

LSDF-Portal: Project administration for the Large Scale Data Facility

Felix Karg

Wednesday, February 16th, 2022

Steinbuch Centre for Computing (SCC)



Karlsruher Institut für Technologie

What is the Large Scale Data Facility?

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- Financed by MWK BW, KIT, and Helmholtz-Society

Who am I?



Felix Karg

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- Main Interests: Programming, Statistics (ML), Biotechnology
- Current Hobbies: Reading, Dancing, Automation



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What is the LSDF-Portal

Introduction to Django

Project Results

Conclusion

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What is the LSDF-Portal

Overview

Screenshots

What is the LSDF-Portal?

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 - Created and improved over multiple SCC-internships

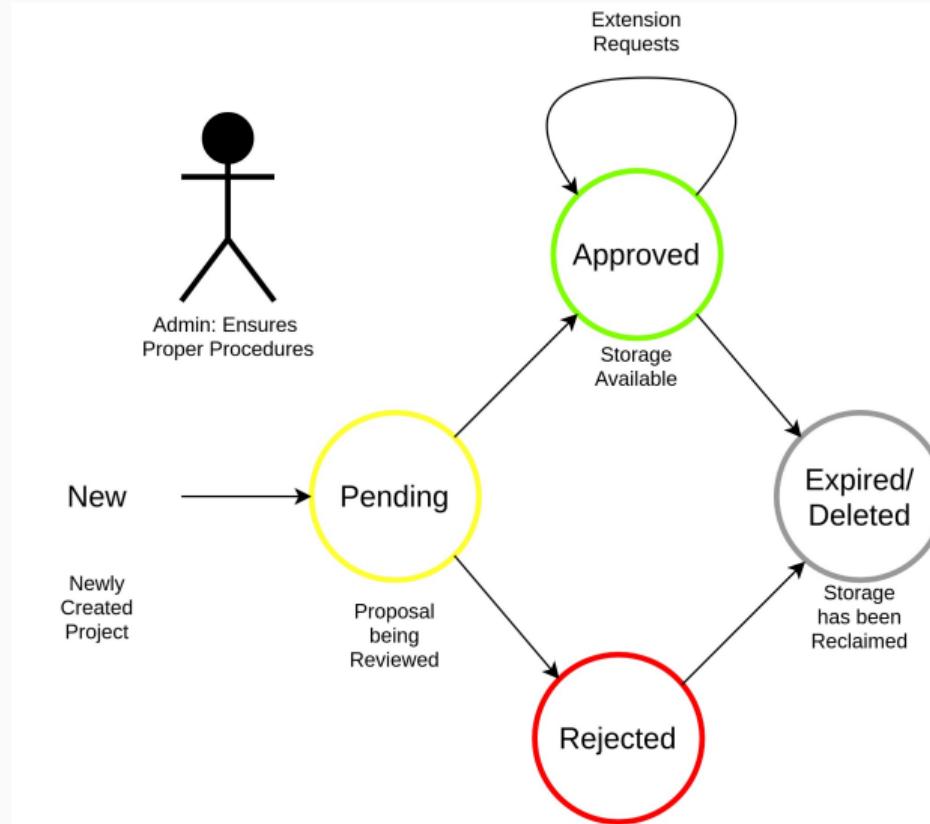
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<https://www.lsdf.kit.edu/os/storageprojects/>

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- Service description:
<https://www.scc.kit.edu/dienste/11228.php>

Project Lifecycle



What is the LSDF-Portal

Overview

Screenshots

Live Demo!

After First Login

The screenshot shows a web-based interface for managing storage projects. At the top, there is a header bar with the KIT logo, the text "Steinbuch Centre for Computing (SCC)", and navigation links for HOME, SITEMAP, ENGLISH, IMPRESSUM, DATENSCHUTZ, and KIT. Below the header, the main content area has a title "Storage projects" and a green button with a plus sign (+). A message below the title states "No requests are available."

Storage projects

No requests are available.

+

Project Creation

[HOME](#) | [SITEMAP](#) | [ENGLISH](#) | [IMPRESSUM](#) | [DATENSCHUTZ](#) | [KIT](#)



Karlsruher Institut für Technologie



[Home](#)

Create new project

Project information

Project name*

Contacts

Owner of the project

Firstname*

Lastname*

Project Creation: Add Contacts

Contacts

Owner of the project

Firstname*

Lastname*

Email*

Institute

Roles

- Head of the project
- Technical contact

Organization

Additional contact



Firstname

Lastname

Email

Institute

Available Fields

Please Specify where your project is mainly located according to the [DFG Fachsystematik](#):

DFG Discipline*

DFG Review Board*

DFG Subject Area*

End of the project*

06.02.2023

How long you need the storage. You will be able to request an extension

Capacity*

Expected storage capacity in TB (1 TB = 1000 GB)

Directory name*

Fields filled out

Please Specify where your project is mainly located according to the [DFG Fachsystematik](#):

DFG Discipline*

Natural Sciences (3)



DFG Review Board*

Mathematics (312)



DFG Subject Area*

Mathematics (312-01)



End of the project*

06.02.2023

How long you need the storage. You will be able to request an extension

Capacity*

15

Expected storage capacity in TB (1 TB = 1000 GB)

Submit Proposal

Protocols

- SSH, SFTP, SCP, HTTPS/Web are enabled for all storage projects
- CIFS
- NFS V3 (Client needs to be connected to KIT-IDM)

Access control

Owner name*

Who should be the owner the project directory? The owner can be a KIT user (e.g. ab1234) or a KIT service account (e.g. OE-ProjectName-0001). Please, contact your ITB to create a service account.

Group name*

Which group should get access to your project directory (e.g. OE-ProjectName-LSDF)? Please contact your ITB to create a group.

Group permission*

No permissions

▼

- Extended group permissions (ACLs)

Submit Storage Proposal

Successful Submission

[HOME](#) | [SITEMAP](#) | [ENGLISH](#) | [IMPRESSUM](#) | [DATENSCHUTZ](#) | [KIT](#)



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Steinbuch Centre for Computing (SCC)



Your storage request has been successfully saved.

[Home](#)

Edit project



Project information

Project name*

Contacts

Owner of the project

Project in List

The screenshot shows a web-based interface for managing storage projects. At the top, there's a header with the KIT logo, a banner for the Steinbuch Centre for Computing (SCC), and navigation links for HOME, SITEMAP, ENGLISH, IMPRESSUM, DATENSCHUTZ, and KIT. Below the header, the main content area is titled "Storage projects".

On the left, there's a button to "Show 10 entries" and a search bar. On the right, there's a green "+" button.

The main table has columns for Project Name, Institute, Capacity, and Last changes. The first row shows a project named "new project" associated with the Institute column. The Capacity is listed as "Requested: 15 TB" and the Last changes are "6.2.2022 14:27". To the right of this row are two small icons: a bar chart and a pencil.

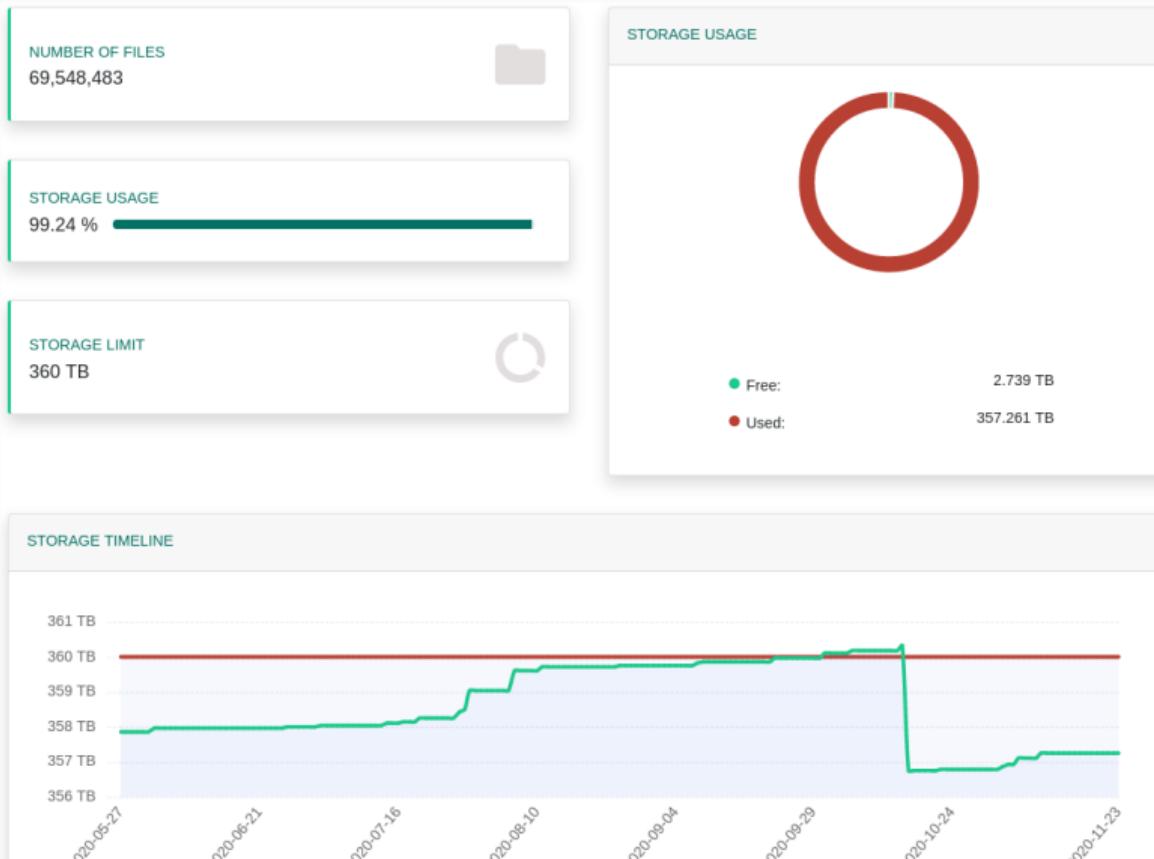
At the bottom, it says "Showing 1 to 1 of 1 entries" and includes navigation buttons for Previous, Next, and page number 1.

Project Name	Institute	Capacity	Last changes
new project		Requested: 15 TB	6.2.2022 14:27

Showing 1 to 1 of 1 entries

Previous **1** Next

Storage Use Histogram



What is the LSDF-Portal

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What is Django? On their Website

Meet Django

Django is a high-level Python web framework that encourages rapid development and clean, pragmatic design. Built by experienced developers, it takes care of much of the hassle of web development, so you can focus on writing your app without needing to reinvent the wheel. It's free and open source.



Ridiculously fast.

Django was designed to help developers take applications from concept to completion as quickly as possible.



Exceedingly scalable.

Some of the busiest sites on the web leverage Django's ability to quickly and flexibly scale.

Django Overview

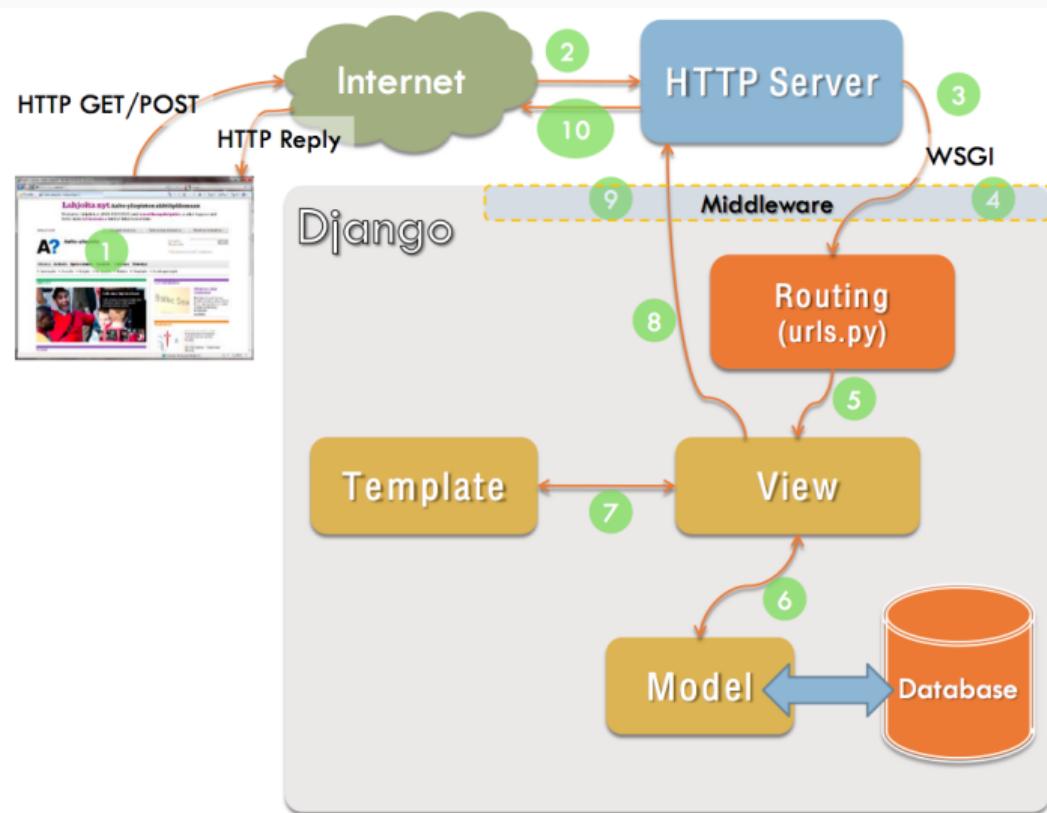


Image source: [1]

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Proper Logging

Automatically Generate Documentation

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Small Mentions

Extension Requests

Changes to Logging

Situation:

Now:

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- Used to be done in inconsistent formats with `print`-statements

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- Properly defined Logging levels (debug, info, warn, ...)

Changes to Logging

Situation:

- Used to be done in inconsistent formats with `print`-statements
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- Good to get overview of Codebase and touch many files

Now:

- Properly defined Logging levels (debug, info, warn, ...)
- Option to log messages in console, syslog and local file

Logging Now: Example

```
INFO [basehttp.log_message]: "GET / HTTP/1.1" 302 0
INFO [basehttp.log_message]: "GET /admin/login?next=/ HTTP/1.1" 302 0
INFO [basehttp.log_message]: "GET /admin/login/?next=/admin/login%3Fnext%3D/ HTTP/1.1" 200 2245
INFO [basehttp.log_message]: "GET /static/admin/js/nav_sidebar.js HTTP/1.1" 200 1360
INFO [basehttp.log_message]: "GET /static/admin/css/nav_sidebar.css HTTP/1.1" 200 2271
INFO [basehttp.log_message]: "GET /static/admin/css/login.css HTTP/1.1" 200 939
INFO [basehttp.log_message]: "GET /static/admin/css/base.css HTTP/1.1" 200 19513
INFO [basehttp.log_message]: "GET /static/admin/css/responsive.css HTTP/1.1" 200 18545
INFO [basehttp.log_message]: "GET /static/admin/css/fonts.css HTTP/1.1" 200 423
INFO [basehttp.log_message]: "GET /static/admin/fonts/Roboto-Light-webfont.woff HTTP/1.1" 200 85692
INFO [basehttp.log_message]: "GET /static/admin/fonts/Roboto-Regular-webfont.woff HTTP/1.1" 200 85876
WARNING [log.log_response]: Not Found: /favicon.ico
WARNING [basehttp.log_message]: "GET /favicon.ico HTTP/1.1" 404 7000
INFO [basehttp.log_message]: "POST /admin/login/?next=/admin/login%3Fnext%3D/ HTTP/1.1" 200 2405
INFO [basehttp.log_message]: "GET /static/admin/fonts/Roboto-Bold-webfont.woff HTTP/1.1" 200 86184
INFO [basehttp.log_message]: "GET /admin/login/?next=/ HTTP/1.1" 200 2205
INFO [basehttp.log_message]: "POST /admin/login/?next=/ HTTP/1.1" 200 2365
INFO [basehttp.log_message]: "GET /admin/login/ HTTP/1.1" 200 2204
INFO [basehttp.log_message]: "POST /admin/login/ HTTP/1.1" 200 2364
INFO [basehttp.log_message]: "GET / HTTP/1.1" 302 0
INFO [basehttp.log_message]: "GET /admin/login?next=/ HTTP/1.1" 302 0
INFO [basehttp.log_message]: "GET /admin/login/?next=/admin/login%3Fnext%3D/ HTTP/1.1" 200 2245
INFO [basehttp.log_message]: "POST /admin/login/?next=/admin/login%3Fnext%3D/ HTTP/1.1" 200 2405
INFO [basehttp.log_message]: "GET /persons/ HTTP/1.1" 200 13898
```

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Why Attempt Automatic Documentation?

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- Automatic, Complete, Up-to-date Overview
- Creation of a frequently used reference

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Situation:

- I had still only a rudimentary understanding of the codebase
- Especially on available routes, endpoints, internal dependencies

Expectations:

- Automatic, Complete, Up-to-date Overview
- Creation of a frequently used reference
- Provides a documentation pipeline and *default*

Automatically Generate Documentation

The screenshot shows a user interface for generating API documentation. It displays several sections, each containing a list of API endpoints with their methods, URLs, and descriptions. The sections are:

- traveler** Travelers
A dropdown menu showing five API endpoints:
 - GET /api/traveler Retrieve all travelers.
 - POST /api/traveler Create a traveler.
 - GET /api/traveler/{traveler} Display the specified traveler.
 - PUT /api/traveler/{traveler} Update the specified traveler.
- trip** Trips
A dropdown menu showing four API endpoints:
 - GET /api/trip Retrieve all trips.
 - POST /api/trip Create a trip.
 - GET /api/trip/{trip} Display the specified trip.
 - PUT /api/trip/{trip} Update the specified trip.
- quote-request** Quote Requests
A dropdown menu with an arrow icon.
- purchase-request** Purchase Requests
A dropdown menu with an arrow icon.
- Schemas**
A dropdown menu with an arrow icon.

(Success from different Project)

Automatically Generate Documentation

traveler	Travelers	▼
GET	/api/traveler	Retrieve all travelers.
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trip	Trips	▼
GET	/api/trip	Retrieve all trips.
POST	/api/trip	Create a trip.
GET	/api/trip/{trip}	Display the specified trip.
PUT	/api/trip/{trip}	Update the specified trip.
quote-request	Quote Requests	>
purchase-request	Purchase Requests	>
Schemas		▼

Failed, because:

(Success from different Project)

Automatically Generate Documentation

traveler	Travelers	▼
GET	/api/traveler	Retrieve all travelers.
LOCK		
POST	/api/traveler	Create a traveler.
LOCK		
GET	/api/traveler/{traveler}	Display the specified traveler.
LOCK		
PUT	/api/traveler/{traveler}	Update the specified traveler.
LOCK		
trip	Trips	▼
GET	/api/trip	Retrieve all trips.
LOCK		
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quote-request	Quote Requests	▶
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Schemas		▼

Failed, because:

- Autogeneration usually used to generate documentation for *DATA* endpoints

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Automatically Generate Documentation

The screenshot shows a Swagger UI interface with the following sections:

- traveler** (Travellers)
 - GET /api/traveler: Retrieve all travelers.
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Failed, because:

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- 'Primitive' Views lacking important information for automatic generation

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(Success from different Project)

Failed, because:

- Autogeneration usually used to generate documentation for *DATA* endpoints
- 'Primitive' Views lacking important information for automatic generation

Was worth a try.

Project Results

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Why Classify Storage Usage?

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- Good existing classification from 'Deutsche Forschungsgesellschaft'

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Engineering Sciences (131 Members)		Subject Areas
RB-Nr.	Review Board / Subject Area	
401	Production Technology	
402	Mechanics and Constructive Mechanical Engineering	
403	Process Engineering, Technical Chemistry	
404	Fluid Mechanics, Technical Thermodynamics and Thermal Energy Engineering	
405	Materials Engineering	
406	Materials Science	
407	Systems Engineering	
408	Electrical Engineering and Information Technology	
409	Computer Science	
	409-01 Theoretical Computer Science	
	409-02 Software Engineering and Programming Languages	
	409-03 Security and Dependability	
	409-04 Operating, Communication, Database and Distributed Systems	
	409-05 Interactive and Intelligent Systems, Image and Language Processing, Computer Graphics and Visualisation	
	409-06 Information Systems, Process and Knowledge Management	
	409-07 Computer Architecture and Embedded Systems	
	409-08 Massively Parallel and Data-intensive Systems	
410	Construction Engineering and Architecture	

Selection of DFG Subject Area upon Project Creation

Please Specify where your project is mainly located according to the [DFG Fachsystematik](#):

DFG Discipline*

DFG Review Board*

DFG Subject Area*

End of the project*

06.02.2023

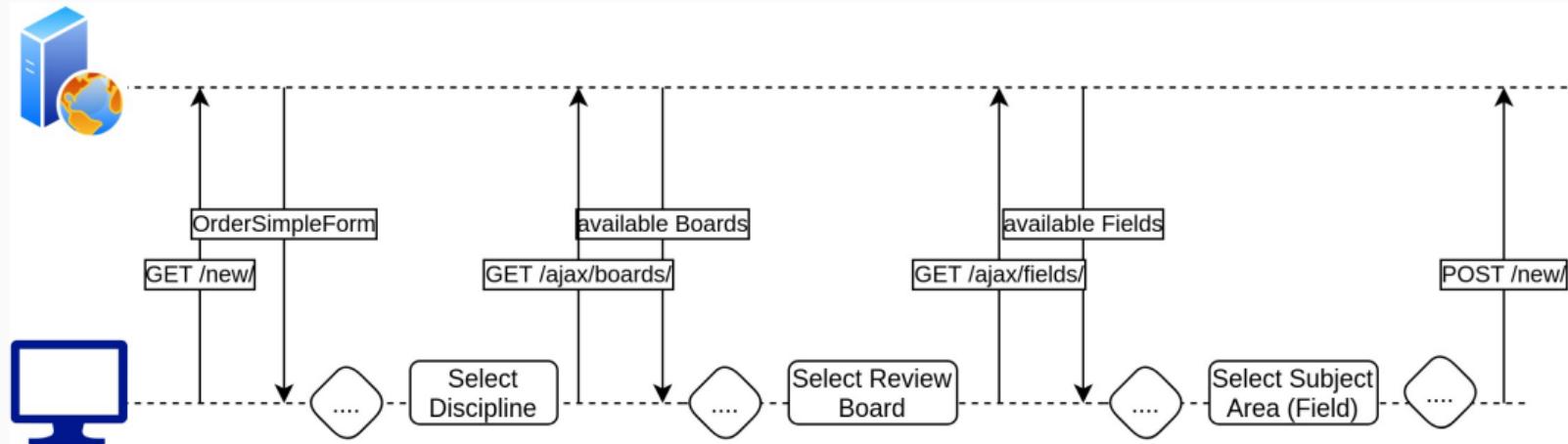
How long you need the storage. You will be able to request an extension

Capacity*

Expected storage capacity in TB (1 TB = 1000 GB)

Directory name*

Request Visualisation



Webpage: Requesting Fields for Boards

```
1  $("#id_board").change(function () {  
2      /* on change of `review board`, request new data for `subject area` field */  
3      var url = $("#form").attr("data-fields-url");          // <host>/ajax/fields/  
4      var board = $(this).val();        // Which board got selected  
5  
6      $.ajax({ // request available fields (subject areas) based on selected board  
7          url: url,           // resolved to <host>/ajax/fields/  
8          data: { 'board': board },    // currently selected board as part of request  
9          success: function (data, _ textStatus, _jqXHR) {  
10              $("#id_field").html(data);    // fill in available subject areas  
11          }  
12      });  
13  });
```

Backend: Answering With Available Fields

```
1 ## urls.py      # path(route: str, view: callable)
2 path(route='ajax/fields/', view=view_science_fields)
3
4 ## views.py
5 def view_science_fields(request: HttpResponseRedirect):
6     b_pk = request.GET.get('board')  # we get the pk of the selected board
7     if b_pk:  # select the Fields that are members of this Board
8         fields = Science_Field.objects.filter(board__pk=b_pk)
9         # SELECT field WHERE field.board.pk == b_pk
10        return render(request, 'dropdown_list_options.html',
11                      {'dropdown_items': fields})
12
13    return render(request, 'dropdown_list_options.html',
14                  {'dropdown_items': Science_Field.objects.none()})
15
```

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- The DFG schema changes every four years
- It was last changed in 2020
- So it'll change again in two years
- The database will extensively references current schema
- Not clear how much will change (probably not a whole lot)

We implemented a command to compare any csv to the schema currently in the database: `manage.py dfg_schema_diff`

Usage of dfg_schema_diff

```
usage: manage.py dfg_schema_diff [-h] [--locale LOCALE] [--columns COLUMNS]
```

```
...
```

```
FILE
```

Show difference from given file schema to DFG schema in database. By default, ignores the now deprecated hierarchy level 1. ...

positional arguments:

FILE	Path to dfg_systematic.csv
------	----------------------------

options:

-h, --help	show this help message and exit
------------	---------------------------------

--locale LOCALE	Set the language of the name column to select. Can correctly select both '<locale>' and 'prefLabel@<locale>' columns. (Default: 'en')
-----------------	---

--columns COLUMNS	Dictionary mapping columns (numbers) to expected values "level" (in the hierarchy, category: 0, deprecated/ignored: 1, board: 2, field: 3), "notation" (e.g. 101-27), and locale translations, e.g. "en" (double quotes are important!). Defaults to auto.
-------------------	--

```
...
```

```
...
```

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- Upgrading all dependencies, especially Django from v2 to v3
- Refactoring and Renaming of Models: Order to LSDFProject, PersonOrder to ProjectRole
- Failed Attempt to rename the Django application: order to lsdfportal

List of Attempts or Results not further talked about

- Upgrading all dependencies, especially Django from v2 to v3
- Refactoring and Renaming of Models: Order to LSDFProject, PersonOrder to ProjectRole
- Failed Attempt to rename the Django application: order to lsdfportal
 - Would have been easy with new setup, ignoring current database

List of Attempts or Results not further talked about

- Upgrading all dependencies, especially Django from v2 to v3
- Refactoring and Renaming of Models: Order to LSDFProject, PersonOrder to ProjectRole
- Failed Attempt to rename the Django application: order to lsdfportal
 - Would have been easy with new setup, ignoring current database
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- Admins: Show a list of all referenced publications from timeframe extensions
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- Failed attempt to properly modularize PersonForm

Project Results

Proper Logging

Automatically Generate Documentation

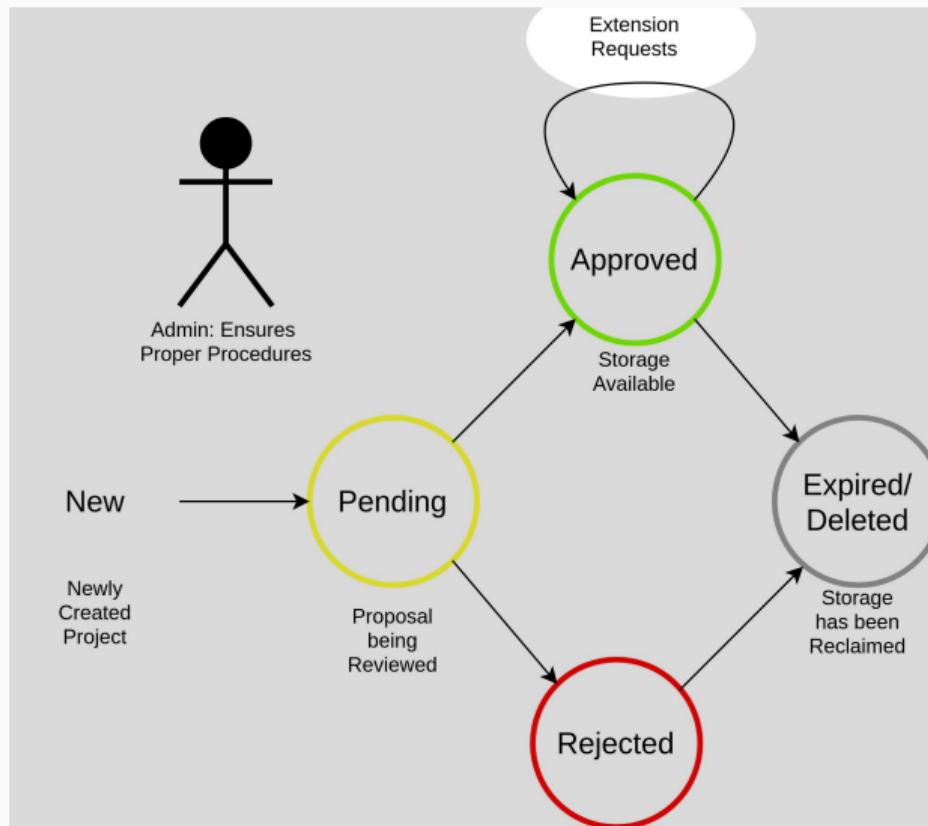
What Research is the Storage used for?

Diff CSV to DFG Schema in Database

Small Mentions

Extension Requests

Project Lifecycle: Extension Requests



Motivation

Frequent Requests:

Motivation

Frequent Requests:

- More Storage

Motivation

Frequent Requests:

- More Storage
- Longer Timeframe

Motivation

Frequent Requests:

- More Storage
- Longer Timeframe

Interaction with Admin not
standardized:



Motivation

Frequent Requests:

- More Storage
- Longer Timeframe

Interaction with Admin not
standardized:

- Mail



Motivation

Frequent Requests:

- More Storage
- Longer Timeframe

Interaction with Admin not
standardized:

- Mail
- Comments in Project



Motivation

Frequent Requests:

- More Storage
- Longer Timeframe

Interaction with Admin not
standardized:

- Mail
- Comments in Project
- ...



Timeframe Extension Request View

[HOME](#) | [SITEMAP](#) | [ENGLISH](#) | [IMPRESSUM](#) | [DATENSCHUTZ](#) | [KIT](#)



Karlsruher Institut für Technologie



Timeframe Extension Request

Project name*

new project

Capacity*

15

Expected storage capacity in TB (1 TB = 1000 GB)

End of the project*

06.02.2023

How long you need the storage. You will be able to request an extension

New End of Project*

2024-02-06

Extension request for one year

Reason*

Publications*

Capacity Extension Request View

[HOME](#) | [SITEMAP](#) | [ENGLISH](#) | [IMPRESSUM](#) | [DATENSCHUTZ](#) | [KIT](#)



Karlsruher Institut für Technologie



Steinbuch Centre for Computing (SCC)



Capacity Extension Request

Project name*

Capacity*

Expected storage capacity in TB (1 TB = 1000 GB)

End of the project*

How long you need the storage. You will be able to request an extension

Request Capacity (New Total)*

Storage capacity you would like to get in TB (1 TB = 1000 GB)

Reason*

Filled out Capacity Extension

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Karlsruher Institut für Technologie



Steinbuch Centre for Computing (SCC)



Capacity Extension Request

Project name*

new project

Capacity*

15

Expected storage capacity in TB (1 TB = 1000 GB)

End of the project*

06.02.2023

How long you need the storage. You will be able to request an extension

Request Capacity (New Total)*

20

Storage capacity you would like to get in TB (1 TB = 1000 GB)

Reason*

Artifacts got bigger than expected

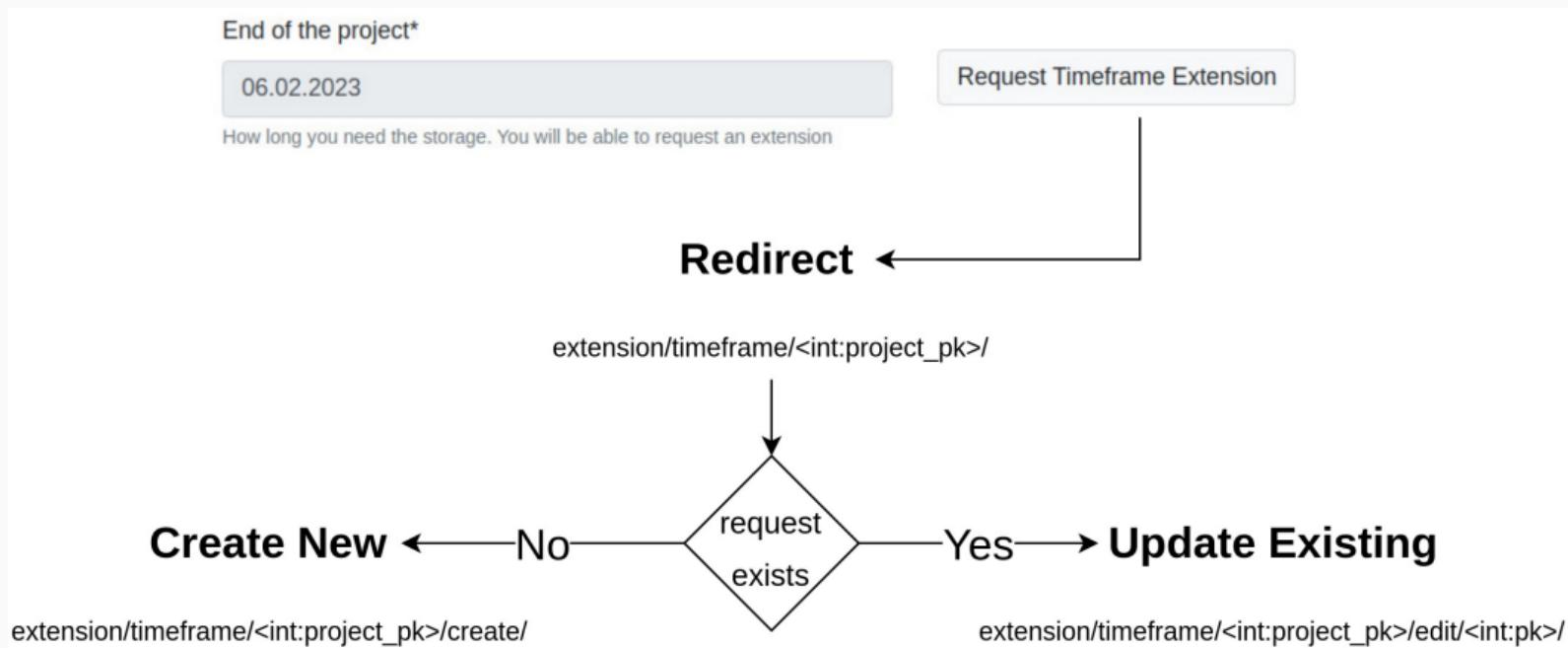
Project: Extension System Message

The screenshot shows a user interface for managing project messages. At the top right, there is a green button labeled "Save changes" with a white plus sign icon. Below this, three blue message cards are displayed, each containing a timestamp and a message:

- [6.2.2022 14:32] Changed project state to "PENDING"
- [6.2.2022 14:33] Changed project state to "APPROVED"
- [6.2.2022 14:36] Requested capacity extension to 20 TB

At the bottom right of the message area, there is another green button with a white plus sign icon, likely for composing a new message.

Routing for Timeframe Requests



Admin: Extension Request Overview

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Home

Open Capacity Requests

Show 10 entries

Search:

Project	Created	State	Reason	Capacity	Decision
new project	2022-02-06	PENDING	Artifacts got bigger than expected	New: 20 TB Current: 15 TB	<button>Approve</button> <button>Reject</button>
some other project	2022-02-06	PENDING	some weird reason	New: 18 TB Current: 16 TB	<button>Approve</button> <button>Reject</button>

System Message showing Extension Approval



Save changes

[6.2.2022 14:32] Changed project state to "PENDING"

[6.2.2022 14:33] Changed project state to "APPROVED"

[6.2.2022 14:36] Requested capacity extension to 20 TB

[6.2.2022 14:59] Changed status of requested capacity extension to APPROVED.



Increased Capacity from User View

Mathematics (312-01) ▾

End of the project*

06.02.2023

Request Timeframe Extension

How long you need the storage. You will be able to request an extension

Capacity*

20

Request Capacity Extension

Expected storage capacity in TB (1 TB = 1000 GB)

What is the LSDF-Portal

Introduction to Django

Project Results

Conclusion

Conclusion

Conclusion

- We learned about LSDF

Conclusion

- We learned about LSDF
- As well as the state of LSDF-Portal and changes

Conclusion

- We learned about LSDF
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- It was a lot of fun working on these challenging tasks!

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- We managed to be successful in most of them!

Conclusion

- We learned about LSDF
- As well as the state of LSDF-Portal and changes
- It was a lot of fun working on these challenging tasks!
- We managed to be successful in most of them!
- The codebase is in a much better state now

Conclusion

- We learned about LSDF
- As well as the state of LSDF-Portal and changes
- It was a lot of fun working on these challenging tasks!
- We managed to be successful in most of them!
- The codebase is in a much better state now
- I'm excited to get it deployed soon!

Next Internship Iteration



Before that: Deployment of newly implemented features

Next Internship Iteration



Before that: Deployment of newly implemented features

There is a bunch of stuff left to do:

Next Internship Iteration



- Adapt design to current KIT corporate design

Before that: Deployment of newly implemented features

There is a bunch of stuff left to do:

Next Internship Iteration



- Adapt design to current KIT corporate design
- Revisit and finish dynamic PersonForms implementation

Before that: Deployment of newly implemented features

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Next Internship Iteration



- Adapt design to current KIT corporate design
- Revisit and finish dynamic PersonForms implementation
- Login with unique identifiers (EPPN) instead of email

Before that: Deployment of newly implemented features

There is a bunch of stuff left to do:

Next Internship Iteration



Before that: Deployment of newly implemented features

- Adapt design to current KIT corporate design
- Revisit and finish dynamic PersonForms implementation
- Login with unique identifiers (EPPN) instead of email
- Advanced User Administration and Management of Accounts

There is a bunch of stuff left to do:

Next Internship Iteration



Before that: Deployment of newly implemented features

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- Adapt design to current KIT corporate design
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- Realizing Projects through Storage API-Access directly

Next Internship Iteration



Before that: Deployment of newly implemented features

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- ...

Sources i

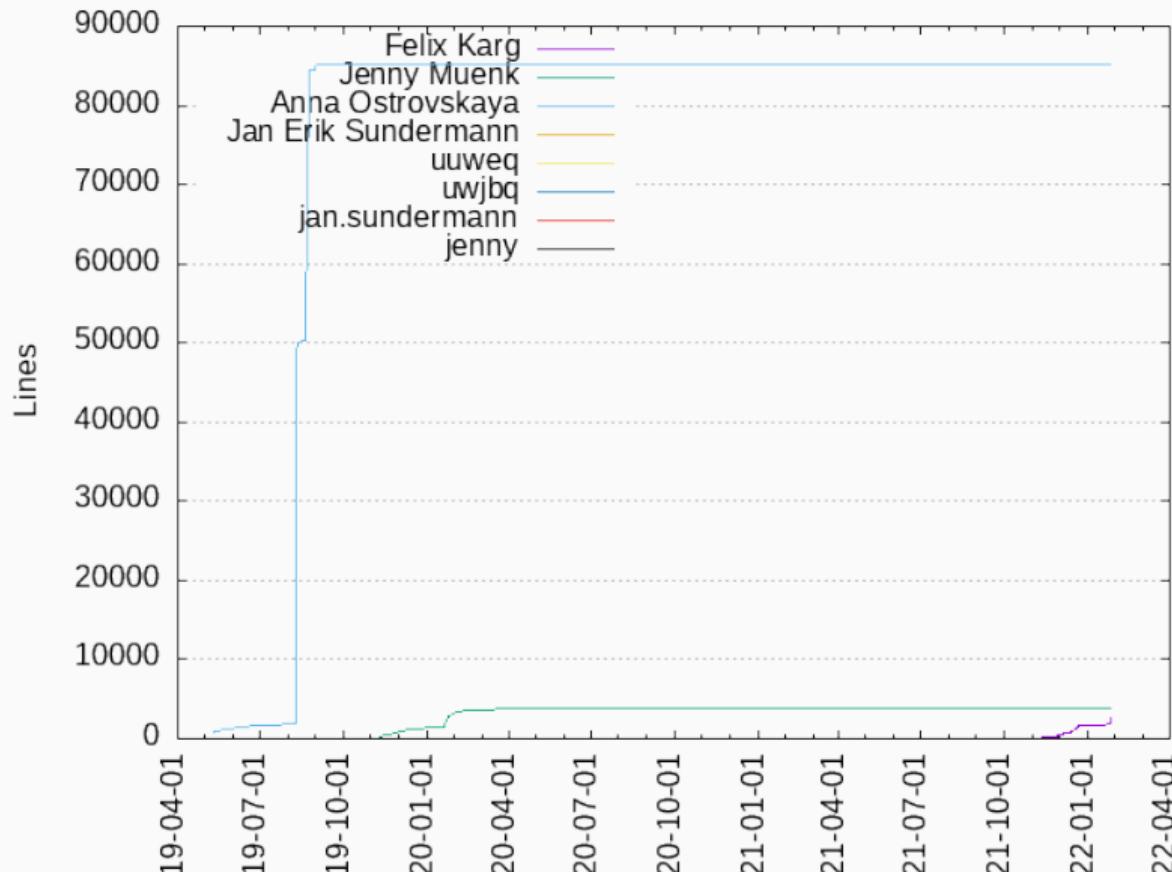
-  "Devopedia, "django"." <https://devopedia.org/django>, 2020.
accessed 2022-02-07.

End

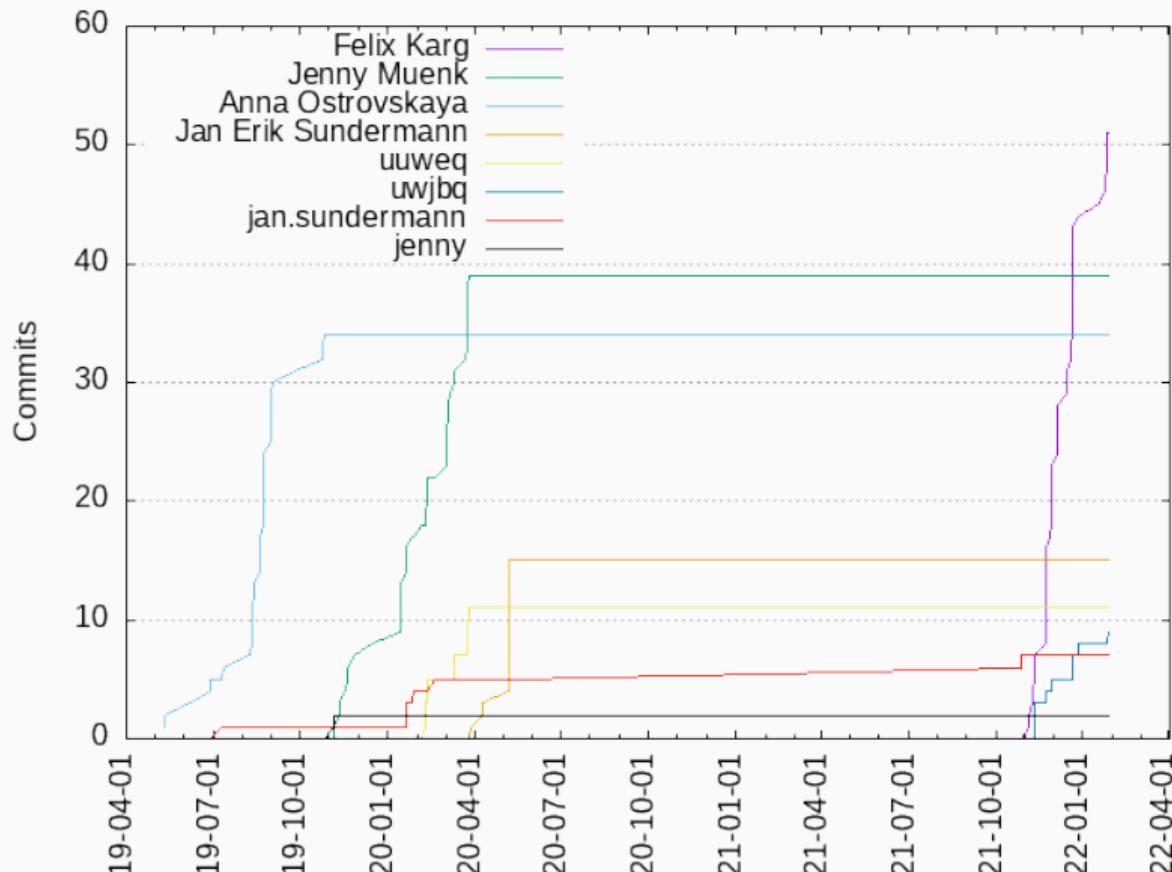
Statistics

More Screenshots

LOC by Author



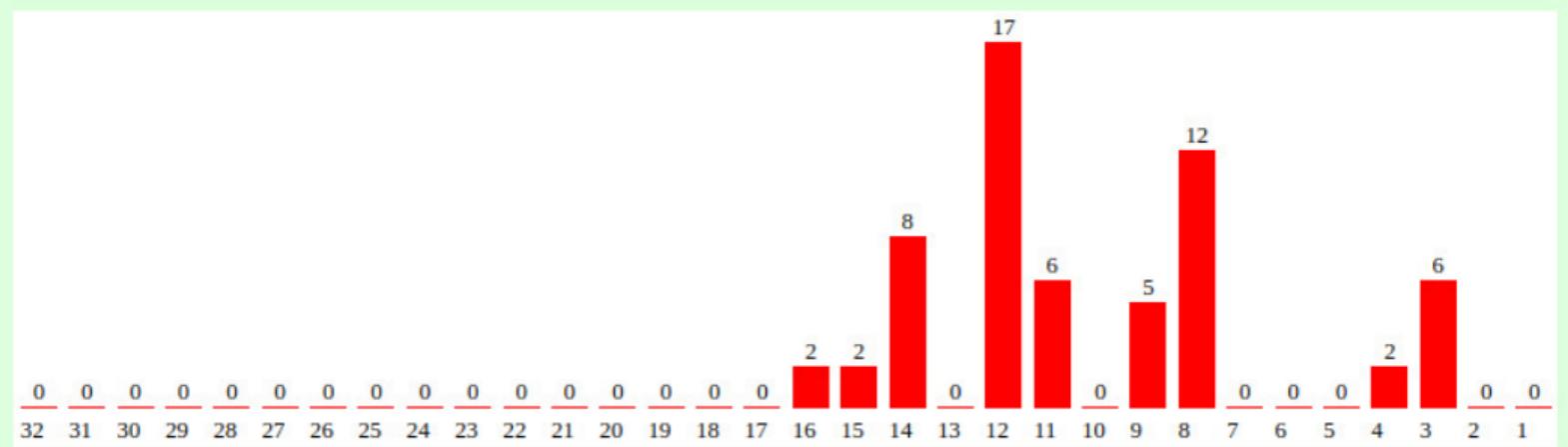
Commits by Author



Recent Activity (Commits by Week)

Weekly activity

Last 32 weeks



LOC stats: Before

Language	Files	Lines	Code	Comments	Blanks
CSS	28	19144	17235	284	1625
JavaScript	27	63499	43096	13725	6678
Python	34	1812	1510	56	246
SVG	14	14	14	0	0
HTML	10	938	838	30	70
— CSS	1	312	282	28	2
— JavaScript	5	155	126	13	16
Total	122	86008	62693	14627	8688

(The numbers don't quite add up, because I omitted e.g. Configs, Markdown, ...)

LOC stats: After

Language	Files	Lines	Code	Comments	Blanks
CSS	28	19162	17248	284	1630
JavaScript	27	63499	43096	13725	6678
Python	48	3078	2485	160	434
SVG	14	14	14	0	0
HTML	15	1231	1107	39	85
— CSS	1	312	282	28	2
— JavaScript	7	244	202	21	21
Total	134	87055	63960	14245	8850

(The numbers don't quite add up, because I omitted e.g. Configs, Markdown, ...)

LOC stats: Diff

Language	Files	Lines	Code	Comments	Blanks
CSS	0	+18	+13	0	+5
JavaScript	0	0	0	0	0
Python	+14	+1266	+975	+104	+188
SVG	0	0	0	0	0
HTML	+5	+293	+269	+9	+15
— CSS	0	0	0	0	0
— JavaScript	+2	+89	+76	+8	+5
Total	+12	+1047	+1267	+382	+162

(The numbers don't quite add up, because I omitted e.g. Configs, Markdown, ...)

Statistics

More Screenshots

More Screenshots

Project Approval

Requesting More Storage

Attempt to properly modularize PersonForm

Project Pending

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Steinbuch Centre for Computing (SCC)



Storage projects



Show entries

Search:

Project Name	Institute	Capacity	Last changes	
new project		Requested: 15 TB	6.2.2022 14:32	

Showing 1 to 1 of 1 entries

Previous **1** Next

State Change Message

Want to add more service accounts? Contact your ITB to request access.

Group permission*

No permissions



Extended group permissions (ACLs)



Save changes

[6.2.2022 14:32] Changed project state to "PENDING"



Project Approved

[HOME](#) | [SITEMAP](#) | [ENGLISH](#) | [IMPRESSUM](#) | [DATENSCHUTZ](#) | [KIT](#)



Karlsruher Institut für Technologie



Steinbuch Centre for Computing (SCC)



Storage projects



Show 10 entries

Search:

Project Name	Institute	Capacity	Last changes	
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Showing 1 to 1 of 1 entries

[Previous](#) [1](#) [Next](#)

State Change Message

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Extended group permissions (ACLs)



Save changes

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More Screenshots

Project Approval

Requesting More Storage

Attempt to properly modularize PersonForm

Extension Requests: The Project Needs to be Approved

DFG REVIEW BOARD

Mathematics (312) ▾

DFG Subject Area*

Mathematics (312-01) ▾

End of the project*

06.02.2023

Request Timeframe Extension

How long you need the storage. You will be able to request an extension

Capacity*

15

Request Capacity Extension

Expected storage capacity in TB (1 TB = 1000 GB)

Directory name*

projectdirectory

What should be the name of the project directory? We recommend using a short project acronym. Allowed characters are "a-z 0-9 _ -"

Timeframe Extension Request View

[HOME](#) | [SITEMAP](#) | [ENGLISH](#) | [IMPRESSUM](#) | [DATENSCHUTZ](#) | [KIT](#)



Karlsruher Institut für Technologie



Timeframe Extension Request

Project name*

new project

Capacity*

15

Expected storage capacity in TB (1 TB = 1000 GB)

End of the project*

06.02.2023

New End of Project*

2024-02-06

How long you need the storage. You will be able to request an extension

Extension request for one year

Reason*

Publications*

Capacity Extension Request View

[HOME](#) | [SITEMAP](#) | [ENGLISH](#) | [IMPRESSUM](#) | [DATENSCHUTZ](#) | [KIT](#)



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Steinbuch Centre for Computing (SCC)



Capacity Extension Request

Project name*

Capacity*

Expected storage capacity in TB (1 TB = 1000 GB)

End of the project*

How long you need the storage. You will be able to request an extension

Request Capacity (New Total)*

Storage capacity you would like to get in TB (1 TB = 1000 GB)

Reason*

Filled out Capacity Extension

[HOME](#) | [SITEMAP](#) | [ENGLISH](#) | [IMPRESSUM](#) | [DATENSCHUTZ](#) | [KIT](#)



Karlsruher Institut für Technologie



Steinbuch Centre for Computing (SCC)



Capacity Extension Request

Project name*

new project

Capacity*

15

Expected storage capacity in TB (1 TB = 1000 GB)

End of the project*

06.02.2023

Request Capacity (New Total)*

20

Storage capacity you would like to get in TB (1 TB = 1000 GB)

Reason*

Artifacts got bigger than expected

Extension System Message

[6.2.2022 14:32] Changed project state to "PENDING"

[6.2.2022 14:33] Changed project state to "APPROVED"

[6.2.2022 14:36] Requested capacity extension to 20 TB



Save changes



Projects Admin View

Storage projects



Show 10 entries

Search:

Extension Request Overview

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Karlsruher Institut für Technologie



Home

Open Capacity Requests

Show 10 entries

Search:

Project	Created	State	Reason	Capacity	Decision
new project	2022-02-06	PENDING	Artifacts got bigger than expected	New: 20 TB Current: 15 TB	<button>Approve</button> <button>Reject</button>
some other project	2022-02-06	PENDING	some weird reason	New: 18 TB Current: 16 TB	<button>Approve</button> <button>Reject</button>

Approving Request

Closed Capacity Requests

Show 10 entries

Search:

Project	Created	State	Reason	Capacity	Decision
new project	2022-02-06	APPROVED	Artifacts got bigger than expected	New: 20 TB Current: 20 TB	<button>Reopen</button>

System Message showing Extension Approval



Save changes

[6.2.2022 14:32] Changed project state to "PENDING"

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Increased Capacity from User View

Mathematics (312-01)



End of the project*

06.02.2023

Request Timeframe Extension

How long you need the storage. You will be able to request an extension

Capacity*

20

Request Capacity Extension

Expected storage capacity in TB (1 TB = 1000 GB)

More Screenshots

Project Approval

Requesting More Storage

Attempt to properly modularize PersonForm

Motivation for PersonForm abstraction

```
1  class OrderSimpleForm(ModelForm):
2      """ Form for Project requests: <host>/new/ """
3      p1_email = EmailField(...)
4      p1_institute = CharField(...)
5      p1_organization = CharField(...)
6      p1_firstname = CharField(...)
7      p1_lastname = CharField(...)
8      p1_roles = MultipleChoiceField(...)
9
10     p2_email = EmailField(...)
11     p2_institute = CharField(...)
12     p2_organization = CharField(...)
13     p2_firstname = CharField(...)
14     p2_lastname = CharField(...)
15     p2_roles = MultipleChoiceField(...)
16
17     p3_email = EmailField(...)
18     p3_institute = CharField(...)
19     p3_organization = CharField(...)
20     p3_firstname = CharField(...)
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22     p3_roles = MultipleChoiceField(...)
23     ...
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Motivation for PersonForm abstraction

- Boilerplate: strong indicator for bad code quality!

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1  class OrderSimpleForm(ModelForm):  
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7      p1_lastname = CharField(...)  
8      p1_roles = MultipleChoiceField(...)  
9  
10     p2_email = EmailField(...)  
11     p2_institute = CharField(...)  
12     p2_organization = CharField(...)  
13     p2_firstname = CharField(...)  
14     p2_lastname = CharField(...)  
15     p2_roles = MultipleChoiceField(...)  
16  
17     p3_email = EmailField(...)  
18     p3_institute = CharField(...)  
19     p3_organization = CharField(...)  
20     p3_firstname = CharField(...)  
21     p3_lastname = CharField(...)  
22     p3_roles = MultipleChoiceField(...)  
23     ...
```

Motivation for PersonForm abstraction

- Boilerplate: strong indicator for bad code quality!
- Redundant!

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13     p2_firstname = CharField(...)  
14     p2_lastname = CharField(...)  
15     p2_roles = MultipleChoiceField(...)  
16  
17     p3_email = EmailField(...)  
18     p3_institute = CharField(...)  
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20     p3_firstname = CharField(...)  
21     p3_lastname = CharField(...)  
22     p3_roles = MultipleChoiceField(...)  
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```

Motivation for PersonForm abstraction

- Boilerplate: strong indicator for bad code quality!
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- Prone to Bugs!

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1  class OrderSimpleForm(ModelForm):  
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12     p2_organization = CharField(...)  
13     p2_firstname = CharField(...)  
14     p2_lastname = CharField(...)  
15     p2_roles = MultipleChoiceField(...)  
16  
17     p3_email = EmailField(...)  
18     p3_institute = CharField(...)  
19     p3_organization = CharField(...)  
20     p3_firstname = CharField(...)  
21     p3_lastname = CharField(...)  
22     p3_roles = MultipleChoiceField(...)  
23     ...
```

Motivation for PersonForm abstraction

- Boilerplate: strong indicator for bad code quality!
- Redundant!
- Prone to Bugs!
- Distracts from meaning!

```
1  class OrderSimpleForm(ModelForm):  
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4      p1_institute = CharField(...)  
5      p1_organization = CharField(...)  
6      p1_firstname = CharField(...)  
7      p1_lastname = CharField(...)  
8      p1_roles = MultipleChoiceField(...)  
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11     p2_institute = CharField(...)  
12     p2_organization = CharField(...)  
13     p2_firstname = CharField(...)  
14     p2_lastname = CharField(...)  
15     p2_roles = MultipleChoiceField(...)  
16  
17     p3_email = EmailField(...)  
18     p3_institute = CharField(...)  
19     p3_organization = CharField(...)  
20     p3_firstname = CharField(...)  
21     p3_lastname = CharField(...)  
22     p3_roles = MultipleChoiceField(...)  
23     ...
```

Motivation for PersonForm abstraction

- Boilerplate: strong indicator for bad code quality!
- Redundant!
- Prone to Bugs!
- Distracts from meaning!
- Not Flexible!

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12     p2_organization = CharField(...)  
13     p2_firstname = CharField(...)  
14     p2_lastname = CharField(...)  
15     p2_roles = MultipleChoiceField(...)  
16  
17     p3_email = EmailField(...)  
18     p3_institute = CharField(...)  
19     p3_organization = CharField(...)  
20     p3_firstname = CharField(...)  
21     p3_lastname = CharField(...)  
22     p3_roles = MultipleChoiceField(...)  
23     ...
```

Motivation for PersonForm abstraction

- Boilerplate: strong indicator for bad code quality!
- Redundant!
- Prone to Bugs!
- Distracts from meaning!
- Not Flexible!
- Hard to modify!

```
1  class OrderSimpleForm(ModelForm):  
2      """ Form for Project requests: <host>/new/ """  
3      p1_email = EmailField(...)  
4      p1_institute = CharField(...)  
5      p1_organization = CharField(...)  
6      p1_firstname = CharField(...)  
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20     p3_firstname = CharField(...)  
21     p3_lastname = CharField(...)  
22     p3_roles = MultipleChoiceField(...)  
23     ...
```

Intermediate Results

```
1  class PersonForm(ModelForm):
2      roles = MultipleChoiceField(
3          label="Roles", required=False,
4          choices=(
5              ("ROLE_HEAD", "Head of the project"),
6              ("ROLE_TECH", "Technical contact"),
7          ))
8      class Meta:
9          model = Person
10         fields = [ "first_name", "last_name", "email",
11                     "institute", "roles", "organization",
12                 ]
13
14 PersonFormSet = formset_factory(PersonForm)
15
16 class OrderSimpleForm(ModelForm):
17     """ Form for Project requests: <host>/new/ """
18     owner = PersonForm() # main contact responsible
19     additional_contacts = PersonFormSet(data={
20         'form-TOTAL_FORMS': '0',    # empty form has zero total forms
21         'form-INITIAL_FORMS': '0', # initially no form is shown
22     })
```

Intermediate Results

```
1  class PersonForm(ModelForm):
2      roles = MultipleChoiceField(
3          label="Roles", required=False,
4          choices=(
5              ("ROLE_HEAD", "Head of the project"),
6              ("ROLE_TECH", "Technical contact"),
7          ))
8      class Meta:
9          model = Person
10         fields = [ "first_name", "last_name", "email",
11                     "institute", "roles", "organization",
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13
14 PersonFormSet = formset_factory(PersonForm)
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- Abstraction to one dedicated PersonForm

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- Would have deleted about 300 lines of boilerplate

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Nothing impossible, but requires a lot of intricate details to get right. We decided to instead implement something else.