

About

About

Note that while document is design documentation, it is also work-in-progress and may change at any time.

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Thoughts / Conclusion

- Assumptions
- Database suggestion 4
 - Backend REST API with Spring boot
 - Frontend React

...

Therefore recommendation to proceed with

Home tab
Application header

Naming Service

IssuesContact Supportlarsjohansson

HomeESS Name RegistrySystem StructureDevice StructureHelp

Format

Functional System Name

Sys-Sub

Device Definition

Dls-Dev

ESS Name

Sys
Sys-Sub
Sys : Dls-Dev-Idx
Sys-Sub : Dls-Dev-Idx

Process Variable Name

Sys : Property
Sys-Sub : Property
Sys : Dls-Dev-Idx : Property
Sys-Sub : Dls-Dev-Idx : Property

Name Elements

Mnemonic	Full Name	Description
System Structure		
Sys	System	High-level system in the ESS facility
Sub	Subsystem	Medium-level system in the ESS facility
Device Structure		
Dls	Discipline	Branch of knowledge indicating the context in which a device is used. Two main groups of Discipline are identified, <i>Scientific</i> and <i>P&ID</i> .
	Device Group	Introduced to allow certain device types to be grouped together in lists. Not part of the convention names. Default is Miscellaneous
Dev	Generic Device type	Two devices of the same generic device type provide the same function
Instance Index		
Idx	Instance index	To distinguish devices of the same type in the same system. Two different set of rules for index are identified for the <i>Scientific</i> and <i>P&ID</i> disciplines.
Configuration Structure (not implemented by the Naming service)		
Property	Observable Property	E.g. Current, Time or Temperature

Validation

ESS Name Registry

ESS names are validated against the following set of rules in the ESS name registry:

- Instance index (*idx*) shall be numeric only for *Scientific* style discipline. For *P&ID* discipline, it shall be 3 digits followed by optional 1-3 lower case letters, valid characters are (a-z, 0-9).
- The device names Sys-Sub : Dls-Dev-Idx shall be distinguishable, which means that names shall be unique irrespective of
 - Letter case
 - Letters I, l and number 1
 - Letter O and number 0
 - Leading zeros, i.e., number 0 immediately following a non-numerical character
- The maximum length of instance index (*idx*) for *Scientific* discipline is 4 digits and 6 characters for *P&ID* discipline.

System Structure

Proposed name elements in the system structure are validated against the following set of rules:

- Names elements for any of the items in the system structure shall be alphanumeric. I.e., only upper and lower case alphanumeric characters (a-z, A-Z, 0-9) are allowed.
- Name elements for system (*s_ys*) shall be globally distinguishable.
- Name elements for subsystem *sub* shall be distinguishable under the same parent system.
- Names elements for any of the items in the system structure shall have 1 to 6 characters.

Device Structure

Proposed name elements in the device structure are validated against the following set of rules:

- Names elements for any of the items in the device structure shall be alphanumeric. I.e., only upper and lower case alphanumeric characters (a-z, A-Z, 0-9) are allowed.
- Name elements for discipline (*d_is*) shall be globally distinguishable.
- Name elements for device type (*dev*) shall be distinguishable under the same discipline.
- Names elements for any of the items in the device structure shall have 1 to 6 characters.

Application header

Issues	–	https://jira.esss.lu.se/projects/NT/issues
Contact Support	–	mailto:Icsscontrolsupport@esss.se
username	–	sign out

ESS Name Registry tab
Table with ESS names

[illegible]

ESS Name Registry tab
Menu & actions – Add, Modify, Delete, View History, Batch Add, Batch Modify, Export

Add	<div><div>Add ESS Name</div><div><div>1. Select name in System Structure (required)</div><div><div><div>▶ Acc: Accelerator (Acc)<ul style="list-style-type: none">▶ A2T: Accelerator to Target (A2T)▶ DTL: Drift Tube Linac (DTL)▶ DmgL: DumpLine (DmgL)▶ FEB: Front End Building (FEB)▶ HBL: High Beta Linac (HBL)▶ HEBT: High Energy Beam Transport (HEBT)▶ ISrc: Ion Source (ISrc)▶ LEBT: Low Energy Beam Transport (LEBT)▶ MBL: Medium Beta Linac (MBL)▶ MEBT: Medium Energy Beam Transport (MEBT)▶ RFQ: Radio Frequency Quadrupole (RFQ)▶ Spk: Spoke Linac (Spk)▶ Stub: Stub (Stub)▶ TS2: Test Stand 2 (TS2)▶ TS3: Test Stand 3 (TS3)▶ TBD: Tuning Beam Dump (TBD)▶ Central Services<ul style="list-style-type: none">▶ Medicen Village Sandbox▶ Neutron Instruments▶ Personnel Safety Systems▶ Target Station</div></div><div>Selection of a name in System Structure is required for ESS name. Selection of top level name (System Group) may be done if mnemonic is available. To select a name inside System Structure, expand nodes by clicking the triangles and select System or Subsystem. Name elements are described and managed in the System Structure.</div><div>Next</div></div></div><div><div>Add ESS Name</div><div><div>2. Select name in Device Structure (optional)</div><div><div><div>▶ Beam Magnets and Deflectors (BMD)<ul style="list-style-type: none">▶ Choppers<ul style="list-style-type: none">▶ BPB-Chop: Chopper (Chop)▶ BPB-ChDump: Chopper Dump (ChDump)▶ BPB-ChopLd: Chopper Load (ChopLd)▶ Dipoles▶ Miscellaneous<ul style="list-style-type: none">▶ Quadrupoles▶ Solenoids▶ Control System (Ctl)<ul style="list-style-type: none">▶ Conventional Power (CnPrv)▶ Cryogenics (Cryo)▶ Electromagnetic Resonators (EMR)▶ General Mechanics (Mech)▶ General Process Control (Proc)▶ Heating, Cooling and Air Conditioning (HVAC)▶ Intercepting Devices (ID)▶ Ion Source Specialties (ISS)▶ Machine Protection Systems (MPS)▶ Motion Control (MC)▶ Network Equipment (NetW)</div></div><div>Selection of a name in Device Structure is optional for ESS name. For System Structure only ESS name, a name in Device Structure shall not be selected. To select a name inside Device Structure, expand nodes by clicking the triangles and select Device Type. Name elements are described and managed in the Device Structure.</div><div>BackNext</div></div></div><div><div>Add ESS Name</div><div><div>3. Enter Instance Index for Scientific</div><div><div></div></div></div><div><div>4. Enter Description</div><div><div></div></div></div><div>254 characters remaining.</div><div><div>The instance index is validated against the following rules:</div><div><div>1. Instance index (<i>i_{inst}</i>) shall be numeric only for Scientific style discipline. For P&ID discipline, it shall be 3 digits followed by optional 1-3 lower case letters, valid characters are (a-z, 0-9).</div><div>2. The device names <i>S₁-S₄ : S₁S₂S₃S₄</i> shall be distinguishable, which means that names shall be unique irrespective of<ul style="list-style-type: none">Letter case<ul style="list-style-type: none">Letters L, I and number 1Letter O and number 0Leading zeros, i.e., number 0 immediately following a non-numerical character</div><div>3. The maximum length of instance index (<i>i_{inst}</i>) for Scientific discipline is 4 digits and 6 characters for P&ID discipline.</div></div></div><div><div>Guidelines:</div><div><div>1. Names should be short, meaningful and easy to read. Abbreviate and use CamelCase.</div><div>2. Names should be easy to pronounce and memorise.</div></div></div><div>Instance Index is applicable if Device Type has been selected. Description is required.</div><div>BackNext</div></div></div><div><div>Add ESS Name</div><div><div>5. Review and Submit:</div><div><div>Name: A2T-BPB-Chop-123</div><div>Description: Test</div></div></div><div>Ensure Name and Description are as intended before ESS name is added.</div><div>BackCancelSubmit</div></div></div>																															
Modify	see Add, different title	see Add, different title	see Add, different title	see Add, different title																												
Delete	<div><div>Review and submit Delete</div><div><table><tr><th>Full Name</th><th>Mnemonic</th><th>Description</th><th>New Status</th></tr><tr><td>▶ Accelerator</td><td>Acc</td><td>The ESS Linear Accelerator</td><td></td></tr><tr><td>▶ Accelerator to Target</td><td>A2T</td><td>The Accelerator to Target Station interface including the dogleg</td><td></td></tr><tr><td>▶ 01 Phase Reference Line</td><td>01OPRL</td><td></td><td></td></tr><tr><td colspan="3">A2T-01OPRL-RFS-FRLTap-054</td><td>Archived</td></tr></table></div><div><div>Commit Message:</div><div><div></div></div></div><div>254 characters remaining.</div><div>CancelSubmit</div></div>	Full Name	Mnemonic	Description	New Status	▶ Accelerator	Acc	The ESS Linear Accelerator		▶ Accelerator to Target	A2T	The Accelerator to Target Station interface including the dogleg		▶ 01 Phase Reference Line	01OPRL			A2T-01OPRL-RFS-FRLTap-054			Archived											
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View History	<div><div>History</div><div><table><tr><th>Full Name</th><th>Mnemonic</th><th>Description</th><th>Status</th><th>Date: 0</th><th>User: 0</th><th>Message: 0</th></tr><tr><td>A2T-05OPRL-RFS-FRLTAP-054</td><td>054</td><td></td><td>Approved</td><td>2016-11-07</td><td>johannom</td><td></td></tr><tr><td>A2T-05OPRL-RFS-FRLTap-054</td><td>054</td><td></td><td>Approved</td><td>2017-09-16</td><td>danielpiotermendez</td><td></td></tr><tr><td>A2T-05OPRL-RFS-FRLTap-054</td><td>054</td><td></td><td>Approved</td><td>2017-10-20</td><td>johannom</td><td></td></tr></table></div></div>	Full Name	Mnemonic	Description	Status	Date: 0	User: 0	Message: 0	A2T-05OPRL-RFS-FRLTAP-054	054		Approved	2016-11-07	johannom		A2T-05OPRL-RFS-FRLTap-054	054		Approved	2017-09-16	danielpiotermendez		A2T-05OPRL-RFS-FRLTap-054	054		Approved	2017-10-20	johannom				
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Batch Add	<div><div>Batch Add Devices</div><div><div>▶ Select import file from disc</div></div><div><div>Download template</div><div>ImportCancel</div></div></div>																															
Batch Modify	<div><div>Batch Modify Devices</div><div><div>▶ Select import file from disc</div></div><div><div>Download template</div><div>ImportCancel</div></div></div>																															
Export	<div><div>Opening NamingConventionExport.xlsx</div><div><div>You have chosen to open:<ul style="list-style-type: none">▶ NamingConventionExport.xlsx<ul style="list-style-type: none">which is: Microsoft Excel Worksheetfrom: https://naming.ess.lu.se</div><div><div>What should Firefox do with this file?</div><div><div><div><input type="radio"/> Open with</div><div>LibreOffice Calc (default)</div></div><div><div><input checked="" type="radio"/> Save File</div></div></div><div><input type="checkbox"/> Do this automatically for files like this from now on.</div></div><div>CancelOK</div></div></div>																															

System Structure tab
Table with System structure

Naming Service				
<div><div><div>Home</div><div>ESS Name Registry</div><div>System Structure</div><div>Device Structure</div><div>Help</div></div><div><div>Issues</div><div>Contact Support</div><div>larsjohansson</div></div></div>				
View	Collapse	Expand		
Full Name		Mnemonic	Description	Status
15 LINAC Warm Unit slot		150LWU		Cancelled
Accelerator		Acc	The ESS Linear Accelerator	Approved
Central Services				Approved
Conventional Facilities		CF		Archived
ESS Bilbao		ESB		Archived
Helmholtz Zentrum Berlin		HZB		Archived
INFN LNL (Legnaro)		LNL	Supersection for INFN LNL in Legnaro	Archived
INFN LNS (Catania)		LNS		Archived
Integrated Control System		ICS		Archived
LINAC Warm Unit 010		LWAU010		Cancelled
Machine Protection System				Archived
Medicon Village Sandbox				Approved
Neutron Instruments		NIS		Archived
Neutron Instruments				Approved
Office Labs		OLB		Archived
Offsite				Archived
Personnel Safety Systems				Approved
Ring		Ring		Archived
Site Infrastructure				Archived
Subsection		Sub		Cancelled
Target Station				Approved
Test		Test		Archived
Test Stand		TestS		Archived
Uppsala University		UU		Archived
Utgard		Utg	Test stand at Scheelevägen 18.	Cancelled

System Structure tab
Menu & actions – Add, Modify, Delete, Cancel, Approve, Reject, Check Devices, View History, Batch Add

Add	<div><div>Propose to add Subsystem</div><div><div>1. Expand (by clicking the triangle) and select parent:</div><div><div>Accelerator (Acc)<div>Accelerator to Target (AZT)<div>Drift Tube Linac (DTL)<div>DumpLine (DmpL)<div>Front End Building (FEB)<div>High Beta Linac (HBL)<div>High Energy Beam Transport (HEBT)<div>Ion Source (ISrc)<div>Low Energy Beam Transport (LEBT)<div>Medium Beta Linac (MBL)<div>Medium Energy Beam Transport (MEBT)<div>Radio Frequency Quadrupole (RFQ)<div>Spoke Linac (Spk)<div>Stubs (Stub)<div>Test Stand 2 (TS2)<div>Test Stand 3 (TS3)<div>Tuning Beam Dump (TBD)<div>Central Services</div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div><div><div>Full Name: *</div><div>00 Test</div></div><div><div>Mnemonic: *</div><div>000TST</div></div><div><div>Description: *</div><div>Description</div></div><div>243 characters remaining.</div><div><div>Back</div><div>Next</div></div></div></div></div>	<div><div>Propose to add Subsystem</div><div><div>Review and Submit Request</div><div><div>Full Name: 00 Test</div><div>Mnemonic: 000TST</div><div>Description: Description</div><div>Commit Message: *</div><div>Message</div></div><div>247 characters remaining.</div><div><div>Back</div><div>Cancel</div><div>Submit</div></div></div></div>																	
Modify	see Add, different title	see Add, different title	see Add, different title																
Delete	<div><div>Review and submit Request to Delete</div><div><table><thead><tr><th>Full Name</th><th>Mnemonic</th><th>Description</th><th>New Status</th></tr></thead><tbody><tr><td>Accelerator</td><td>Acc</td><td>The ESS Linear Accelerator</td><td></td></tr><tr><td>Accelerator to Target</td><td>AZT</td><td>The Accelerator to Target Station interface including the dogleg</td><td></td></tr><tr><td>00-Test</td><td>000TST</td><td>Description</td><td>Pending</td></tr></tbody></table><div>Commit Message: *</div><div>254 characters remaining.</div><div>WARNING: There are 43 registered device names that are affected by this action!</div><div><div>Cancel</div><div>Submit</div></div></div></div>	Full Name	Mnemonic	Description	New Status	Accelerator	Acc	The ESS Linear Accelerator		Accelerator to Target	AZT	The Accelerator to Target Station interface including the dogleg		00-Test	000TST	Description	Pending		
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Next

System Structure tab
Menu & actions – Add, Modify, Delete, Cancel, Approve, Reject, Check Devices, View History, Batch Add

Reject	<div><div>Review and submit Reject proposals, modifications and/or deletions</div><table><tr><th>Full Name</th><th>Mnemonic</th><th>Description</th><th>New Status</th></tr><tr><td>▼ Accelerator</td><td>Acc</td><td>The ESS Linear Accelerator</td><td></td></tr><tr><td>▼ Accelerator to Target</td><td>A2T</td><td>The Accelerator to Target Station interface including the dogleg</td><td></td></tr><tr><td>00-Test</td><td>000TST</td><td>Description</td><td>Rejected</td></tr></table><div>Commit Message: *</div><div>254 characters remaining.</div><div>CancelSubmit</div></div>	Full Name	Mnemonic	Description	New Status	▼ Accelerator	Acc	The ESS Linear Accelerator		▼ Accelerator to Target	A2T	The Accelerator to Target Station interface including the dogleg		00-Test	000TST	Description	Rejected																					
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Batch Add	<div><div>Batch Add Names</div><div>+ Select import file from disc</div><div>Download templateImportCancel</div></div>																																					

Existing, Device Structure

Reference

Device Structure tab
Table with Device structure

Naming Service					
<div>HomeESS Name RegistrySystem StructureDevice StructureHelpIssuesContact Supportlarsjohansson</div>					
View	Collapse	Expand			
Full Name		Mnemonic	Index Style	Description	Status
ACCT-front-end-unit		BCMFEE	Scientific		Cancelled
Air-Handling		AH	Scientific		Archived
Air-Handling		57B	Scientific		Archived
Air-handling-system		57	Scientific	BSAB-code-57-is-air-handling-systems-follows-standard-SS-EN-813246-1	Archived
Basic-Process-Control-System		BPGS	Scientific	Any BPGS	Cancelled
Beam Magnets and Deflectors		BMD	Scientific		Approved
Beam-off-Station		BOS	Scientific		Rejected
Condition-Monitoring		CM	Scientific	Vibration-and-sound-measurement	Cancelled
Control System		Ctrl	Scientific		Approved
Controls		CH	Scientific		Archived
Conventional Power		CnPw	Scientific		Approved
Cooling-System		SSP	Scientific		Archived
Cryogenics		Cryo	P&ID		Approved
Discipline-Test		Dis	Scientific		Archived
Electromagnetic Resonators		EMR	P&ID		Approved
Fast-Beam-Interlock-Systems		FBIS	Scientific	MPS-dedicated-equipment-for-FBIS	Archived
Gas-systems		Gas	Scientific		Rejected
General Mechanics		Mech	Scientific		Approved
General Process Control		Proc	P&ID	General process control according to standard ANSI/ISA S5.1 and ISO 14617-6	Approved
Heating, Cooling and Air Conditioning		HVAC	P&ID		Approved
Information-Technology		IT	Scientific		Archived
Intercepting Devices		ID	Scientific		Approved
Interlock		INTK	Scientific	Interlocks-managed-by-PLC	Rejected
Interlocks		Intk	Scientific		Archived
Input-Output-Controller		IOC	Scientific		Archived
Ion Source Specialties		ISS	Scientific	"Specialties" Added - Request A. Ponton "Specialties" removed after check from Timo - Francois Bellorini	Approved
Ionization-chamber-BLM-detector		ICBLM	Scientific		Cancelled
Low-voltage-supply-card		LVG	Scientific	Low-voltage-supply-card	Cancelled
Lubrication		Lube	Scientific	To-be-used-for-lubrication-system-components--e.g.-Solenoid-valve,-Grease-Pump,-Grease-progressive-distributor,...	Cancelled
Machine Protection Systems		MPS	Scientific	MPS dedicated equipment for general MP systems	Approved
Machine-Protection-Systems-for-Bending-Magnets		MPSBMg	Scientific	MPS-dedicated-equipment-for-MPS-Bending-Magnets	Archived
Machine-Protection-Systems-for-Insertable-Devices		MPSID	Scientific	MPS-dedicated-equipment-for-MPS-Insertable-Devices	Archived
Machine-Protection-Systems-for-Magnets		MPSMag	Scientific	MPS-dedicated-equipment-for-MPS-Magnets	Archived
Machine-Protection-Systems-for-Neutron-Scattering-Systems		MPSNSS	Scientific	MPS-dedicated-equipment-for-MPS-Neutron-Scattering-Systems	Archived
Machine-Protection-Systems-for-Target		MPSTrg	Scientific	MPS-dedicated-equipment-for-MPS-Target	Archived
Machine-Protection-Systems-for-Vacuum-Gate-Valves		MPSVae	Scientific	MPS-dedicated-equipment-for-MPS-Vacuum-Gate-Valves	Archived
Motion Control		MC	Scientific		Approved
MyNewDevice		MND	Scientific		Rejected
Network Equipment		NetW	Scientific		Approved
Neutron Chopper		Chop	Scientific		Approved
ODH Detection Systems		ODH	Scientific		Approved
Operations		Ops	Scientific	Management-of-the-production-systems	Archived
Personnel Safety Systems		PSS	Scientific		Approved
Phase-Reference-Line-Gas-Barrier		PRLGB	Scientific	Gas-Barrier-for-Phase-Reference-Line	Cancelled
Pneumatics		Pneu	Scientific	Compressed-air-actuation-devices	Cancelled
Power Convertors		PwC	Scientific		Approved
PrD		PrD	Scientific	ok	Cancelled
Process-Systems		Proe	P&ID	Letter-codes-for-instrument-functions-according-to-ISO-14617-6:2002-Letter-codes-for-apparatus-and-machinery-according-to-ISO-10628:2000-annex-D-2.	Archived
Proton Beam Instrumentation		PBI	Scientific		Approved
Radiation Monitoring Technology		RMT	Scientific		Approved
Radiometry		Rad	Scientific	Instruments-that-use-electromagnetic-radiation-(including-visible-light)-to-measure-physical-properties.	Cancelled
RF Systems		RFS	Scientific		Approved
Safety-Valve		SV	Scientific		Cancelled
Sample Environment Equipment		SEE	Scientific	Sample Environment Equipment	Approved
Sample Environment Systems		SES	Scientific	Sample environment equipment and auxiliary support equipment for use on the neutron instruments.	Approved
Software Controllers		SC	P&ID	Software Controllers Holder	Approved
System		SYS	Scientific	Test-system-discipline.	Cancelled
Target Safety-System		TSS2	Scientific	TSS-dedicated-equipment-To-be-renamed...	Cancelled
Timing-System		TS	Scientific	Timing-System.	Archived
Vacuum		Vac	P&ID		Approved
Variable-Frequency-Drive		VFD	Scientific		Cancelled

Device Structure tab
Menu & actions – Add, Modify, Delete, Cancel, Approve, Reject, Check Devices, View History

See Existing, System Structure

Help tab

Naming Service

IssuesContact Supportlarsjohansson

HomeESS Name RegistrySystem StructureDevice StructureHelp

ESS Naming Convention

CHESS

Manual

Listed below are some of the frequently-used work-flows and frequently-asked questions related to the Naming System

About applicationAbout user interfaceAbout REST API

About ESS names and name parts (System Structure, Device Structure)

About fields for ESS names and name parts (in particular UUID, name, mnemonic)

About tabs, filter, menu, pagination

To view ESS names

To add ESS name

To add ESS names through Batch Add

To modify ESS name

To modify ESS names through Batch Modify

To delete ESS name

To propose add in System Structure

To propose add in System Structure through Batch Add

To propose add in Device Structure

To propose modify in System Structure

To propose modify in Device Structure

To propose delete in System Structure

To propose delete in Device Structure

To cancel proposal for change in System Structure

To cancel proposal for change in Device Structure

About REST API

To find ESS names and information for ESS names

To find name parts and information for name parts

To find history for ESS names and name parts

Noteworthy

- Regular expressions can be used in application
 - For filtering in user interface in ESS Name Registry tab in ESS Name column
 - For searching in REST API

Naming Administrators

[Alfio Rizzo](#)[John Sparger](#)[Marino Vojneski](#)

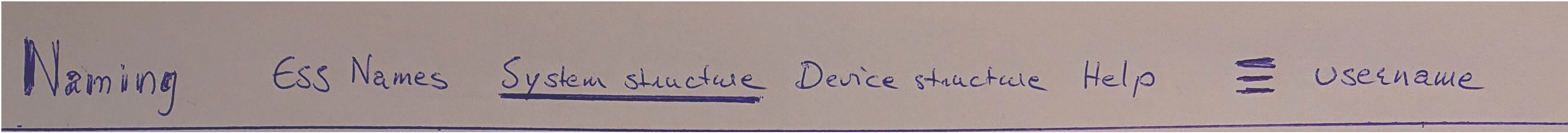
About

Version: 5.2.4

About

Some important things to keep in mind below.

Application header
Sketch



Sketch

- | | | |
|------------------|---|-----------------------------------|
| Naming | – | title |
| ESS Names | – | show content for ESS names |
| System Structure | – | show content for System structure |
| Device Structure | – | show content for Device structure |
| Help | – | show content for Help |
| Menu | – | show menu content |
| username | – | show username |

Menu

- Contact Support
- Issues
- Filter
- Status
- APPROVED, ARCHIVED, CANCELLED, PENDING, REJECTED
- Sign out

ESS Names

Sketch

ESS names as envisioned.
Not to forget – pagination, filtering, sorting

Actions

Add

Modify

Delete

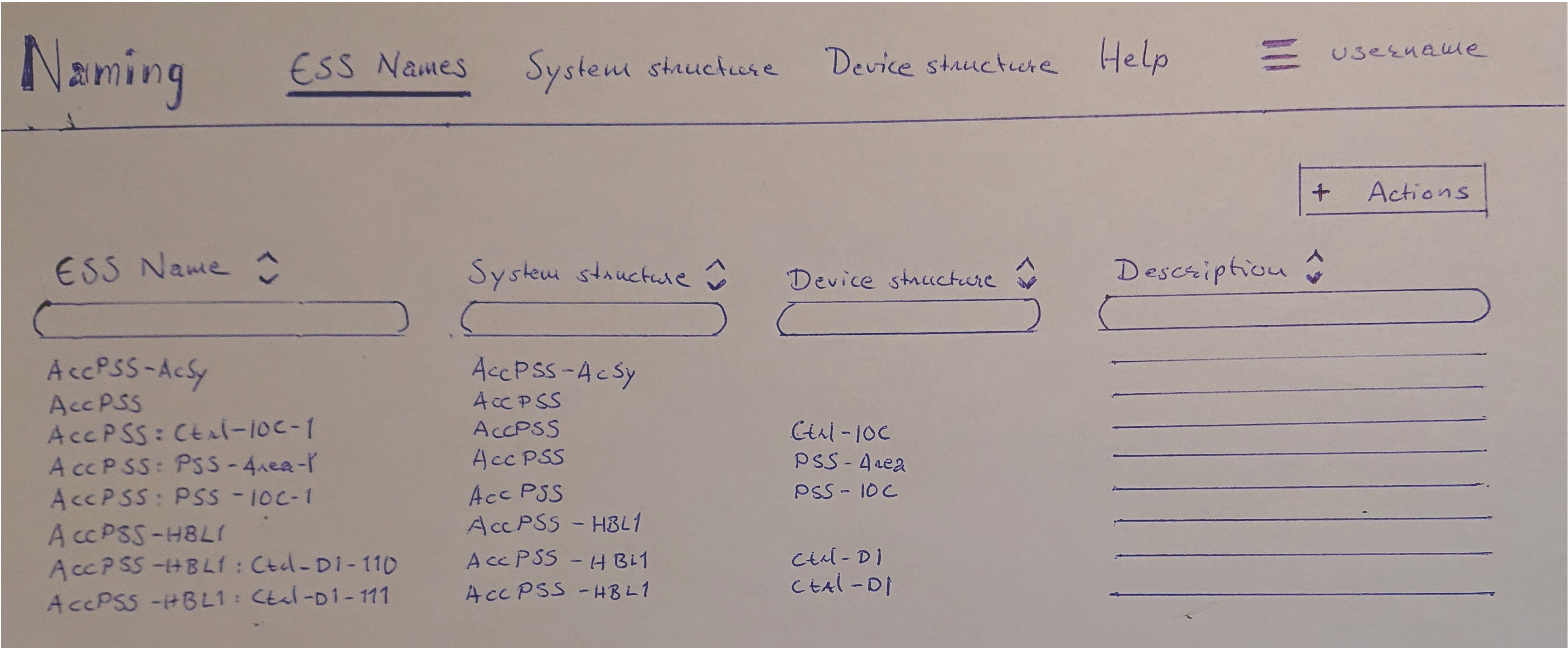
View History

Batch Add

Batch Modify

Export

See also Existing



Actions — in terms of requirements on Frontend, REST API, Backend			
	Frontend	REST API	Note
View	See above	get ESS names (+ per <i>name</i> , <i>system structure mnemonic path</i> , <i>device structure mnemonic path</i> , <i>description</i> , <i>status</i> , <i>latest</i> , <i>deleted</i> , <i>pagination</i> , <i>filtering</i> , <i>sorting</i>)	Visitor
Add	See existing Dialogs similar to today, however tree tables with columns <i>name</i> , <i>mnemonic</i> , <i>mnemonic path</i> and ability to filter and sort See also System structure	get System structure content (+ per <i>name</i> , <i>mnemonic</i> , <i>mnemonic path</i>)	User
		get Device structure content (+ per <i>name</i> , <i>mnemonic</i> , <i>mnemonic path</i>) add name	Note Approved. latest, not deleted
Modify	See existing See Add	get System structure content (+ per <i>name</i> , <i>mnemonic</i> , <i>mnemonic path</i>) get Device structure content (+ per <i>name</i> , <i>mnemonic</i> , <i>mnemonic path</i>) update name	User
Delete		get System structure hierarchy per uuid (system group, system, subsystem) get Device structure hierarchy per uuid (device type) delete name	User
View History		get ESS name history per uuid, name	Visitor
Batch Add		upload Excel file	User
Batch Modify		upload Excel file	User
Export		export content to Excel file	Visitor

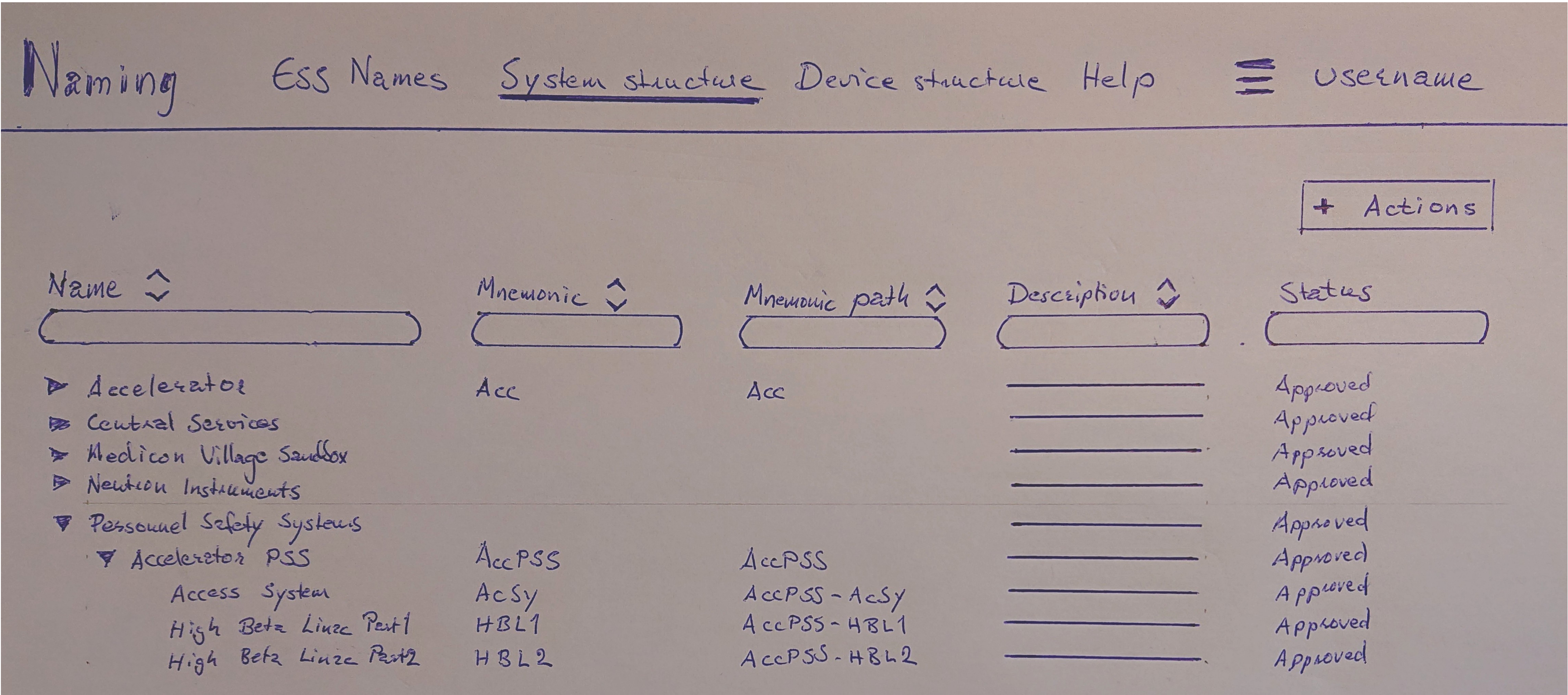
System Structure Sketch

System structure as envisioned.
Not to forget – pagination, filtering, sorting

Actions

- Add
- Modify
- Delete
- Cancel
- Approve
- Reject
- Check Devices
- View History
- Batch Add

See also Existing



Actions – in terms of requirements on Frontend, REST API, Backend				
		Frontend	REST API	Note
View		See above	get System structure content for system group, system, subsystem (+ per name, mnemonic, mnemonic path, description, status, latest, deleted, pagination, filtering, sorting)	Visitor
Add		See existing Dialogs similar to today, however tree tables with columns name, mnemonic, mnemonic path and ability to filter and sort	get System structure content (+ per name, mnemonic, mnemonic path) add System structure content	User
				Note Approved. latest, not deleted
Modify		See existing See Add	see above get System structure content above current entry (uuid) update System structure content	User
				Note Approved. latest, not deleted
Delete			get System structure content bove current entry (uuid) get ESS names for System structure (uuid, mnemonic path) delete for System structure (uuid)	User
Cancel			get System structure content bove current entry (uuid)	User
Approve			get System structure content bove current entry (uuid) get ESS names for System structure (uuid, mnemonic path) approve for System structure (uuid)	Administrator
Reject			get System structure content bove current entry (uuid) reject for System structure (uuid)	Administrator
Check Devices			get ESS names for System structure (uuid, mnemonic path) check devices for System structure (uuid)	Administrator
View History			get System structure history per uuid (, mnemonic path)	Visitor
Batch Add			upload Excel file	User

Device Structure

Device structure as envisioned.
Not to forget – pagination, filtering, sorting

- Actions
- Add
 - Modify
 - Delete
 - Cancel
 - Approve
 - Reject
 - Check Devices
 - View History

See System Structure
 same except no Batch Add option in menu
See also Existing

Help

Help as envisioned

Static content.
Same content as before.

REST API, About

About

Some important things to keep in mind below.

REST API divided in areas

- ESS name – /names – provides ESS name data for Naming application
- Structure – /structures – provides structure data for Naming application
- History – /history – provides history for ESS names and structure data for Naming application
- Healthcheck – /healthcheck – provides healthcheck for Naming application
- Verification – /verification – provides verification of data migration for Naming application

REST API, ESS name

ESS name

- ESS name – /names – provides ESS name data for Naming application

Note - ESS Name
- fields in object to/from client/backend

NameElement	
uuid	(UUID)
systemgroup	(UUID)
system	(UUID)
subsystem	(UUID)
devicetype	(UUID)
systemstructure	(String)(mnemonic path)
devicestructure	(String)(mnemonic path)
index	(String)
name	(String)
description	(String)
status	(Status)(enum)
latest	(boolean)
deleted	(boolean)
when	(Date)
who	(String)
comment	(String)

-
- CRUD through REST API
 - parameters
 - type (enum)
SYSTEMGROUP, SYSTEM, SUBSYSTEM, DISCIPLINE, DEVICEGROUP, DEVICETYPE (exact)
 - status (enum)
APPROVED (, ARCHIVED, CANCELLED, PENDING, REJECTED) (exact)
 - latest (Boolean)
 - deleted (Boolean)
 - query (enum + values)
UUID, (exact)
NAME, SYSTEMSTRUCTURE, DEVICESTRUCTURE, DESCRIPTION (regex)
 - orderBy (enum)
NAME, SYSTEMSTRUCTURE, DEVICESTRUCTURE, DESCRIPTION (exact)
 - isAsc (Boolean)
 - offset (Integer)(page)
 - limit (Integer)(page size)
 - authentication/authorization
 - 3 levels - no, user, administrator
 - no - read
 - user - create, update, delete
 - (administrator)
 - may need possibility to query backend about mnemonic equivalence

	method	path	query	description
		required parameter(s)	optional parameter(s)	
create				
	POST	/names	[data]	multiple
read				
	GET	/names/{uuid}	uuid/name	single
	GET	/names	type statuses latest deleted queryFields queryValues orderBy isAsc offset limit	multiple
update				
	PUT	/names	[data]	multiple
delete				
	DELETE	/names/{uuid}		single

REST API, Structure

Structure

- Structure – /structures – provides structure data for Naming application

Note - System structure & Device structure
- fields in object to/from client/backend

StructureElement				
	type	(Type)(enum)		
	uuid	(UUID)		
	parent	(UUID)		
	name	(String)		
	mnemonic	(String)		
	mnemonicpath	(String)(mnemonic path)		
	level	(String)		
	description	(String)		
	status	(Status)(enum)		
	latest	(boolean)		
	deleted	(boolean)		
	when	(Date)		
	who	(String)		
	comment	(String)		

- CRUD through REST API				
- parameters				
	type	SYSTEMGROUP, SYSTEM, SUBSYSTEM, DISCIPLINE, DEVICEGROUP, DEVICETYPE (enum)		
	status	APPROVED, ARCHIVED, CANCELLED, PENDING, REJECTED (enum)		
	latest	(Boolean) (exact)		
	deleted	(Boolean) (Boolean)		
	query	UUID, NAME, MNEMONIC, MNEMONICPATH, DESCRIPTION (enum + values)		
	orderBy	NAME, MNEMONIC, MNEMONICPATH, DESCRIPTION (regex)		
	isAsc	(Boolean) (enum)		
	offset	(Integer)(page)		
	limit	(Integer)(page size)		
- authentication/authorization				
	3 levels - no, user, administrator			
	no	- read		
	user	- create, update, delete (administrator to approve, reject)		
	administrator	- update (approve, reject (, checkdevices))		
- may need possibility to query backend about mnemonic equivalence				

	method	path	query	description
		required parameter(s)	optional parameter(s)	

create				
	POST	/structures/{type}	[data]	multiple

read				
	GET	/structures/{uuid}	uuid/mnemonic type	single
	GET	/structures	type status latest deleted queryFields queryValues orderBy isAsc offset limit	multiple

update				
	PUT	/structures/{type}	[data]	multiple
	PATCH	/structures/{type}/{uuid}/approve		single
	PATCH	/structures/{type}/{uuid}/reject		single
	PATCH	/structures/{type}/{uuid}/cancel		single
	(POST	/structures/checkdevices		multiple)

delete				
	DELETE	/structures/{uuid}		single

REST API, History

History

- History – /history – provides history for ESS names and structure data for Naming application

Note

- fields in object to/from client/backend
 - NameElement
 - StructureElement

(- CRUD through REST API)

- parameters
 - typeSYSTEMGROUP, SYSTEM, SUBSYSTEM, DISCIPLINE, DEVICEGROUP, DEVICETYPE(enum)(exact)
- authentication/authorization
 - no
 - (user) - read
 - (administrator)

	method	path required parameter(s)	query optional parameter(s)	description
create				
read				
	GET	/history/structures/{ <u>uuid</u> }	type	single
	GET	/history/names/{ <u>uuid</u> }		single
update				
delete				

REST API, History

History

- History – /history – provides history for ESS names and structure data for Naming application

Note

- fields in object to/from client/backend
 - NameElement
 - StructureElement

(- CRUD through REST API)

- parameters
 - typeSYSTEMGROUP, SYSTEM, SUBSYSTEM, DISCIPLINE, DEVICEGROUP, DEVICETYPE(enum)(exact)
- authentication/authorization
 - no - read
 - (user)
 - (administrator)

	method	path required parameter(s)	query optional parameter(s)	description
create				
read				
	GET	/history/structures/{ <u>uuid</u> }	type	single
	GET	/history/names/{ <u>uuid</u> }		single
update				
delete				

REST API. Healthcheck

Healthcheck

- Healthcheck – /healthcheck – provides healthcheck for Naming application

Note

- CRUD through REST API)
- authentication/authorization
 - no (user) - read
 - (administrator)

method	path	query	description
	required parameter(s)	optional parameter(s)	
create			
read			
GET	/healthcheck		
update			
delete			

REST API, Verification

Verification

- Verification – /verification – provides verification of data migration for Naming application

```
/**
 * Perform verification of data migration with focus on device revision.
 * Ok if all entries ok and no entry nok.
 *
 * @return report of data migration
 */
@GetMapping("/migration_devicerevision")

/**
 * Perform verification of data migration with focus on name part revision.
 * Ok if all entries ok and no entry nok.
 *
 * @return report of data migration
 */
@GetMapping("/migration_namepartrevision")

/**
 * Perform verification of data in sense that all data can be reached. Current data is one thing but suggested data (pending) and old data (obsolete) is another thing.
 * All data reached verification can be done like selecting all entries from tables (ESS names, system group, system, subsystem, discipline, device group, device type)
 * and then take uuid and retrieve history for uuid. By that, all entries should be reached. In a sense, select distinct uuid, then retrieve history by uuid,
 * all ids should be encompassed by looking at all returned rows. Requires a couple of for loops and maps and sets to keep track of things.
 *
 * This verification concerns itself with new database, not old database.
 *
 * @return report of reachability of data
 */
@GetMapping("/data_reachable")

/**
 * Verify difference between old REST API and new REST API.
 *
 * Amount is less in new than in old. Verify that all content in new REST API is in old REST API and that difference is old/obsolete data.
 *
 * @return
 */
@GetMapping("/restapi_oldvsnew")
```

Backend, About

About

Some important things to keep in mind below.

API layer interfaces to correspond to REST API areas

- names
- structures
- history
- healthcheck
- verification

API layer implements API layer interfaces.

Service layer is called by API layer. Purpose of layer is to collect information for and handle specific task, e.g. get this given that information.

Repository layer is called by Service layer. Purpose of layer is to handle CRUD (create, read, update, delete) for persistence.

Backend, API layer

About

Some important things to keep in mind below.

API layer interfaces to correspond to REST API areas

- names
 - create names
 - read name
 - read names
 - update names
 - delete name
- structures
 - create structures
 - read structure
 - read structures
 - update structures
 - update structure (cancel)
 - update structure (approve)
 - update structure (reject)
 - update structure (check devices)
 - delete structure
- history
 - read history (name)
 - read history (structure)
- healthcheck
 - read healthcheck
- verification
 - read data migration with focus on device revisions
 - read data migration with focus on name part revisions
 - read data migration with focus on reachability of data
 - read data migration with focus on difference of old REST API and new REST API
 - (read data migration with focus on latest column)(encompassed by first two verifications)

API layer interfaces to contain

- http status codes
- Swagger annotations

API layer classes to implement API layer interfaces

Backend, Service layer

About

Some important things to keep in mind below.

Services to be provided

- get convention name
- get convention name equivalence
- get mnemonic
- get mnemonic equivalence
- validate mnemonic
- parse Excel file(s)
- CRUD
 - ESS name
 - System structure
 - Device structure

Backend, Repository layer

About

Some important things to keep in mind below.

Hibernate
Entity manager

May have interface and implementing classes like API layer.

More

About

Some important things to keep in mind below.

Ahead

About

Some important things to keep in mind below.