

DS Catalog Specificaton

The Device Server Catalog (DS Catalog) is a web application for managing catalog of implemented Tango device servers. The main features of the application are

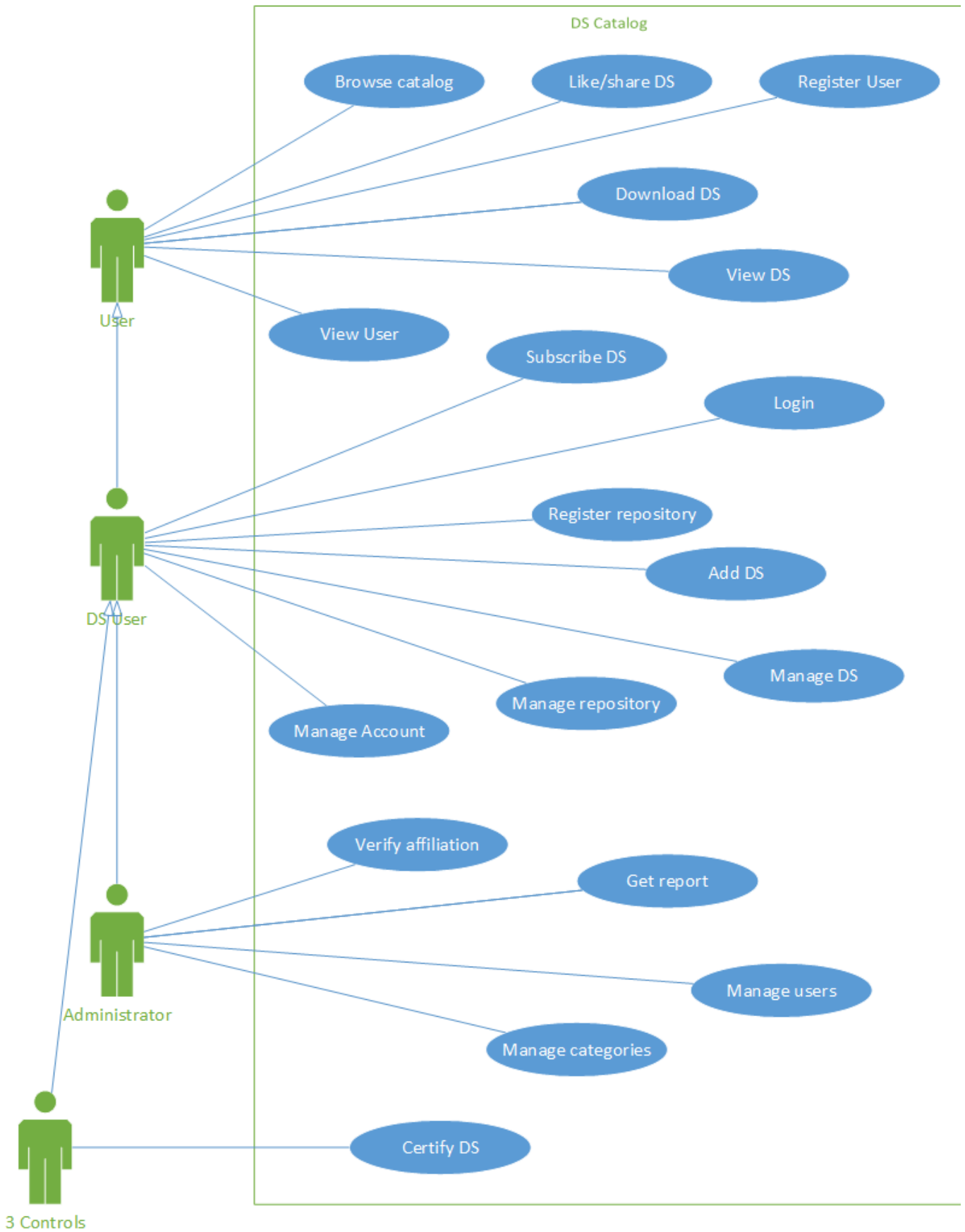
- browse device servers
- share and download device servers from catalog
- add new device servers by users and organizations
- certify ds by 3Controls

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- Description of Use Cases

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Use Case diagram



Actors

In DS Catalog we can distinguish 4 types of actors with different permissions:

- **User** - any, unregistered user who uses DS Catalog. User can browse device servers, download ds.
- **DS User** - registered user who can register new repositories and device servers and manage them. There are two types of DS Users: individuals and companies.
- **Administrator** - Tango Collaboration Executive Committee representative who can manage device servers catalog and verify DS Users
- **3Controls** - a user dedicated for 3Controls company who can certify added device servers

Description of Use Cases

| Use Case | Description | Mockup |
|----------------|--|-----------------------------|
| Browse catalog | User can browse ds catalog, search ds | DS catalog |
| View DS | User can view detailed view of the ds | Device Server |
| Like/share DS | Each ds can be liked, shared by like/share Facebook options. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">Other social links (Twitter, G+, LinkedIn etc) to be considered.</div> | DS catalog Device Server |
| Download DS | User can download any number of available device servers from the catalog. The option is available from ds detailed view and from ds list. Chosen device servers should be compressed to one zip/tar file, file name: <ul style="list-style-type: none"> • for one ds: ds name • for more ds: tango_device_servers_date | DS catalog Device Server |
| Register User | User can set up an account in DS Catalog application. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">The process of users registration depends on Tango Community requirements. We propose to: <ul style="list-style-type: none"> • integrate Tango Controls Community accounts with DS Catalog account • provide SSO between above mentioned applications • enable registration using facebook/gmail/linkedin account </div> | Log in / Log out |
| Login | To login to the DS Catalog user must entered login and password. The login may be user login or email. User may log in using facebook/gmail/linkedin account | Log in / Log out |
| Subscribe DS | User can subscribe devices. Function available only for registered users with confirmed email. | DS catalog Device Server |
| View User | View basic info about DS user (the same view for logged in and not logged in users) | My Account |
| Manage account | User can view his account details, edit data and change password and email and subscription list. If user change his email he must confirm it (application sends an email with a confirmation link) | My Account |

| | | |
|--------------------|--|---|
| Add DS | <p>User can register any number of device servers.</p> <p>Information about ds are imported from xmi file.</p> <p>User has to choose type of repository: Git, SVN, Mercurial, CSV, FTP, other</p> <p>After adding a repository, the system verifies does the repository exist.</p> <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p>In the specification, DS User who add device server is called DS owner. If the user represents a company, all users associated with the comany are treated as DS owners by default.</p> <p>To determine:</p> <ul style="list-style-type: none"> • the user with affiliation could decide if he register repository/add ds on behalf of the organization or as a user • user linked with an organization (affiliation) always adds repo/ds on behalf of the organization </div> | Device Server |
| Manage Repository | <p>User can manage his repositories: change link, type, add/delete files and code.</p> | Repository |
| Manage DS | <p>User can edit registered device server: edit information, delete ds</p> <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p>Any changes in the repo</p> </div> | <p>My Device Servers</p> <p>Device Server</p> |
| Verify affiliation | <p>User can add affiliation . The process of verification affiliation depends on Tango Community requirements.</p> <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p>We assumed that:</p> <ul style="list-style-type: none"> • there is a predefined list of affiliations, user can provide Other affiliation (like on tango-controls site) <p>To determine:</p> <ul style="list-style-type: none"> • the ability to add more than one affiliations to the user (eg. Solaris and 3Controls); the user could then decide if he register repository/add on behalf of the organization (choose one of affiliation) or as a user </div> | Administration |
| Manage categories | <p>User can manage categories: add, edit, delete. There is one predefined category: Other</p> | Administration |
| Get report | <p>View and generate statistics on users and device servers.</p> | Administration |
| Manage users | <p>User can view, edit users data and delete users.</p> | Administration |
| Certify DS | <p>3Controls company can set flag: certified.</p> <p>The flag means that device server is tested and compatible with Guideline/3Controls standards and requirements.</p> <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p>We propose the following approach to the certification:</p> <ul style="list-style-type: none"> • user who set up an account in DS Catalog automatically accept the aconsent saying that 3Control s company can certify all his devices added with open source licence. • Device servers added on comercial licences cannot be certify until ds owner asks for it. </div> | Certification |

UI sketches

- DS catalog
- Device Server
- My Account
- My Device Servers
- Administration
- Log in / Log out
- Certification

We propose two-column page layout, on the mockups we present content of main-columns, the content of the second one (informative, right located column) is to determine.

DS catalog

Main site of DS catalog application. Default view for all users.

To determine:

- is advanced search needed
- other functions available from main site to all users eg. links to tango-controls site etc
- maximum number of displayed device servers (depend on graphics/site layout), the number could be constant or user can choose max number standard select option next to the catalog page number: 10,20,50

The screenshot shows the 'Tango Device Servers Catalog' interface. At the top, there's a search bar and navigation icons. Below it, a search filter section includes 'Name', 'Category', 'Licence', and a 'Certified' checkbox. A table lists device servers with columns for Name, Repository, Category, Licence, Downloads, and Certified. At the bottom, there are buttons for 'Add Device Server', 'Download', and 'Subscribe', along with pagination controls.

Annotations:

- searching:** Name entered by the user: searching like %entered_name%. Category: list of defined categories. Licence: GPL, LGPL, Apache, MIT, other (requires additional field for license text or link to file). Displayed device servers must meet all searching criteria.
- Option for Administrator/3Controls:** as additional option in menu nr 2. Depends how it looks on tango-controls site.
- Log in Register:** (1)
- My Account My Device Logout:** (2)
- Menu option for:** 1 User, 2 DS User.
- Like/share DS-Catalog main site:** Standard fb function enables to all users.
- Button visible for logged-in users:** After clicking, redirect to the ds add site.
- Buttons are active if at least one device server is selected. Buttons available to all users.**
- Subscribe button:** If user is not registered, after clicking app shows message: "Please log in to subscribe device servers".
- Download button:** After clicking, app shows standard download pop-up. Pop-up window title: Opening "file_name.zip".
- Table description:**
 - COLUMNS:**
 - checkbox - selec/deselect all device servers displayed in the catalog
 - Name - ds name, after clicking user is redirected to the ds detailed view
 - Repository - link to the repository, after clicking user is redirected to the repo
 - Category - ds category (DOES ds could have more than 1 category?)
 - Added by - nick or company name, after clicking user is redirected to the author view
 - Licence - ds licence
 - Downloads - total number of ds downloads
 - Certified - flag -> ds certified by the 3Controls
 - Table Functions:**
 - one-click on row (except of name, author and repository links) -> select checkbox
 - double click on row -> redirect to the ds detailed view

Device Server

Mockup presents detailed view of ds. It describes all fields (also validation required when adding) and all functions available from this form depend on the user role.

Assumptions to discussion:

- User can download only the latest version
- We separate repository commands from the DS catalog actions, the only integraton is importing data from the xmi file, and checqout while downloading ds
- Any change made in repo (commit etc) is not visible in DS Catalog unless user provide it and increase version
- Must the device server name be unique? No

Table of contents

- Mockup
- General Section description
- Specfication Section description
 - Adding manually
 - Importing from xmi file
- Add DS process

Mockup

Form title: Device Server Name + Version number and a marker/graphic means that DS is Certified.
NOTE: marker is available only if the current DS version is certified

Section Described under the mockup called "General Section"

Class Section

- section title: class name (in xmi file: <classes name=...>
- as many sections classes as many <classes> elements in the xmi file (unless specification is added manually, then one class is mandatory)
- the section should be collapsed by default, after clicking on section name -> expanded
- the section is complemented on the base of xmi file adding with other DS files to the repo or is completed by the user
- detailed description of the fields (validation, mapping xmi file) is under this mockup in Specification Section: Description
- description of Add DS process is in Section: Add DS Process

Option able to export data again if user change xmi file or export data if user add later an xmi file.

Function description:
After clicking Import from xmi, system search in the repository (added to DS form) an xmi file. The process is analogous to importing data from xmi file while adding new DS.
Note: All data in Specification section should be overwritten.

- Added on: date added by the system after saving DS form DDMMYYYY, by: nick or compny_name
- Updated on: date added by the system after saving DS form DDMMYYYY, by: nick or compny_name
- Like/Share - fb function

Device Servers Catalog

Tango Device Servers Catalog

- -> Device Servers Catalog -> Magner Version 2.1

Magnet Version 2.1

Downloads: number of downloads

Repository: link_to_repo

Licence: licence_type

Category: categories

Certified: No/Version 2.1 by: company date: DDMMYYYY

Specification

Class: class_name

Description: ds description / <description description=...>

Inheritances: list of base classes / <inheritances classname=...>

Properties:

| Name | Description | Default Value | Type |
|---------------|----------------------|---------------|-----------|
| property_name | property_description | default_value | data_type |
| property_name | property_description | default_value | data_type |
| property_name | property_description | default_value | data_type |

Commands:

| Name | Description | Argument type | Return type |
|------|-------------|-----------------|-------------|
| name | description | void/string etc | arguments |
| name | description | void/string etc | arguments |
| name | description | void/string etc | arguments |

Attributes:

| Name | Type | Data type | Read/Write |
|----------------|------------|-----------|------------|
| attribute_name | Scalar etc | type | Read |
| attribute_name | Scalar etc | type | Read |
| attribute_name | Scalar etc | type | Read |

Pipes:

| Name | Description | Read/Write |
|----------------|-------------|------------|
| attribute_name | description | Read |
| attribute_name | description | Read |
| attribute_name | description | Read |

States:

| Name | Description |
|------------|-------------|
| state_name | description |
| state_name | description |
| state_name | description |

Specification source:

Additional information:
textfield optional

Added on: date by: nick or compny_name
Updated on: date by: nick or compny_name

[Like/Share](#)

Archives

| Version | Date added | Changes description |
|------------|------------|---------------------|
| ds version | date | description |
| ds version | date | description |
| ds version | date | description |

Certified:
Value = no/version, if Certified == no or Certified == version earlier of the current DS version, additional option is available "apply for certification" (option is available only to the owner of DS -> while he adding, editing or viewing ds form). After applying the option "apply for certification" is marked as sending.
NOTE: user has information only on the last certified version, company that certified and date of certification, there is no need to show if other versions were also certified

If User edit property:

- Form Title = Edit Property
- Button Save instead of Add

If User view property:

- Form Title = View Property
- Button Close instead of Add and Cancel

New Property

Name:

Description:

Default Value:

Type:

Similarly look and oct New/Edit Command form, New/Edit Attribute form and New/Edit State form. Double-click on element on the list, show element view (although all information for property, command and state are displayed on the lists, the attribute detail view could have info about attribute properties -> to discussion)

IMPORTANT
Functions Edit, Ad, Delete presented on the lists: Properties, Commands, Attributes, Pipes, States are available only if user add specification manually. If specification is imported from the xmi file above

Are you sure you want to delete this item?

Available actions depend on the role and performed action.

While viewing DS form:

- Download, Edit, Delete - available to DS User (who add ds or any user belongs to the company that add ds)
- Download, Subscribe - available to User/DS User who isn't ds owner

While editing:

- Save, Cancel

While adding new ds:

- Add, Cancel

Archives Section

- the section should be collapsed by default, after clicking on section name -> expanded
- the section stores the DS history
- after each editing and saving user should provide a comment, system automatically increases version

IMPORTANT:

- after adding DS: version taken from xmi file or provided by the user
- application keep in the Archives information provided in

General Section description

Description of fields and their validation while adding DS:

- Downloads - field increases automatically after clicking Download button on this form or Download button on DS Catalog main page if the DS is selected. Noneditable for the user.
- Repository - link to the repository, text, max 200 signs, mandatory.
 - While adding ds, there should be additional field "repository type" selected before providing repository link.
 - Repository type - mandatory, select: GIT, Mercurial, SVN, CVS, FTP, other
 - After adding a repository the application verify does the repo exist and check the possibility to perform basic repo functions.
 - After adding, if exactly the same link is added to the different ds, the application show error message (we assume that each ds should have a separate folder)
 - While viewing: after clicking on the link user is redirected to the repo
- License - license type, select: LGPL, GPL, Apache, MIT, custom, mandatory field (other may be added according to need)
- Category - select: all categories defined in administration, mandatory field
- Certified by 3Controls - field described on the mockup, default value after adding DS = No.

Specification Section description

Description of fields and their validation while adding DS

Adding manually

- Description - text, max 500 signs, mandatory field
- Inheritances - text, max 50 signs, optional field
- Subsection Properties (optional section)
 - Name - text max 20 signs, mandatory
 - Description - text, max 200 signs, optional
 - Default Value - text, max 10 signs, optional
 - Type - select: void, String, double, etc; mandatory if Default Value is not empty
- Subsection Commands (optional section)
 - Name - text max 20 signs, mandatory
 - Description - text, max 200 signs, optional
 - Argument type - select: void, String, double, etc; mandatory field
 - Return type - return arg, mandatory if Type != void
- Subsection Attributes (optional section)
 - Name - text max 20 signs, mandatory
 - Type - select: void, String, double, etc; mandatory field
 - Data type - select: void, String, double, etc; mandatory field
 - Read/Write - select: read, write, read_write, read_with_write; mandatory field
- Subsection Pipes (optional section)
 - Name - mandatory field
 - Description - text, max 200 signs, optional field
 - Read/Write - select: read, write, read_write, read_with_write; optional field
- Subsection States (optional section)
 - Name - select: ON, OFF, CLOSE, OPEN, INSERT, EXTRACT, MOVING, STANDBY, FAULT, INIT, RUNNING, ALARM, DISABLE, UNKNOWN; mandatory field
 - Description - text, max 200 signs, optional
 - Specification source - filed filled by the system; source = "file_name.xmi" if data is taken from xmi Pogo file or xmi file compatible with Pogo, source = "user" if section Specification was completed manually (to discussion: should this field be visible to all users)

Importing from xmi file

Description of data mapped from Pogo xmi file (or xmi file compatible with Pogo) to the DS Specification Class

| Field name (on the form) | xmi tags and attribute value |
|--------------------------|--------------------------------|
| Description | <description description=VALUE |

| | |
|------------------------------|--|
| Inheritances | <inheritances classname=VALUE |
| Subsection Properties | All <deviceProperties> elements |
| Name | <deviceProperties name=VALUE |
| Description | <deviceProperties description=VALUE |
| Default Value | subelement of <deviceProperties> <DefaultPropValue>VALUE</DefaultPropValue> |
| Type | subelement of <deviceProperties> <type xsi:type=VALUE |
| Subsection Commands | All <commands> elements |
| Name | <commands name=VALUE |
| Description | <commands description=VALUE |
| Argument type | subelement of <commands> <type xsi:type=VALUE |
| Return type | subelements of <commands><argout> <type xsi:type=VALUE |
| Subsection Attributes | All <attributes> elements |
| Name | <attributes name=VALUE |
| Type | <attributes attType=VALUE |
| Data type | <dataType xsi:type=VALUE |
| Read/Write | <attributes rwType=VALUE |
| Subsection States | All <states> elements |
| Name | <states name=VALUE |
| Description | <states description=VALUE |

Add DS process

Add DS process description:

To add DS to DS Catalog application user must provide ds name and repo with already existing ds. After adding repo the system automatically check if an xmi file exists. Xmi file should be generated in Pogo or compatible with Pogo xmi files:

- If xmi file exists and is compatible with xmi Pogo file format, system import all needed information and fulfill the Specification section. In this case user cannot edit this section, options Add, Edit, Delete properties, attributes, commands and states are disabled.
- If xmi file doesn't exists or is not compatible with the Pogo xmi file format, the system shows message: "There is no xmi file found in the repository "repo_name". Please complete device server specification manually". It should also support uploading of an xmi file.
- If in the repository there are more than one xmi files, system should verify all files:
 - if more than one file is compatible with xmi Pogo file, system shows Error message.
 - if one file is compatible with Pogo xmi, system import data from the file

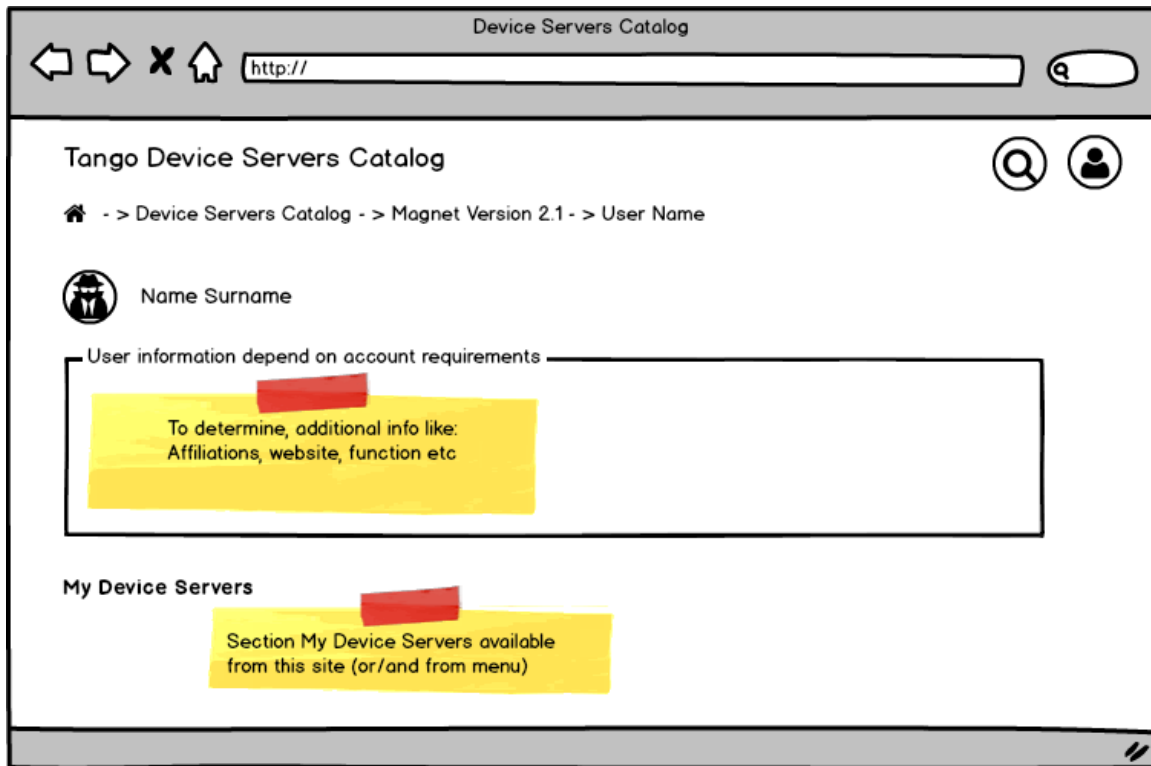
My Account

UI sketch depends on the requirements of the user registration and verify affiliation.

We propose analogous interface to Profile Modification site on tango-controls.com, with differences arising from the above requirements.

User view

DS users could view basic information about DS users: Login, Name, Surname, Affiliation, List of Added Device Servers.



My Device Servers

List of user Device Servers.

Device Servers Catalog

Tango Device Servers Catalog

My Device Servers

Name Category Licence Certified Deleted

| <input type="checkbox"/> | Name | Repository | Category | Licence | Downloads | Certified | |
|--------------------------|---------|------------|----------|---------|-----------|-------------------------------------|--|
| <input type="checkbox"/> | ds_name | repo_link | category | licence | number | <input checked="" type="checkbox"/> | |
| <input type="checkbox"/> | ds_name | repo_link | category | licence | number | <input checked="" type="checkbox"/> | |
| <input type="checkbox"/> | ds_name | repo_link | category | licence | number | <input type="checkbox"/> | |
| <input type="checkbox"/> | ds_name | repo_link | category | licence | number | <input checked="" type="checkbox"/> | |
| <input type="checkbox"/> | ds_name | repo_link | category | licence | number | <input type="checkbox"/> | |

< < 1 2 3 > >

Add Device Server Download

Options:
Edit ds - function described on Device Server mockup

Delete ds - owner can delete ds, ds is flagged as deleted (only Administrative users and DS owner could view deleted device servers), deleted ds isn't available to the users. Administrators, DS Users who subscribed the ds and 3Control should be informed about deletion (email)

Administration

UI sketches depend on the administration functions available on tang-controls.org site.

Administration modules:

- Users - users arrangement with affiliation verification option
- Affiliations - manages organizations and affiliations
- DS Categories - manages of ds categories (view list of categories, add, delete, edit)
- Statistics - view basic statistics and get reports
- Certification - module dedicated for ds certification



Log in / Log out



Log in form should be analogous to the tango-controls.org log in form. Displayed as a pop-u.

To discussion: possibility to log in using social sites

Log in

If you did not create an account, register first please.

 Log in with Facebook  Log in with LinkedIn

 Log in with Google  Log in with Twitter

Login:*

Password:*

Remember Me:

Logout pop-up

Standard Logout message: Are you sure you want to logout? Options: Logout, Cancel

Certification

To discussion