service as displayed in the Bridge UI. | `"xUMLControllerService"` | |
| `port` | Service port. | `29035` | |
| `type` | Service type. | unknown | Other service type than listed below. Service types that cannot be recognized by the xuml-tool will be listed as unknown. |
| | | control | xUML Controller service. |
| | | event_observer | Event observer service. |
| | | http | HTTP service. |
| | | java | Java service. |
| | | jms | JMS listener service . |
| | | jvm | JVM service for Java adapter. |
| | | rest | REST service. |
| | | sap | SAP service. |
| | | scheduler | Scheduler service. |
| | | shadow | SOAP shadow service for testing purposes. |
| | | soap | SOAP service. |
| | | timer | Timer service. |
| | | xslt | XSLT service for XSLT adapter. |
| `wsdl` | Relative link to the WSDL file (SOAP services only). | `/HelloWorldService?wsdl` | |

## show-settings

xuml-tool 1.3.0Display all information on the settings of a repository.

| Parameters / Options | Mandatory | Description | Allowed Values | Example |
|---|---|---|---|---|
| > Path to a repository file or to a deployed repository. | ✓ | • For repository files: Provide the path to the repository file to be analyzed.<br>• For deployed repositories: Provide the path to the service directory of the service to analyzed. Usually this will be a directory name starting with **bridge_...**. | a valid path | `xuml-tool show-seetings ./hello_world.rep --format json-pretty --include-passwords=1` |

| | | | | | |
|---|---|---|---|---|---|
| `--format` | | Specify in which format the information should be displayed. | **`human-readable`** | Display the results in a human-readable way (default). This format is not meant for any kind of automatic parsing. It may change anytime in the future. | |
| | | | `json` | Display the results in compressed JSON. | |
| | | | `json-pretty` | Display the results in pretty JSON. | |
| `--include-passwords=0` | | Specify if passwords should be printed in clear text. | **`0`** | Hide passwords (default). | |
| | | | `1` | Display passwords. | |

## Output


```
{
  "settings": [
    {
      "aliases": [
        "global_Idea_ManagementRoles::acme_manager",
        "G_IDEA_MANAGEMENTROLES_ACME_MANAGER"
      ],
      "category": "Global Settings",
      "defaultValue": "ceb466b0-4bd4-11e9-88ed-21f8a9cbbef8",
      "label": {
        "_": "Idea_ManagementRoles::acme_manager: "
      },
      "name": "G_IDEA_MANAGEMENTROLES_ACME_MANAGER",
      "schema": {
        "type": "string"
      },
      "section": "Settings / Deployment Macros"
    },
    {
      "aliases": [
        "global_IdeaProcess::holdTime",
        "G_IDEAPROCESS_HOLDTIME"
      ],
      "category": "Global Settings",
      "defaultValue": "PT60S",
      "label": {
        "_": "IdeaProcess::holdTime: "
      },
      "name": "G_IDEAPROCESS_HOLDTIME",
      "schema": {
        "type": "string"
      },
      "section": "Settings / Deployment Macros"
    },
    {
      "aliases": [
        "global_IdeaProcess::autoRetry",
        "G_IDEAPROCESS_AUTORETRY"
      ],
      "category": "Global Settings",
      "defaultValue": "false",
```

```
      "label": {
        "_": "IdeaProcess::autoRetry: "
      },
      "name": "G_IDEAPROCESS_AUTORETRY",
      "schema": {
        "type": "string"
      },
      "section": "Settings / Deployment Macros"
    },
    {
      "aliases": [
        "global_Idea_ManagementRoles::acme_employee",
        "G_IDEA_MANAGEMENTROLES_ACME_EMPLOYEE"
      ],
      "category": "Global Settings",
      "defaultValue": "4fda0960-18b4-11e9-a713-db1c180eef20",
      "label": {
        "_": "Idea_ManagementRoles::acme_employee: "
      },
      "name": "G_IDEA_MANAGEMENTROLES_ACME_EMPLOYEE",
      "schema": {
        "type": "string"
      },
      "section": "Settings / Deployment Macros"
    },
    {
      "aliases": [
        "addOn_RestTestToolCacheControl",
        "AO_RESTTESTTOOLCACHECONTROL"
      ],
      "category": "Add-Ons",
      "defaultValue": "max-age=2592000, public",
      "label": {
        "_": "Test Tool: Cache Control: value: "
      },
      "name": "AO_RESTTESTTOOLCACHECONTROL",
      "schema": {
        "type": "string"
      },
      "section": "REST HTTP Server"
    },
    {
      "aliases": [

"addOn_Services_Service_RESTService_JSONComposerOptions_writeTypeDiscrimina
tor",
        "AO_SRV_RESTSERVICE_JSONCOMPOSEROPTIONS_WRITETYPEDISCRIMINATOR"
      ],
      "category": "Add-Ons",
      "defaultValue": true,
      "label": {
        "_": "RESTService: JSONComposerOptions: writeTypeDiscriminator"
      },
      "name":
"AO_SRV_RESTSERVICE_JSONCOMPOSEROPTIONS_WRITETYPEDISCRIMINATOR",
      "schema": {
        "type": "boolean"
      },
      "section": "REST Service Base"
    },
    {
      "aliases": [

"addOn_Services_Service_xUMLControllerService_JSONComposerOptions_writeType
Discriminator",
        "CTRL_JSONCOMPOSEROPTIONS_WRITETYPEDISCRIMINATOR"
      ],
      "category": "Add-Ons",
      "defaultValue": true,
      "label": {
        "_": "xUMLControllerService: JSONComposerOptions:
```

```
writeTypeDiscriminator"
      },
      "name": "CTRL_JSONCOMPOSEROPTIONS_WRITETYPEDISCRIMINATOR",
      "schema": {
        "type": "boolean"
      },
      "section": "REST Service Base"
    },
    {
      "aliases": [

"addOn_Services_Service_xUMLControllerService_JSONComposerOptions_compact",
        "CTRL_JSONCOMPOSEROPTIONS_COMPACT"
      ],
      "category": "Add-Ons",
      "defaultValue": true,
      "label": {
        "_": "xUMLControllerService: JSONComposerOptions: compact"
      },
      "name": "CTRL_JSONCOMPOSEROPTIONS_COMPACT",
      "schema": {
        "type": "boolean"
      },
      "section": "REST Service Base"
    },
    {
      "aliases": [
        "addOn_RESTService_Component_View.Composites.Idea_Management.
RESTService_Enabled",
        "AO_RESTSERVICE_IDEA_MANAGEMENT_RESTSERVICE_ENABLED"
      ],
      "category": "Add-Ons",
      "defaultValue": true,
      "label": {
        "_": "RESTService: enabled: "
      },
      "name": "AO_RESTSERVICE_IDEA_MANAGEMENT_RESTSERVICE_ENABLED",
      "schema": {
        "type": "boolean"
      },
      "section": "REST Service Base"
    },
    {
      "aliases": [
        "addOn_RestDescriptorCacheControl",
        "AO_RESTDESCRIPTORCACHECONTROL"
      ],
      "category": "Add-Ons",
      "defaultValue": "no-cache",
      "label": {
        "_": "Descriptor: Cache Control: value: "
      },
      "name": "AO_RESTDESCRIPTORCACHECONTROL",
      "schema": {
        "type": "string"
      },
      "section": "REST HTTP Server"
    },
    {
      "aliases": [
        "addOn_Services_Service_xUMLControllerService_ResolveHostnames",
        "CTRL_RESOLVEHOSTNAMES"
      ],
      "category": "Add-Ons",
      "defaultValue": true,
      "label": {
        "_": "xUMLControllerService: ResolveHostnames: "
      },
      "name": "CTRL_RESOLVEHOSTNAMES",
      "schema": {
        "type": "boolean"
```

```
      },
      "section": "REST Service Base"
    },
    {
      "aliases": [
        "addOn_Services_Service_xUMLControllerService_Port",
        "CTRL_PORT"
      ],
      "category": "Add-Ons",
      "defaultValue": 21113,
      "label": {
        "_": "xUMLControllerService: Port: "
      },
      "name": "CTRL_PORT",
      "schema": {
        "type": "integer"
      },
      "section": "REST Service Base"
    },
    {
      "aliases": [
        "addOn_StateDB_UnicodeMode",
        "AO_STATEDB_UNICODEMODE"
      ],
      "category": "Add-Ons",
      "defaultValue": "Platform default",
      "label": {
        "_": "StateDB: Unicode Mode (Platform default | Unicode | non-
Unicode): "
      },
      "name": "AO_STATEDB_UNICODEMODE",
      "schema": {
        "type": "string"
      },
      "section": "SQL Adapter Connection"
    },
    {
      "aliases": [
        "addOn_SQLAuthorization_StateDB_DBPassword",
        "AO_STATEDB_PWD"
      ],
      "category": "Add-Ons",
      "defaultValue": "***",
      "label": {
        "_": "StateDB: DBPassword: "
      },
      "name": "AO_STATEDB_PWD",
      "schema": {
        "type": "password"
      },
      "section": "SQL Adapter Authorization"
    },
    {
      "aliases": [
        "addOn_SEI_HTTP_Service_MaximumConnections",
        "AO_SOAP_MAXIMUMCONNECTIONS"
      ],
      "category": "Add-Ons",
      "defaultValue": 50,
      "label": {
        "_": "MaximumConnections: "
      },
      "name": "AO_SOAP_MAXIMUMCONNECTIONS",
      "schema": {
        "type": "integer"
      },
      "section": "SOAP HTTP Server"
    },
    {
      "aliases": [
        "addOn_SOAP_AllowTracing",
```

```
        "AO_SOAP_ALLOWTRACING"
      ],
      "category": "Add-Ons",
      "defaultValue": true,
      "label": {
        "_": "Allow Tracing (true/false): "
      },
      "name": "AO_SOAP_ALLOWTRACING",
      "schema": {
        "type": "boolean"
      },
      "section": "SOAP HTTP Server"
    },
    {
      "aliases": [
        "ALIAS_Persistent State_Database",
        "AL_PS_DATABASE"
      ],
      "category": "Add-Ons",
      "defaultValue": ":local:",
      "label": {
        "_": "Persistent State: Database: "
      },
      "name": "AL_PS_DATABASE",
      "schema": {
        "type": "string"
      },
      "section": "Persistent State"
    },
    {
      "aliases": [
        "addOn_core.dump.not-catched-errors_core.dump.catched-errors_core.
dump.catched-errors.code",
        "AO_DUMP_CAUGHT_ERRORS_CODE"
      ],
      "category": "Add-Ons",
      "defaultValue": "*",
      "label": {
        "_": "Caught Error Code (MY_CODE|*): "
      },
      "name": "AO_DUMP_CAUGHT_ERRORS_CODE",
      "schema": {
        "type": "string"
      },
      "section": "Dump Configuration"
    },
    {
      "aliases": [
        "addOn_StateDB_DBType",
        "AO_STATEDB_DBTYPE"
      ],
      "category": "Add-Ons",
      "defaultValue": "MySQL",
      "label": {
        "_": "StateDB: DB Type: "
      },
      "name": "AO_STATEDB_DBTYPE",
      "schema": {
        "type": "string"
      },
      "section": "SQL Adapter Connection"
    },
    {
      "aliases": [
        "ALIAS_Persistent State_Owner",
        "AL_PS_OWNER"
      ],
      "category": "Add-Ons",
      "defaultValue": "Idea_Management",
      "label": {
        "_": "Persistent State: Owner: "
```

```
    },
    "name": "AL_PS_OWNER",
    "schema": {
      "type": "string"
    },
    "section": "Persistent State"
  },
  {
    "aliases": [
      "addOn_Services_Service_RESTService_Port",
      "AO_SRV_RESTSERVICE_PORT"
    ],
    "category": "Add-Ons",
    "defaultValue": 11113,
    "label": {
      "_": "RESTService: Port: "
    },
    "name": "AO_SRV_RESTSERVICE_PORT",
    "schema": {
      "type": "integer"
    },
    "section": "REST Service Base"
  },
  {
    "aliases": [
      "global_IdeaProcess::autoRetryTime",
      "G_IDEAPROCESS_AUTORETRYTIME"
    ],
    "category": "Global Settings",
    "defaultValue": "PT60S",
    "label": {
      "_": "IdeaProcess::autoRetryTime: "
    },
    "name": "G_IDEAPROCESS_AUTORETRYTIME",
    "schema": {
      "type": "string"
    },
    "section": "Settings / Deployment Macros"
  },
  {
    "aliases": [
      "ALIAS_Persistent State_WorkerLimit",
      "AL_PS_WORKERLIMIT"
    ],
    "category": "Add-Ons",
    "defaultValue": "2",
    "label": {
      "_": "Persistent State: WorkerLimit: "
    },
    "name": "AL_PS_WORKERLIMIT",
    "schema": {
      "type": "string"
    },
    "section": "Persistent State"
  },
  {
    "aliases": [
      "addOn_StateDB_MaxConnectionReuse",
      "AO_STATEDB_MAXCONNECTIONREUSE"
    ],
    "category": "Add-Ons",
    "defaultValue": "1000",
    "label": {
      "_": "StateDB: Max Connection Reuse: "
    },
    "name": "AO_STATEDB_MAXCONNECTIONREUSE",
    "schema": {
      "type": "string"
    },
    "section": "SQL Adapter Connection"
  },
```

```
{
  "aliases": [
    "addOn_Services_Service_xUMLControllerService_MaximumConnections",
    "CTRL_MAXIMUMCONNECTIONS"
  ],
  "category": "Add-Ons",
  "defaultValue": 50,
  "label": {
    "_": "xUMLControllerService: MaximumConnections: "
  },
  "name": "CTRL_MAXIMUMCONNECTIONS",
  "schema": {
    "type": "integer"
  },
  "section": "REST Service Base"
},
{
  "aliases": [
    "addOn_StateDB_ConnectionPooling",
    "AO_STATEDB_CONNECTIONPOOLING"
  ],
  "category": "Add-Ons",
  "defaultValue": "true",
  "label": {
    "_": "StateDB: Connection Pooling (true | false): "
  },
  "name": "AO_STATEDB_CONNECTIONPOOLING",
  "schema": {
    "type": "string"
  },
  "section": "SQL Adapter Connection"
},
{
  "aliases": [
    "addOn_SQLAuthorization_StateDB_DBUser",
    "AO_STATEDB_USER"
  ],
  "category": "Add-Ons",
  "defaultValue": "-",
  "label": {
    "_": "StateDB: DBUser: "
  },
  "name": "AO_STATEDB_USER",
  "schema": {
    "type": "string"
  },
  "section": "SQL Adapter Authorization"
},
{
  "aliases": [
    "addOn_StateDB_MaxConnectionAge",
    "AO_STATEDB_MAXCONNECTIONAGE"
  ],
  "category": "Add-Ons",
  "defaultValue": "15",
  "label": {
    "_": "StateDB: Max Connection Age (minutes): "
  },
  "name": "AO_STATEDB_MAXCONNECTIONAGE",
  "schema": {
    "type": "string"
  },
  "section": "SQL Adapter Connection"
},
{
  "aliases": [
    "addOn_Settings_ServerWorkerThreads",
    "AO_SETTINGS_SERVERWORKERTHREADS"
  ],
  "category": "Add-Ons",
  "defaultValue": "1",
```

```
    "label": {
      "_": "ServerWorkerThreads: "
    },
    "name": "AO_SETTINGS_SERVERWORKERTHREADS",
    "schema": {
      "type": "string"
    },
    "section": "SAP Global"
  },
  {
    "aliases": [
      "addOn_StateDB_MaxConnectionIdleTime",
      "AO_STATEDB_MAXCONNECTIONIDLETIME"
    ],
    "category": "Add-Ons",
    "defaultValue": "60",
    "label": {
      "_": "StateDB: Max Connection Idle Time (minutes): "
    },
    "name": "AO_STATEDB_MAXCONNECTIONIDLETIME",
    "schema": {
      "type": "string"
    },
    "section": "SQL Adapter Connection"
  },
  {
    "aliases": [
      "addOn_Services_Service_RESTService_MaximumConnections",
      "AO_SRV_RESTSERVICE_MAXIMUMCONNECTIONS"
    ],
    "category": "Add-Ons",
    "defaultValue": 50,
    "label": {
      "_": "RESTService: MaximumConnections: "
    },
    "name": "AO_SRV_RESTSERVICE_MAXIMUMCONNECTIONS",
    "schema": {
      "type": "integer"
    },
    "section": "REST Service Base"
  },
  {
    "aliases": [
      "addOn_Services_Service_RESTService_JSONComposerOptions_keepNulls",
      "AO_SRV_RESTSERVICE_JSONCOMPOSEROPTIONS_KEEPNULLS"
    ],
    "category": "Add-Ons",
    "defaultValue": false,
    "label": {
      "_": "RESTService: JSONComposerOptions: keepNulls"
    },
    "name": "AO_SRV_RESTSERVICE_JSONCOMPOSEROPTIONS_KEEPNULLS",
    "schema": {
      "type": "boolean"
    },
    "section": "REST Service Base"
  },
  {
    "aliases": [
      "global_getCompositeName"
    ],
    "category": "Global Settings",
    "defaultValue": "Idea_Management",
    "label": {
      "_": "getCompositeName: "
    },
    "name": "global_getCompositeName",
    "schema": {
      "type": "string"
    },
    "section": "Settings / Deployment Macros"
```

```
    },
    {
      "aliases": [
        "addOn_service_RESTService_RESTService_shadow_port",
        "AO_SSRV_RESTSERVICE_PORT"
      ],
      "category": "Add-Ons",
      "defaultValue": 51113,
      "label": {
        "_": "RESTServicePort: "
      },
      "name": "AO_SSRV_RESTSERVICE_PORT",
      "schema": {
        "type": "integer"
      },
      "section": "SOAP HTTP Server"
    },
    {
      "aliases": [

"addOn_Services_Service_xUMLControllerService_JSONComposerOptions_keepNulls
",
        "CTRL_JSONCOMPOSEROPTIONS_KEEPNULLS"
      ],
      "category": "Add-Ons",
      "defaultValue": false,
      "label": {
        "_": "xUMLControllerService: JSONComposerOptions: keepNulls"
      },
      "name": "CTRL_JSONCOMPOSEROPTIONS_KEEPNULLS",
      "schema": {
        "type": "boolean"
      },
      "section": "REST Service Base"
    },
    {
      "aliases": [
        "addOn_RESTService.IdeaProcessRest_Enabled",
        "AO_RESTSERVICE_IDEAPROCESSREST_ENABLED"
      ],
      "category": "Add-Ons",
      "defaultValue": "true",
      "label": {
        "_": "RESTService: IdeaProcessRest: enabled: "
      },
      "name": "AO_RESTSERVICE_IDEAPROCESSREST_ENABLED",
      "schema": {
        "type": "string"
      },
      "section": "SOAP HTTP Service Request"
    },
    {
      "aliases": [
        "addOn_Services_Service_RESTService_ResolveHostnames",
        "AO_SRV_RESTSERVICE_RESOLVEHOSTNAMES"
      ],
      "category": "Add-Ons",
      "defaultValue": true,
      "label": {
        "_": "RESTService: ResolveHostnames: "
      },
      "name": "AO_SRV_RESTSERVICE_RESOLVEHOSTNAMES",
      "schema": {
        "type": "boolean"
      },
      "section": "REST Service Base"
    },
    {
      "aliases": [
        "addOn_core.dump.not-catched-errors_core.dump.catched-errors",
        "AO_DUMP_CAUGHT_ERRORS"
```

```
    ],
    "category": "Add-Ons",
    "defaultValue": "false",
    "label": {
      "_": "Dump Caught Errors: enabled: "
    },
    "name": "AO_DUMP_CAUGHT_ERRORS",
    "schema": {
      "type": "string"
    },
    "section": "Dump Configuration"
  },
  {
    "aliases": [
      "addOn_Services_Service_RESTService_JSONComposerOptions_compact",
      "AO_SRV_RESTSERVICE_JSONCOMPOSEROPTIONS_COMPACT"
    ],
    "category": "Add-Ons",
    "defaultValue": true,
    "label": {
      "_": "RESTService: JSONComposerOptions: compact"
    },
    "name": "AO_SRV_RESTSERVICE_JSONCOMPOSEROPTIONS_COMPACT",
    "schema": {
      "type": "boolean"
    },
    "section": "REST Service Base"
  },
  {
    "aliases": [
      "addOn_StateDB_DBName",
      "AO_STATEDB_DBNAME"
    ],
    "category": "Add-Ons",
    "defaultValue": "-",
    "label": {
      "_": "StateDB: DB Name: "
    },
    "name": "AO_STATEDB_DBNAME",
    "schema": {
      "type": "string"
    },
    "section": "SQL Adapter Connection"
  },
  {
    "aliases": [
      "addOn_SEI_HTTP_Service_ResolveHostnames",
      "AO_SOAP_RESOLVEHOSTNAMES"
    ],
    "category": "Add-Ons",
    "defaultValue": true,
    "label": {
      "_": "ResolveHostnames: "
    },
    "name": "AO_SOAP_RESOLVEHOSTNAMES",
    "schema": {
      "type": "boolean"
    },
    "section": "SOAP HTTP Server"
  },
  {
    "aliases": [
      "addOn_RESTService.IdeaProcessRest_URI"
    ],
    "category": "Add-Ons",
    "defaultValue": "/rest/process/IdeaProcess",
    "label": {
      "_": "RESTService: IdeaProcessRest: URI: "
    },
    "name": "addOn_RESTService.IdeaProcessRest_URI",
    "schema": {
```

```
      "type": "string"
    },
    "section": "SOAP HTTP Service Request"
  },
  {
    "aliases": [
      "addOn_core.dump.not-catched-errors",
      "AO_DUMP_UNCAUGHT_ERRORS"
    ],
    "category": "Add-Ons",
    "defaultValue": "true",
    "label": {
      "_": "Dump Not Caught Errors: enabled: "
    },
    "name": "AO_DUMP_UNCAUGHT_ERRORS",
    "schema": {
      "type": "string"
    },
    "section": "Dump Configuration"
  },
  {
    "aliases": [
      "addOn_RESTService.ConfigurationRest_Enabled",
      "AO_RESTSERVICE_CONFIGURATIONREST_ENABLED"
    ],
    "category": "Add-Ons",
    "defaultValue": "true",
    "label": {
      "_": "RESTService: ConfigurationRest: enabled: "
    },
    "name": "AO_RESTSERVICE_CONFIGURATIONREST_ENABLED",
    "schema": {
      "type": "string"
    },
    "section": "SOAP HTTP Service Request"
  },
  {
    "aliases": [
      "addOn_UILibraryPath_RestUILibraryCacheControl",
      "AO_UILIBRARYPATH_RESTUILIBRARYCACHECONTROL"
    ],
    "category": "Add-Ons",
    "defaultValue": "max-age=2592000, public",
    "label": {
      "_": "Library Cache Control: value: "
    },
    "name": "AO_UILIBRARYPATH_RESTUILIBRARYCACHECONTROL",
    "schema": {
      "type": "string"
    },
    "section": "REST HTTP Server"
  },
  {
    "aliases": [
      "addOn_RESTService.ConfigurationRest_URI"
    ],
    "category": "Add-Ons",
    "defaultValue": "/rest/configuration",
    "label": {
      "_": "RESTService: ConfigurationRest: URI: "
    },
    "name": "addOn_RESTService.ConfigurationRest_URI",
    "schema": {
      "type": "string"
    },
    "section": "SOAP HTTP Service Request"
  },
  {
    "aliases": [
      "addOn_Settings_DefaultConnectionPoolSize",
      "AO_SETTINGS_DEFAULTCONNECTIONPOOLSIZE"
```

```
    ],
    "category": "Add-Ons",
    "defaultValue": "10",
    "label": {
      "_": "DefaultConnectionPoolSize: "
    },
    "name": "AO_SETTINGS_DEFAULTCONNECTIONPOOLSIZE",
    "schema": {
      "type": "string"
    },
    "section": "SAP Global"
  },
  {
    "aliases": [
      "wsdl_host"
    ],
    "category": "Add-Ons",
    "defaultValue": "${server_hostname}",
    "label": {
      "_": "WSDL: host: "
    },
    "name": "wsdl_host",
    "schema": {
      "type": "string"
    },
    "section": "WSDL"
  },
  {
    "aliases": [
      "addOn_UILibraryPath_UILibraryCacheControl",
      "AO_UILIBRARYPATH_UILIBRARYCACHECONTROL"
    ],
    "category": "Add-Ons",
    "defaultValue": "max-age=2592000, public",
    "label": {
      "_": "Library Cache Control: value: "
    },
    "name": "AO_UILIBRARYPATH_UILIBRARYCACHECONTROL",
    "schema": {
      "type": "string"
    },
    "section": "SOAP HTTP UI Server"
  },
  {
    "aliases": [
      "global_Idea_ManagementRoles::acme_ceo",
      "G_IDEA_MANAGEMENTROLES_ACME_CEO"
    ],
    "category": "Global Settings",
    "defaultValue": "5c917b80-4b17-11e9-8833-5503b6d0e61f",
    "label": {
      "_": "Idea_ManagementRoles::acme_ceo: "
    },
    "name": "G_IDEA_MANAGEMENTROLES_ACME_CEO",
    "schema": {
      "type": "string"
    },
    "section": "Settings / Deployment Macros"
  },
  {
    "aliases": [
      "addOn_Settings_FieldPadding",
      "AO_SETTINGS_FIELDPADDING"
    ],
    "category": "Add-Ons",
    "defaultValue": "NEVER",
    "label": {
      "_": "FieldPadding: "
    },
    "name": "AO_SETTINGS_FIELDPADDING",
    "schema": {
```

```
        "type": "string"
      },
      "section": "SAP Global"
    },
    {
      "aliases": [
        "addOn_core.dump.not-catched-errors_core.dump.catched-errors_core.
dump.catched-errors.domain",
        "AO_DUMP_CAUGHT_ERRORS_DOMAIN"
      ],
      "category": "Add-Ons",
      "defaultValue": "*",
      "label": {
        "_": "Caught Error Domain (MY_DOMAIN|*): "
      },
      "name": "AO_DUMP_CAUGHT_ERRORS_DOMAIN",
      "schema": {
        "type": "string"
      },
      "section": "Dump Configuration"
    }
  ]
}
```


| Output | | Description | Values / Example |
|---|---|---|---|
| settings | | Array containing the service settings as an array element each. | |
| | aliases | Array of setting name aliases. This array also includes the **name** property (see below). | [<br>  "addOn_RESTService.ConfigurationRest_Enabled",<br><br>"AO_RESTSERVICE_CONFIGURATIONREST_ENABLED"<br>] |
| | category | Setting category. In the Bridge UI, the setting **sections** (see below) are grouped by this category (see xUML Service Settings). | "Add-Ons" |
| | defaultValue | Default value of the setting. | "true" |
| | label _ | Label of the setting in the Bridge UI (default language). | "RESTService: ConfigurationRest: enabled: " |
| | name | External (friendly) name of the setting. Use this name to build the environment variable as described below (see xUML Service Settings). | "AO_RESTSERVICE_CONFIGURATIONREST_ENABLED" |
| | schema | Extended JSON schema of the setting type. | |
| | schema type | Type of the setting. Possible types are: string, integer, boolean and password (masked string). | "string" |
| | section | Setting section within a **category** (see above). All settings of a section are listed together in the Bridge UI (see xUML Service Settings). | SQL Adapter Authorization |

## show-ui

xuml-tool 1.3.0Display all information on UIs contained in a repository.

| Parameters / Options | Mandatory | Description | Allowed Values | Example |
|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Path to a repository file or to a deployed repository. | ✅ | • For repository files: Provide the path to the repository file to be analyzed.<br>• For deployed repositories: Provide the path to the service directory of the service to analyzed. Usually this will be a directory name starting with **bridge_...**. | a valid path | | `xuml-tool show-seetings ./hello_world.rep --format json-pretty` |
| `--format` | | Specify in which format the information should be displayed. | **human-readable** | Display the results in a human-readable way (default). This format is not meant for any kind of automatic parsing. It may change anytime in the future. | |
| | | | json | Display the results in compressed JSON. | |
| | | | json-pretty | Display the results in pretty JSON. | |

## Output

```
{
  "ui": [
    {
      "name": "index",
      "path": "/ui/index.html",
      "port": 11113
    }
  ]
}
```

| Output | | Description | Values / Example |
|---|---|---|---|
| `ui` | | Array containing the UIs within this repository as an array element each. | |
| | `name` | Name of the UI. | `"index"` |
| | `path` | Relative path to the UI. | `"/ui/index.html"` |
| | `port` | UI port. | `11113` |

# validate

xuml-tool 1.5.0Check the repository and report duplicate data items. This command is useful for support cases only.

| Parameters / Options | Mandatory | Description | Allowed Values | Example |
|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Path to a repository file or to a deployed repository. | ✅ | • For repository files: Provide the path to the repository file to be analyzed.<br>• For deployed repositories: Provide the path to the service directory of the service to analyzed. Usually this will be a directory name starting with **bridge_....** | a valid path | | `xuml-tool validate ./MongoDBAdapter_CustomerManagement_Example.rep --format json-pretty` |
| `--format` | | Specify in which format the information should be displayed. | **`human-readable`** | Display the results in a human-readable way (default). This format is not meant for any kind of automatic parsing. It may change anytime in the future. | |
| | | | `json` | Display the results in compressed JSON. | |
| | | | `json-pretty` | Display the results in pretty JSON. | |
| `--tmp-files-policy` | | Specify whether to keep or remove temporary files used during the execution of this command. | `leave` | Keep the temporary files. | |
| | | | **`remove`** | Remove the temporary files (default). | |

## Output

```
{
  "data items": [
    {
      "dataItem": {
        "dataItemName": "identifiers",
        "dataItemNamespace": "http://e2e.ch/bridge/controller"
      },
      "instances": [
        {
          "diff": [],
          "id": "urn:xUML_Controller.xUML Controller.trace.configurations.:
classifier.identifiers"
        },
        {
          "diff": [],
          "id": "urn:xUML_Controller.xUML Controller.trace.identifiers"
        }
```

```
      ]
    },
    {
      "dataItem": {
        "dataItemName": "ArrayUtils",
        "dataItemNamespace": ""
      },
      "instances": [
        {
          "diff": [],
          "id": "urn:PAS_Platform.Utils.ArrayUtils"
        },
        {
          "diff": [],
          "id": "urn:xuml.utils.ArrayUtils"
        }
      ]
    },
    {
      "dataItem": {
        "dataItemName": "queryObjects",
        "dataItemNamespace": "http://e2e.ch/bridge/controller"
      },
      "instances": [
        {
          "diff": [],
          "id": "urn:xUML_Controller.xUML Controller.pstate.classes.urn::
Customer_Management.Customer_Management.queryObjects"
        },
        {
          "diff": [],
          "id": "urn:xUML_Controller.xUML Controller.pstate.classes.urn::
Customer_Management.Customer_ManagementImport.queryObjects"
        },
        {
          "diff": [],
          "id": "urn:xUML_Controller.xUML Controller.pstate.queryObjects"
        }
      ]
    },
    {
      "dataItem": {
        "dataItemName": "raw",
        "dataItemNamespace": "http://e2e.ch/bridge/controller"
      },
      "instances": [
        {
          "diff": [],
          "id": "urn:xUML_Controller.xUML Controller.trace.configurations.:
classifier.identifiers.:id.raw"
        },
        {
          "diff": [],
          "id": "urn:xUML_Controller.xUML Controller.pstate.objects.:
objectId.raw"
        },
        {
          "diff": [],
          "id": "urn:xUML_Controller.xUML Controller.pstate.events.:
eventId.raw"
        }
      ]
    },
    {
      "dataItem": {
        "dataItemName": "object",
        "dataItemNamespace": "http://e2e.ch/bridge/controller"
      },
      "instances": [
        {
          "diff": [],
```

```
          "id": "urn:xUML_Controller.xUML Controller.pstate.classes.urn::
Customer_Management.Customer_ManagementImport.object"
        },
        {
          "diff": [],
          "id": "urn:xUML_Controller.xUML Controller.pstate.classes.urn::
Customer_Management.Customer_Management.object"
        }
      ]
    },
    {
      "dataItem": {
        "dataItemName": "objectId",
        "dataItemNamespace": "http://e2e.ch/bridge/controller"
      },
      "instances": [
        {
          "diff": [],
          "id": "urn:xUML_Controller.xUML Controller.pstate.objects.
objectId"
        },
        {
          "diff": [],
          "id": "urn:xUML_Controller.xUML Controller.pstate.classes.urn::
Customer_Management.Customer_ManagementImport.objects.objectId"
        },
        {
          "diff": [],
          "id": "urn:xUML_Controller.xUML Controller.pstate.classes.urn::
Customer_Management.Customer_Management.objects.objectId"
        }
      ]
    },
    {
      "dataItem": {
        "dataItemName": "Utilities",
        "dataItemNamespace": ""
      },
      "instances": [
        {
          "diff": [],
          "id": "urn:Base_Components.Basic_Behavior.String.Utilities"
        },
        {
          "diff": [],
          "id": "urn:Data_Model.Service.Helper.Utilities"
        }
      ]
    },
    {
      "dataItem": {
        "dataItemName": "signals",
        "dataItemNamespace": "http://e2e.ch/bridge/controller"
      },
      "instances": [
        {
          "diff": [],
          "id": "urn:xUML_Controller.xUML Controller.pstate.classes.urn::
Customer_Management.Customer_Management.objects.:objectId.signals"
        },
        {
          "diff": [],
          "id": "urn:xUML_Controller.xUML Controller.pstate.objects.:
objectId.signals"
        },
        {
          "diff": [],
          "id": "urn:xUML_Controller.xUML Controller.pstate.classes.urn::
Customer_Management.Customer_ManagementImport.objects.:objectId.signals"
        }
      ]
```

```
    },
    {
      "dataItem": {
        "dataItemName": "events",
        "dataItemNamespace": "http://e2e.ch/bridge/controller"
      },
      "instances": [
        {
          "diff": [],
          "id": "urn:xUML_Controller.xUML Controller.pstate.objects.:
objectId.events"
        },
        {
          "diff": [],
          "id": "urn:xUML_Controller.xUML Controller.pstate.events"
        }
      ]
    },
    {
      "dataItem": {
        "dataItemName": "objects",
        "dataItemNamespace": "http://e2e.ch/bridge/controller"
      },
      "instances": [
        {
          "diff": [],
          "id": "urn:xUML_Controller.xUML Controller.pstate.classes.urn::
Customer_Management.Customer_Management.objects"
        },
        {
          "diff": [],
          "id": "urn:xUML_Controller.xUML Controller.pstate.classes.urn::
Customer_Management.Customer_ManagementImport.objects"
        },
        {
          "diff": [],
          "id": "urn:xUML_Controller.xUML Controller.pstate.objects"
        }
      ]
    },
    {
      "dataItem": {
        "dataItemName": "Process",
        "dataItemNamespace": ""
      },
      "instances": [
        {
          "diff": [],
          "id": "urn:xuml.configuration.Process"
        },
        {
          "diff": [
            {
              "op": "add",
              "path": "/Base~1dataItems/Array",
              "value": {
                "name": "startEvents",
                "type": "urn:xuml.configuration.StartEvent"
              }
            },
            {
              "op": "add",
              "path": "/Base~1dataItems/String",
              "value": {
                "name": "href"
              }
            },
            {
              "op": "add",
              "path": "/Base~1dataItems/content",
              "value": "\n   "
```

```
            }
          ],
          "id": "urn:Process_Tracing.Process"
        },
        {
          "diff": [
            {
              "op": "add",
              "path": "/Base~1dataItems/Array",
              "value": {
                "name": "startEvents",
                "type": "urn:xuml.configuration.StartEvent"
              }
            },
            {
              "op": "add",
              "path": "/Base~1dataItems/String",
              "value": {
                "name": "href"
              }
            },
            {
              "op": "add",
              "path": "/Base~1dataItems/content",
              "value": "\n   "
            }
          ],
          "id": "urn:ConfigurationService.ConfigurationRest.Rest.Process"
        }
      ]
    },
    {
      "dataItem": {
        "dataItemName": "Security",
        "dataItemNamespace": ""
      },
      "instances": [
        {
          "diff": [],
          "id": "urn:xuml.bpmn.Security"
        },
        {
          "diff": [
            {
              "op": "remove",
              "path": "/Base~1dataItems/VirtualOperation"
            },
            {
              "op": "remove",
              "path": "/Base~1dataItems/content"
            },
            {
              "op": "remove",
              "path": "/Base~1dataItems/parent"
            }
          ],
          "id": "urn:Customer_ManagementService.Customer_ManagementRest.
Customer_Management.Security"
        },
        {
          "diff": [],
          "id": "urn:ConfigurationService.ConfigurationRest.Rest.
Configuration.Security"
        },
        {
          "diff": [
            {
              "op": "remove",
              "path": "/Base~1dataItems/Record"
            },
            {
```

```
              "op": "remove",
              "path": "/Base~1dataItems/content"
            }
          ],
          "id": "urn:ConfigurationService.ConfigurationRest.Security"
        }
      ]
    },
    {
      "dataItem": {
        "dataItemName": "Customer_Management",
        "dataItemNamespace": ""
      },
      "instances": [
        {
          "diff": [],
          "id": "urn:Customer_Management.Customer_Management"
        },
        {
          "diff": [
            {
              "op": "replace",
              "path": "/Base~1dataItems/Record/name",
              "value": "customer"
            },
            {
              "op": "replace",
              "path": "/Base~1dataItems/Record/type",
              "value": "urn:Data_Model.Service.Customer"
            },
            {
              "op": "replace",
              "path": "/Base~1dataItems/String/name",
              "value": "holdTime"
            },
            {
              "op": "add",
              "path": "/Base~1dataItems/String/defaultValue",
              "value": "PT60S"
            },
            {
              "op": "add",
              "path": "/Base~1dataItems/Boolean",
              "value": {
                "defaultValue": "false",
                "name": "autoRetry"
              }
            },
            {
              "op": "add",
              "path": "/Base~1dataItems/DateTime",
              "value": {
                "name": "terminateAt"
              }
            },
            {
              "op": "add",
              "path": "/Base~1dataItems/VirtualOperation",
              "value": {
                "component": "urn:Customer_Management.Customer_Management.
no_item_selected",
                "id": "##no_item_selected$$1809553938",
                "name": "no_item_selected"
              }
            },
            {
              "op": "add",
              "path": "/Base~1dataItems/parent",
              "value": "urn:Customer_Management.Customer_ManagementImport"
            }
          ],
```

```
          "id": "urn:Customer_ManagementImplementation.Customer_Management.
Public.Customer_Management"
        }
      ]
    }
  ]
}
```

# xUML Service Settings

A service repository contains lots of tab files that describe the service. Concerning xUML service settings, these tab files contain variable content that is substituted on deployment by default setting values.

Using the xuml-tool, you can overwrite those default by defining special environment variables on your system. The name format of these environment variables have to follow the following scheme: `XUMLT_S_<setting id>`.
`<setting id>` is the friendly id of a setting as displayed by the `show-settings` command, **settings.name** property of the output structure.

xuml-tool 1.5.0Also, you can replace the global variables by values provided from a file with option `--global-variables-file` on the `deploy` and on the `run` command.