[KAN-89] [Teacher] Delete an assignment Created: 22/May/24 Updated: 22/May/24 Resolved: 22/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Teacher & Admin

Type:	Task	**Priority:**	Medium
Reporter:	Nikolaj Dall	**Assignee:**	Nikolaj Dall
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i00019:9

Description

As a teacher,

I want to be able to delete an assignment, such that no students are attached to the assignment and it is gone from the database

Acceptance Criteria

1. **[Deletion]** Ability to delete and assignments and all traces of it in the database

↳[KAN-88] [Teacher] Remove students from an assignment Created: 22/May/24 Updated: 22/May/24 Resolved: 22/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Teacher & Admin

Type:	Task	**Priority:**	Medium
Reporter:	Nikolaj Dall	**Assignee:**	Nikolaj Dall
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:r0r

Description

As a teacher,

I want to be able to remove students from an assignments, such that the students are no longer tied to the assignment

Acceptance Criteria

1. **[Single Delete]** Ability to delete a single student from an assignment
2. **[Bulk Delete]** Ability to delete students in bulk from an assignment

Teacher & Admin (KAN-10)

↳[KAN-87] [Both] log out Created: 22/May/24 Updated: 22/May/24 Resolved: 22/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Teacher & Admin

Type:	Task	**Priority:**	Medium
Reporter:	Nikolaj Dall	**Assignee:**	Nikolaj Dall
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i00023:

Description

As an Admin or a Teacher,

I want to be able to log out of keycloak

Acceptance Criteria

1. **[Keycloak]** Log out of the website using keycloak and return to the landing page

↳**[KAN-86] [Teacher] List courses** Created: 22/May/24 Updated: 22/May/24 Resolved: 22/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Teacher & Admin

Type:	Task	**Priority:**	Medium
Reporter:	Nikolaj Dall	**Assignee:**	Nikolaj Dall
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i00019:r

Description

As a teacher,

I want to be able list all my courses, such that I can see the courses that I am teaching

Acceptance Criteria

1. **[List]** Ability to list all courses connected to the teacher

[KAN-85] [Teacher] Extract Metadata and Logs from submission Created: 22/May/24 Updated: 22/May/24 Resolved: 22/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Teacher & Admin

Type:	Task	**Priority:**	Medium
Reporter:	Nikolaj Dall	**Assignee:**	Nikolaj Dall
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:k

Description

As a teacher,

I want to be able to extract metadata as a CSV or logs in a ZIP for submissions made by the students to an assignment I have created. This should be able to be done for a whole assignment, a bulk of students or a single student.

Acceptance Criteria

1. **[Extraction]** Ability to download a CSV file or a ZIP file for the metadata or logs, respectively. Both in bulk or individual.

↳**[KAN-84] [Teacher] List submissions** Created: 22/May/24 Updated: 22/May/24 Resolved: 22/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Teacher & Admin

Type:	Task	**Priority:**	Medium
Reporter:	Nikolaj Dall	**Assignee:**	Nikolaj Dall
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:d

Description

As a teacher,

I want to be able to list submissions, such that i can see what submissions I have gotten for each assignment from the students

Acceptance Criteria

1. **[List]** Ability to list submissions from students that are enrolled in this teachers course for this teachers assignments

⤷**[KAN-83] [Teacher] Add students to a course** Created: 22/May/24 Updated: 22/May/24 Resolved: 22/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Teacher & Admin

Type:	Task	**Priority:**	Medium
Reporter:	Nikolaj Dall	**Assignee:**	Nikolaj Dall
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:

Description

As a teacher,

I want to be able to add students to my course such that I can share information about the course with them

Acceptance Criteria

1. **[Add]** Ability to add student to a course, and have it shown in the database

↳[KAN-82] **[Teacher] Create a course** Created: 22/May/24 Updated: 22/May/24 Resolved: 22/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Teacher & Admin

Type:	Task	Priority:	Medium
Reporter:	Nikolaj Dall	Assignee:	Nikolaj Dall
Resolution:	Done	Votes:	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i00019:i

Description

As a teacher,

I want to be able to create the course that I am teaching, such that I have a reference to share with my students

Acceptance Criteria

1. **[Creation]** Ability to create a course with a name and add it to the database

⤷[KAN-81] Secure Website Access with Signed TLS Certificate Created: 21/May/24 Updated: 21/May/24 Resolved: 21/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Infrastructure

Type:	Task	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Paul Schwarz
Resolution:	Done	**Votes:**	0
Labels:	Kubernetes		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:zzzvi

Description

As a system administrator,

I aim to enhance the trustworthiness of my website. To achieve this, I'll obtain a signed TLS certificate and configure NGINX to use it. I'll leverage a certificate manager and issuer through ACME to securely manage the secret.

Acceptance Criteria:

- Set up an ACME client (e.g., Certbot) to automate certificate issuance and renewal.
- The ACME client should use the ACME protocol to communicate with the CA.
- Regularly renew the certificate before it expires.
- Verify that the ACME client successfully obtains and deploys the renewed certificate.

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Cloud

Type:	Task	Priority:	Medium
Reporter:	Paul Schwarz	Assignee:	Unassigned
Resolution:	Done	Votes:	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i00053:

Description

As a System Developer,

I want to be able to enable HTTPS and TLS connections on the Kubernetes cluster, so that i can secure the communication channels between clients and services.

Acceptance Criteria*:*

1. **[Obtain Certificates]** Optain TLS certificatefrom either a Trusted Certificate Authority, or Let's Encrypt for temporary free certificate.
2. **[Certificate validation]** Ensure that the certificate covers all domains and subdomains of the cluster.
3. **[Ingress controller]** Set up the ingress to use the TLS certificate and ensure full functionality/compatibility

↳**[KAN-79] Set up Github Actions CI/CD for cloud deploy** Created: 20/May/24 Updated: 20/May/24 Resolved: 20/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Cloud

Type:	Task	**Priority:**	Medium
Reporter:	Paul Schwarz	**Assignee:**	Unassigned
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0004v:

Description

As a DevOps Engineer,

I want to be able to set up Github Actions for Continuous Integration/Deployment so that i can automate our building, testing and deployment pipeline.

Acceptance Criteria:

1. **[Workflow.yml]** The workflow for Cloud Deployment should correctly set up and configure the gcloud SDK and plugins, build our images, and run Helm upgrades on our 3 clustergroups (Infrastructure/monitoring/frontend)
2. **[Automatic Deployment]** The workflow should automatically execute on push or pull-request to a specified branch.

↳[KAN-78] **Implementing building/deployment through Google Cloud Builds**
Created: 20/May/24 Updated: 20/May/24 Resolved: 20/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Cloud

Type:	Task	**Priority:**	Medium
Reporter:	Paul Schwarz	**Assignee:**	Unassigned
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0004n:

Description

As a DevOps Engineer,

I want to add cloudbuild.yaml's for all our service groups (Infrastructure/Monitoring/Frontend), so that i can build our images and deploy local changes to the cloud using Google cloud builds.

Acceptance Criteria:

1. **[Build Files]:** All of the services and cluster components should be buildable through the cloudbuild.yaml files.
2. **[Pipeline Config]** Google cloud build should be default configured to the DM885 cluster and have access to our Github Repository for building automatically if required.
3. **[Cluster Verification]** After using Gcloud builds, ensure that the changes in the deployed cluster match expectations.

↳[KAN-77] **Ensure Persistent Volumes are correctly allocated on Gcloud** Created: 20/May/24 Updated: 20/May/24 Resolved: 20/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Cloud

Type:	Task	**Priority:**	Medium
Reporter:	Paul Schwarz	**Assignee:**	Unassigned
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0004f:

Description

As a System Developer,

I want to be able to ensure that persistent volumes are correctly allocated and linked to the appropriate services in the cloud, so that data persistence is maintained throughout the cloud deployment.

Acceptance Criteria:

1. **[Gcloud Compute Disk]** For the service that need it, gcloud disks have been created and properly bound to the services.
2. **[Gcloud Kubernetes Engine]** The kubernetes engine on google cloud should correctly detect and save out Persistent Volume Claims between deploys.

↳[KAN-76] Prepare Keycloak service for cloud deployment Created: 20/May/24 Updated: 20/May/24 Resolved: 20/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Cloud

Type:	Task	Priority:	Medium
Reporter:	Paul Schwarz	Assignee:	Unassigned
Resolution:	Done	Votes:	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i00047:

Description

As a DevOps Engineer,

I want to update the current implementation of Keycloak so that the service can correctly handle authentication in the cloud.

Acceptance Criteria:

1. **[Internal Traffic]** The internal connectivity of the Keycloak service inside of the cluster should be unchanged.
2. **[External Traffic]** Keycloak should be able to handle cloud-based URL's

↳[KAN-75] **Database Schema** Created: 16/May/24 Updated: 16/May/24 Resolved: 16/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Infrastructure

Type:	Task	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Tobias Svane Mikkelsen
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:zzzw

Description

We want to develop a Database Schema that can be shared across the teams

Infrastructure (KAN-37)

↳**[KAN-74] Convert to Helm** Created: 15/May/24 Updated: 21/May/24 Resolved: 21/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Infrastructure

Type:	Task	**Priority:**	Medium
Reporter:	Tobias Svane Mikkelsen	**Assignee:**	Tobias Svane Mikkelsen
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0003z:

Description

I want to migrate our existing Kubernetes deployment configurations for infrastructure to Helm charts.

So that we can efficiently manage, control, and deploy our infrastructure applications in a more streamlined and scalable manner.

Acceptance Criteria:

1. Successfully converted Kubernetes deployment configurations to Helm charts for all our microservices.
2. Ensure that all configurations and parameters are accurately translated into Helm chart templates.
3. Verify that the Helm charts are properly packaged and can be easily deployed using Helm CLI commands.
4. Provide documentation and guidelines for developers to use and effectively contribute to the Helm charts.

Completing these tasks will help us streamline our deployment process, improve scalability, and facilitate better collaboration among our development team.

↳[KAN-73] **Convert to Helm** Created: 15/May/24 Updated: 21/May/24 Resolved: 21/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Monitoring

Type:	Task	**Priority:**	Medium
Reporter:	Tobias Svane Mikkelsen	**Assignee:**	Tobias Svane Mikkelsen
Resolution:	Done	**Votes:**	0
Labels:	Kubernetes		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0003r:

Description

I want to migrate our existing Kubernetes deployment configurations for monitoring to Helm charts

So that we can efficiently manage, control, and deploy our monitoring applications in a more streamlined and scalable manner.

Acceptance Criteria:

1. Successfully converted Kubernetes deployment configurations to Helm charts for all our microservices.
2. Ensure that all configurations and parameters are accurately translated into Helm chart templates.
3. Verify that the Helm charts are properly packaged and can be easily deployed using Helm CLI commands.
4. Provide documentation and guidelines for developers to effectively use and contribute to the Helm charts.

Completing these tasks will help us streamline our deployment process, improve scalability, and facilitate better collaboration among our development team.

⤷**[KAN-72] [Teacher] Delete config** Created: 12/May/24 Updated: 21/May/24 Resolved: 15/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Teacher & Admin

Type:	Task	**Priority:**	Medium
Reporter:	Nikolaj Dall	**Assignee:**	Nikolaj Dall
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:r2

Description

As a teacher,

I want to be able to delete a config, such that the config gets removed from the database

Acceptance Criteria

1. **[Deletion]** Ability to set a delete a config and remove it from the database

↳**[KAN-71] [Both] Keycloak login** Created: 12/May/24 Updated: 22/May/24 Resolved: 22/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Teacher & Admin

Type:	Task	**Priority:**	Medium
Reporter:	Nikolaj Dall	**Assignee:**	Nikolaj Dall
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0003j:

Description

As an Admin or a Teacher,

I want to be able to utilize keycloak to login to the respective services

Acceptance Criteria

1. **[Keycloak]** Set up keycloak and authentication flows such that a teacher and an admin can log in to their services

↳ **[KAN-67] Comprehensive README for Developer Onboarding** Created: 11/May/24 Updated: 11/May/24

Status:	In Progress
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Group Organization

Type:	Task	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Kian Larsen
Resolution:	Unresolved	**Votes:**	0
Labels:	GitHub		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:zzzzv

Description

As a new developer contributing to the project,

I want a comprehensive and well-structured README file that serves as a guide for my development journey. This README should include:

- A clear and concise overview of the project, explaining its purpose, functionality, and value.
- Detailed setup instructions on how to get the project running locally on my machine, including prerequisites, dependencies, and step-by-step instructions.
- An explanation of the project's architecture and codebase, including the main components, their interactions, and the overall flow of data.
- Guidelines on how to contribute to the project, including coding standards, branch naming conventions, and the pull request process.
- Information on how the project integrates with the cloud, including deployment processes, environment variables, and cloud services used.

So that I can quickly understand the project, set it up on my local machine, make meaningful contributions, and understand how it interacts with the cloud. This will enable me to be productive and efficient in my development work.

Acceptance Criteria:

- The README provides a clear understanding of the project's purpose and functionality.
- The README contains detailed instructions for setting up the project locally.
- The README explains the project's architecture and codebase.
- The README provides guidelines for contributing to the project.
- The README explains how the project integrates with the cloud.
- A new developer can set up the project on their local machine and start contributing within a reasonable amount of time after reading the README.

↳[KAN-66] **Task Management and Overview with Jira** Created: 11/May/24 Updated: 11/May/24 Resolved: 11/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Group Organization

Type:	Task	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Lukas Brandt
Resolution:	Done	**Votes:**	0
Labels:	Administration		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0000b:

Description

As an organization,

We want a comprehensive Jira board that provides a complete overview of all our tasks, both in progress and completed. This board should:

- Display who is assigned to each task and their current progress.
- Indicate if any task is blocked and the reason for the blockage.
- Allow us to track the overall progress of our work.

So that we can effectively manage our tasks, identify bottlenecks, and make informed decisions about our workflow and resource allocation.

Acceptance Criteria:

- The Jira board is set up and accessible to all relevant members of the organization.
- All tasks, both in progress and completed, are accurately represented on the Jira board.
- Each task on the Jira board clearly shows the assignee and their current progress.
- Any blocked tasks are clearly marked, with details about the blockage readily available.
- The organization can track overall work progress and make estimations about future performance based on the Jira board.

↳**[KAN-65] Enhance Grafana with Alerts** Created: 11/May/24 Updated: 11/May/24

Status:	To Do
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Monitoring

Type:	Task	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Kian Larsen
Resolution:	Unresolved	**Votes:**	0
Labels:	Kubernetes		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:zzzv

Description

As a system developer,

I want a robust alerting system that proactively notifies me of any issues affecting the production system. This system should be integrated with our existing Slack service via Grafana's alerting system and should alert me in the following scenarios:

- When any pods are down or unresponsive, potentially affecting the availability of our services.
- When there is excessive memory usage, which could indicate a memory leak or other performance issue.
- When the available disk space is critically low, which could affect the system's ability to log events or store data.

So that I can promptly address these issues, minimize downtime, and ensure the smooth operation of our system in production.

Acceptance Criteria:

- The alerting system is successfully integrated with Slack via Grafana's alerting system.
- Alerts are triggered and sent to the designated Slack channel when pods are down.

- Alerts are triggered and sent to the designated Slack channel when memory usage exceeds the defined threshold.
- Alerts are triggered and sent to the designated Slack channel when available disk space falls below the defined threshold.
- The system developer is able to receive and acknowledge these alerts, and take appropriate action in response.

↳[KAN-64] Implementing Slack for Effective Organizational Communication
Created: 11/May/24 Updated: 11/May/24

Status:	In Progress
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Group Organization

Type:	Task	Priority:	Medium
Reporter:	Kian Larsen	Assignee:	William J
Resolution:	Unresolved	Votes:	0
Labels:	Administration		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:zzzzt

Description

As an organization,

We need a communication channel that not only facilitates internal discussions but also integrates seamlessly with our other applications such as GitHub and Grafana. This channel should:

- Allow us to create separate threads for discussing different topics such as technology choices, frontend development, infrastructure, and more.
- Provide service hooks for integrating with our other applications, enabling us to receive updates and notifications directly within the communication channel.

After careful consideration, we have decided that Slack could be an effective solution for our needs, so that we can streamline our communication, keep everyone in the loop about ongoing discussions and updates, and foster a collaborative environment within our organization.

Acceptance Criteria:

- Slack is set up and accessible to all members of the organization.
- Separate threads are created for different discussion topics.
- Service hooks are successfully set up for GitHub and Grafana, and updates from these applications are being received in Slack.

- Members of the organization are actively using Slack for communication and finding it beneficial for their work.

↳**[KAN-62] GitHub Organization Setup** Created: 11/May/24 Updated: 11/May/24 Resolved: 11/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Group Organization

Type:	Task	Priority:	Medium
Reporter:	Kian Larsen	Assignee:	Kian Larsen
Resolution:	Done	Votes:	0
Labels:	GitHub		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0002w:

Description

As an organization,

We need a GitHub organization to consolidate our branches and configure access rights, so that we can manage our codebase effectively and integrate tools like SonarCloud for code quality checks.

Acceptance Criteria:

- **Given** we have multiple code branches, **When** we set up our GitHub organization, **Then** all our branches should be gathered under this organization.
- **Given** we have a GitHub organization, **When** we configure access rights, **Then** only authorized personnel should have access to specific branches.
- **Given** we have a GitHub organization, **When** we integrate SonarCloud, **Then** it should be able to analyze the code in our branches and provide quality checks.

Notes:

- The GitHub organization setup should allow us to manage our branches effectively.
- The access rights configuration should ensure that only authorized personnel can access and make changes to specific branches.
- The integration with SonarCloud is crucial for maintaining code quality and security.

↳[**KAN-61**] **Branch Protection and Code Review** Created: 11/May/24 Updated: 11/May/24 Resolved: 11/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Group Organization

Type:	Task	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Kian Larsen
Resolution:	Done	**Votes:**	0
Labels:	GitHub		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0002x:

Description

As a developer,

I want branch protection rules to be enforced, so that I can avoid accidentally merging changes into the wrong branch or introducing errors that could have been avoided with a peer review – the responsibility for any issues is shared and not solely on me. Furthermore, I want the main branch to be carefully managed by administrators, so that the integrity of our codebase is maintained and any potential issues are mitigated.

Acceptance Criteria:

- Branch protection rules are clearly defined and enforced.
- All changes must be reviewed by at least one colleague before merging.
- Only administrators have the authority to manage the main branch.
- Any errors or issues are identified and addressed promptly to maintain the integrity of the codebase.

[KAN-60] Group Organization Created: 11/May/24 Updated: 11/May/24 Due: 24/May/24

Status:	In Progress
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None

Type:	Epic	Priority:	Medium
Reporter:	Kian Larsen	Assignee:	Kian Larsen
Resolution:	Unresolved	Votes:	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0003b:
Start date:	01/Mar/24

↳**[KAN-59] Automated Image Update Checks and PR Creation with Dependabot**
Created: 11/May/24 Updated: 11/May/24

Status:	In Progress
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Group Organization

Type:	Task	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Kian Larsen
Resolution:	Unresolved	**Votes:**	0
Labels:	GitHub		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:zzzzi

Description

As a system developer,

I want an automated system that checks for updates to our images and creates pull requests (PRs) for these updates. This system should:

- Use Dependabot to automatically check for new updates to our images.
- Have the necessary access rights to create PRs for these updates, so that I only need to review and approve them.
- Please note that due to the lack of support for Kubernetes YAML files, this automation is expected to work only for our custom Docker files.

So that I can focus on other important tasks without the need to manually check for image updates and create PRs, thereby improving my productivity and efficiency.

Acceptance Criteria:

- Dependabot is set up and has the necessary access rights to create PRs.
- Dependabot is successfully checking for updates to our custom Docker files.
- When updates are available, Dependabot automatically creates a PR.
- The system developer is able to review and approve these PRs.

↳[KAN-58] **Code Quality Assurance with SonarCloud and SonarLint** Created: 11/May/24 Updated: 11/May/24

Status:	In Progress
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Group Organization

Type:	Task	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Kian Larsen
Resolution:	Unresolved	**Votes:**	0
Labels:	GitHub		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:zzzzr

Description

As an all-purpose developer,

I want to ensure that I am writing clean, secure code that adheres to our team's coding conventions and style, so that I can prevent introducing vulnerabilities into the system.

Acceptance Criteria:

- Given I have written code for a feature, When I create a pull request, Then a Continuous Integration (CI) build should be triggered.
- Given a CI build is triggered, **When** the build runs, **Then** it should include a SonarCloud analysis that checks my code against our customised quality gates.
- Given the SonarCloud analysis is complete, **When** it finds issues that don't pass the quality gates, **Then** I should be notified and be unable to merge my code into the main branch until the issues are resolved.
- Given I am writing or refactoring code, **When** I violate any of our coding conventions or styles, **Then** SonarLint (integrated in my IDE) should alert me in real-time.

Notes:

- The quality gates and coding rules should be customisable to fit our team's specific needs and practices.

- The CI build and SonarCloud analysis should run on every pull request to ensure consistent code quality.
- SonarLint should be integrated directly into VSCode or other IDEs used by the team for immediate feedback on coding style and conventions.

[KAN-57] Cloud Created: 11/May/24 Updated: 21/May/24

Status:	In Progress
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None

Type:	Epic	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Paul Schwarz
Resolution:	Unresolved	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0002v:

↳**[KAN-56] Partitioning Environments using Namespaces** Created: 11/May/24 Updated: 11/May/24

Status:	To Do
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Infrastructure

Type:	Task	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Kian Larsen
Resolution:	Unresolved	**Votes:**	0
Labels:	Kubernetes		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:zzzx

Description

As a system developer,

I aim to create a structured and organized environment by defining namespaces. This could involve partitioning environments such as production and pre-production, if available. Alternatively, it could mean segregating the backend and frontend into separate namespaces. This categorization will enhance the manageability and overview of the Kubernetes cluster.

Acceptance Criteria:

- Namespaces should be defined to partition environments, such as production and pre-production, if such an environment exists.
- The backend and frontend should be placed into two different namespaces if this grouping enhances the overview of the Kubernetes cluster.
- The partitioning of environments or services into namespaces should not disrupt the functionality or performance of the services.
- Post partitioning, an enhanced overview of the Kubernetes cluster should be observable.

Infrastructure (KAN-37)

[KAN-55] Configure Backend to Use HTTPS Created: 11/May/24 Updated: 11/May/24

Status:	To Do
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Infrastructure

Type:	Task	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Kian Larsen
Resolution:	Unresolved	**Votes:**	0
Labels:	Kubernetes		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:zzzy

Description

As a system developer,

I aim to secure all our services' network communications. This involves configuring services that natively support HTTPS to use it and deploying NGINX instances as reverse proxies for services that don't directly support HTTPS. The objective is to safeguard sensitive data during transmission and uphold our services' integrity.

Acceptance Criteria:

- Services that support HTTPS should use HTTPS instead of HTTP for network communication.
- For services that don't support HTTPS, an NGINX instance should be deployed as a reverse proxy to facilitate HTTPS communication.
- Post configuration changes, all services should be able to communicate using HTTPS without any errors upon restart.
- The new HTTPS setup should not adversely affect the performance or functionality of the services when they communicate.

↳[KAN-54] **Configure Network Policies For Services** Created: 11/May/24 Updated: 11/May/24

Status:	To Do
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Infrastructure

Type:	Task	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Kian Larsen
Resolution:	Unresolved	**Votes:**	0
Labels:	Kubernetes		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:zzzz

Description

As a system developer,

I want my services to communicate securely and without exposing more than necessary. To achieve this, we need to configure network policies such that services that must be able to see each other can, and services that should not, cannot. This approach is similar to networking in docker-compose, where each compose file is on its own network, unless attached to an externally defined network.

Acceptance Criteria:

- Network policies are configured to control service communication.
- Services that need to see each other can communicate securely.
- Services that should not see each other are unable to communicate.

↳**[KAN-53] Migration to Kubernetes** Created: 11/May/24 Updated: 11/May/24 Resolved: 11/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Infrastructure

Type:	Task	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Kian Larsen
Resolution:	Done	**Votes:**	0
Labels:	Kubernetes		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0002f:4

Description

As a developer,

I expect scalability and high performance of my system. To achieve this, we need to migrate our prototyped docker-compose infrastructure setup to Kubernetes. This will ensure that our system can handle increased load and perform optimally under different conditions.

Acceptance Criteria:

- The system is migrated from a docker-compose infrastructure setup to Kubernetes.
- The system demonstrates scalability and can handle increased load.
- The migration process is smooth and does not disrupt the functioning of the system.

↳**[KAN-52] Ingress with HTTPS and TLS 1.3** Created: 11/May/24 Updated: 11/May/24 Resolved: 11/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Infrastructure

Type:	Task	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Kian Larsen
Resolution:	Done	**Votes:**	0
Labels:	Kubernetes		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0002f:9

Description

As a developer (and user),

I want the connection from Big IP to the services to be secure by using HTTPS with TLS 1.3. This requires an Ingress with certificates (preferably signed by a CA). We will achieve this using NGINX as a reverse proxy/ingress to our Kubernetes cluster, ensuring a secure and reliable connection to our services. The services can then be accessed as indicated below:

- `<Host>/keycloak`
- `<Host>/student`
- `<Host>/teacher`
- `<Host>/adminer`
- `<Host>/grafana`

Acceptance Criteria:

- The connection from Big IP to the services is secure and uses HTTPS with TLS 1.3.
- NGINX is used as a reverse proxy/ingress to the Kubernetes cluster.
- The system performs reliably with the secure connection setup.

[KAN-51] Adminer GUI Access to Application Database Created: 11/May/24 Updated: 11/May/24 Resolved: 11/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Infrastructure

Type:	Task	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Kian Larsen
Resolution:	Done	**Votes:**	0
Labels:	docker-compose		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0002f:i

Description

As a developer,

I want Adminer GUI access to my application database such that I can view the contents of the database and execute queries for debugging or migrations. This makes it possible to interact with the database in a user-friendly and efficient manner.

Acceptance Criteria:

- GUI access to the application database is provided.
- The developer is able to view the contents of the database.
- The developer is able to execute queries for debugging or migrations.
- An Adminer interface is available for interacting with the database.

↳[KAN-50] **Access to Docker Daemon for Service Development** Created: 11/May/24 Updated: 11/May/24 Resolved: 11/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Infrastructure

Type:	Task	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Kian Larsen
Resolution:	Done	**Votes:**	0
Labels:	docker-compose		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0002g:

Description

As a developer,

I want access to a Docker daemon such that I can:

- develop a service to run Docker images.
- ensure that the daemon does not interfere with the production environment, so that the stability and integrity of the production environment are maintained.
- use the Docker in Docker (DinD) image from DockerHub, where the Docker socket is exposed on Port 2376.

Acceptance Criteria:

- Access to a Docker daemon is provided for service development.
- The Docker daemon does not interfere with the production environment.
- The Docker in Docker image from DockerHub is used, with the Docker socket exposed on Port 2376.
- Connection to the Docker host is possible via HTTPS.

↳**[KAN-49] Keycloak Based Authentication** Created: 11/May/24 Updated: 11/May/24 Resolved: 11/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Infrastructure

Type:	Task	Priority:	Medium
Reporter:	Kian Larsen	**Assignee:**	Kian Larsen
Resolution:	Done	**Votes:**	0
Labels:	docker-compose		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0002h:

Description

As a system developer,

I want to have a consistent environment with reusable services. To achieve this, I want to use a single service, Keycloak, for handling authentication across the whole environment. This will ensure a unified and secure authentication mechanism for all services.

Acceptance Criteria:

- Keycloak is used as the single service for handling authentication across the environment.
- All services are able to integrate with Keycloak for authentication.
- The authentication mechanism provided by Keycloak is secure and reliable.

↳**[KAN-48] PostgeSQL Keycloak** Created: 11/May/24 Updated: 11/May/24 Resolved: 11/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Infrastructure

Type:	Task	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Kian Larsen
Resolution:	Done	**Votes:**	0
Labels:	docker-compose		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0002j:

Description

As a developer,

I want to replace the default H2 in-memory database used by Keycloak with a PostgreSQL database. This change is necessary to ensure the stability and performance of my applications, as the H2 in-memory database is not suitable for production use.

Acceptance Criteria:

- A production-ready environment is set up and maintained.
- Keycloak is configured to use a PostgreSQL database instead of the default H2 in-memory database.

↳**[KAN-47] PostgreSQL Database for Service Development** Created: 11/May/24 Updated: 11/May/24 Resolved: 11/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Infrastructure

Type:	Task	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Kian Larsen
Resolution:	Done	**Votes:**	0
Labels:	docker-compose		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0002n:

Description

As a developer,

I need to have a PostgreSQL database available to use for my services. This is crucial for the development, testing, and deployment of my services, ensuring they have a robust and reliable data storage solution.

Acceptance Criteria:

- A PostgreSQL database is set up and available for use.
- The developer is able to connect to the PostgreSQL database from their services.
- The database is reliable and meets the performance requirements of the services.
- The database is maintained and managed effectively to ensure its availability and integrity.
- The database must be persistent on whatever server it is deployed on.
- Database must be based on a `relations.sql` file declaring all tables.

↳**[KAN-46] Deployment of kube-state-metrics for Enhanced Grafana Dashboard**
Created: 10/May/24 Updated: 10/May/24 Resolved: 10/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Monitoring

Type:	Task	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Kian Larsen
Resolution:	Done	**Votes:**	0
Labels:	Kubernetes		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:zy9

Description

As a system developer,

I want to know the state of my running pods and other data supporting the kube-state-metric Grafana dashboard. To achieve this, I want to deploy kube-state-metrics and add the endpoint to Prometheus, so that I can have a comprehensive view of my Kubernetes cluster's state and performance.

Acceptance Criteria:

1. **[Deploy kube-state-metrics]** kube-state-metrics should be successfully deployed in the system. It should be able to collect and expose detailed information about the state of the Kubernetes cluster.
2. **[Enhancement of Grafana Dashboard]** The Grafana dashboard should be enhanced with the data collected by kube-state-metrics. The dashboard should display this information in a clear and user-friendly manner.
3. **[Addition of Metrics Endpoint to Prometheus]** The metrics endpoint provided by kube-state-metrics should be added to Prometheus. Prometheus should be able to scrape metrics from this endpoint and make them available for analysis.

↳[**KAN-45**] **Enhancing Grafana Dashboards with Cluster Information using cAdvisor and Prometheus** Created: 10/May/24 Updated: 10/May/24 Resolved: 10/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Monitoring

Type:	Task	Priority:	Medium
Reporter:	Kian Larsen	**Assignee:**	Kian Larsen
Resolution:	Done	**Votes:**	0
Labels:	Kubernetes		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:zyr

Description

As a system developer,

I want to enhance my Grafana dashboards with information about my cluster using the cAdvisor integrated into the Kubernetes Kubelet and add this metrics endpoint to Prometheus, so that I can have a more detailed and comprehensive view of my system's performance and status.

Acceptance Criteria:

1. **[Integration of cAdvisor]** cAdvisor should be successfully integrated into the Kubernetes Kubelet. It should be able to collect and expose detailed information about the cluster.

1. **[Enhancement of Grafana Dashboards]** The Grafana dashboards should be enhanced with the cluster information collected by cAdvisor. The dashboards should display this information in a clear and user-friendly manner.

1. **[Addition of Metrics Endpoint to Prometheus]** The metrics endpoint provided by cAdvisor should be added to Prometheus. Prometheus should be able to scrape metrics from this endpoint and make them available for analysis.

↳**[KAN-44] Migration of Monitoring System to Kubernetes for Scalability and Cloud Readiness** Created: 10/May/24 Updated: 10/May/24 Resolved: 10/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Monitoring

Type:	Task	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Kian Larsen
Resolution:	Done	**Votes:**	0
Labels:	Kubernetes		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:zz

Description

As a system developer,

I want to migrate our current monitoring system to Kubernetes to allow scalability and make it ready for deployment on the cloud, so that we can efficiently manage the growth of our system and take advantage of the benefits of cloud computing.

Acceptance Criteria:

1. **[Successful Migration]** The current monitoring system should be successfully migrated to Kubernetes. All functionalities of the current system should be preserved in the Kubernetes environment.
2. **[Cloud Readiness]** The migrated monitoring system should be ready for deployment on the cloud. It should be compatible with our chosen cloud provider and adhere to the best practices for cloud deployments.

[KAN-43] Deployment and Configuration of Prometheus for Metrics Scraping

Created: 10/May/24 Updated: 11/May/24 Resolved: 10/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Monitoring

Type:	Task	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Kian Larsen
Resolution:	Done	**Votes:**	0
Labels:	docker-compose		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:zzzr

Description

As a system developer,

I want to deploy Prometheus to scrape metrics from various endpoints and configure it to scrape from the following endpoints: `prometheus:9090`, `keycloak:8080`, `promtail:9080`, `loki:3100`, `node-exporter:9100`, and{{postgres-exporter:9187}}, so that I can have a centralized and efficient system for metrics collection and analysis.

Acceptance Criteria:

1. **[Deploy Prometheus]** Prometheus should be successfully deployed in the system. It should be up and running without any issues.
2. **[Configure Scraping Endpoints]** Prometheus should be configured to scrape metrics from the following endpoints:
    1. Prometheus Endpoint (prometheus:9090)
    2. Keycloak Endpoint (keycloak:8080)
    3. Promtail Endpoint (promtail:9080)
    4. Loki Endpoint (loki:3100)
    5. Node-Exporter Endpoint (node-exporter:9100)
    6. Postgres-Exporter Endpoint (postgres-exporter:9187)

7. Prometheus must be persistent on the server

↳[**KAN-42**] **Node- and Postgres-Exporter for Metrics Insight** Created: 10/May/24 Updated: 10/May/24 Resolved: 10/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Monitoring

Type:	Task	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Kian Larsen
Resolution:	Done	**Votes:**	0
Labels:	docker-compose		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:zyi

Description

As a system developer,

I want to gain insights into my database metrics and node metrics by deploying node-exporter and postgres-exporter. These tools should expose these metrics via a Prometheus metrics endpoint, so that I can monitor and analyze the performance of my system and database in a comprehensive manner.

1. **[Deploy Node-Exporter]** Node-Exporter should be successfully deployed using Docker-Compose. It should be able to collect and expose various node metrics.
2. **[Deploy Postgres-Exporter]** Postgres-Exporter should be deployed using Docker-Compose. It should be able to gather and expose metrics from the PostgreSQL database.
3. **[Prometheus Metrics Endpoint]** Both Node-Exporter and Postgres-Exporter should expose the collected metrics via a Prometheus metrics endpoint. This will allow Prometheus to scrape and store these metrics.

↳[KAN-41] Logging with Promtail and Loki Created: 10/May/24 Updated: 10/May/24 Resolved: 10/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Monitoring

Type:	Task	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Kian Larsen
Resolution:	Done	**Votes:**	0
Labels:	docker-compose		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:zzz4

Description

As a system developer,

I want to transition from analogue to digital logging by utilizing Promtail for log gathering and parsing, and Loki as the log client, so that I can have a more efficient, searchable, and manageable logging system.

Acceptance Criteria:

1. **[Promtail Implementation]** Promtail should be successfully deployed and configured. It should be able to gather and parse logs from various services in the system.
2. **[Loki Implementation]** Loki should be set up as the log client. It should be able to receive and store logs sent by Promtail, and make them available for querying.
3. **[Docker-Compose Usage]** The implementation of Promtail and Loki should be done using Docker-Compose. This will ensure a reproducible environment and ease of deployment.

↳**[KAN-40] Integration of Grafana for Comprehensive System Metrics Analysis**
Created: 10/May/24 Updated: 10/May/24 Resolved: 10/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Monitoring

Type:	Task	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Kian Larsen
Resolution:	Done	**Votes:**	0
Labels:	docker-compose		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:zzz9

<table><tr><td>Description</td></tr></table>

As a system developer,

I want to utilize Grafana as a unified portal for querying both application database and system metrics, so that I can have a holistic view of my system's performance and data in one place.

Acceptance criteria:

1. **[Deploy Grafana using Docker]** Grafana should be successfully deployed and running in our environment. It should be accessible and responsive to user interactions.
2. **[Configure Authentication with Keycloak]** Grafana should be configured to use Keycloak for authentication. This will ensure secure access to the dashboard and protect sensitive data from unauthorized access.
3. **[Configure Datasources]** The following datasources should be correctly configured and connected to Grafana:
    1. Prometheus should be set up as a datasource in Grafana. It should be able to fetch and display system metrics in real-time.
    2. Loki should be integrated as a datasource in Grafana for querying and displaying log data. It should be able to fetch logs from different services and display them in a user-friendly format.

3. The PostgreSQL database should be connected as a datasource in Grafana. It should allow querying the application database and visualizing the data in various formats.

↳[KAN-39] **Dashboard for Container and Node Metrics** Created: 10/May/24 Updated: 10/May/24 Resolved: 10/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Monitoring

Type:	Task	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Kian Larsen
Resolution:	Done	**Votes:**	0
Labels:	docker-compose		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:zzzi

Description

As a **developer** of the system,

I want to have a dashboard that visualizes vital data about my containers and node metrics, so that I can monitor the health and performance of my system in real-time.

Acceptance Criteria:

1. The dashboard should display real-time data about the containers such as CPU usage, memory usage, network IO, disk IO, and number of running processes.
2. The dashboard should be able to filter data based on specific time ranges (e.g., last hour, last 24 hours, last 7 days, etc.).
3. The dashboard should be user-friendly and intuitive, allowing me to easily understand the state of my system.

[KAN-38] Monitoring Created: 10/May/24 Updated: 11/May/24 Due: 24/May/24

Status:	In Progress
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None

Type:	Epic	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Kian Larsen
Resolution:	Unresolved	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0002f:
Start date:	01/Mar/24
Issue color:	purple

[KAN-37] Infrastructure Created: 10/May/24 Updated: 21/May/24 Due: 24/May/24

Status:	In Progress
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None

Type:	Epic	**Priority:**	Medium
Reporter:	Kian Larsen	**Assignee:**	Kian Larsen
Resolution:	Unresolved	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i00027:
Start date:	01/Mar/24
Issue color:	purple

↳[**KAN-36**] **[Teacher] Create Assignment Config page** Created: 15/Apr/24 Updated: 22/May/24 Resolved: 10/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Teacher & Admin

Type:	Task	Priority:	Medium
Reporter:	William J	Assignee:	William J
Resolution:	Done	Votes:	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001z:

Description

As an Admin,

I want to be able to add create an assignment config, such that i can specify resources

Acceptance Criteria

1. **[Create]** Ability to create an assignment config that can then be edited

↳**[KAN-35] [Both] Add bootstrap styling globally** Created: 06/Mar/24 Updated: 22/May/24

Status:	To Do
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Teacher & Admin

Type:	Task	Priority:	Medium
Reporter:	William J	Assignee:	Unassigned
Resolution:	Unresolved	Votes:	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i00021:

Description

As an Teacher or an Admin,

I want to be able to have a nice interface using bootstrapping

Acceptance Criteria

1. **[Bootstrap]** Added bootstrap to the website

Teacher & Admin (KAN-10)

↳[KAN-34] [Teacher] List assignments Created: 06/Mar/24 Updated: 22/May/24 Resolved: 15/Apr/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Teacher & Admin

Type:	Task	**Priority:**	Medium
Reporter:	William J	**Assignee:**	William J
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:zzy

Description

As a Teacher,

I want to be able to list my assignments, such that I can get an overview of the assignments I have

Acceptance Criteria

1. **[Listing]** Ability to see a list of all assignments

↳**[KAN-31] [Admin] Monitoring and logging the platform using a dashboard** Created: 29/Feb/24 Updated: 22/May/24 Resolved: 22/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Teacher & Admin

Type:	Task	**Priority:**	Medium
Reporter:	Nikolaj Dall	**Assignee:**	Unassigned
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i00020:

Description

As an Admin,

I want to be able to monitor and log the platform such that i can get an overview of the system.

Acceptance Criteria

1. **[Monitor]** Able to log into monitoring service
2. **[Logging]** Able to log into logging service

Teacher & Admin (KAN-10)

↳[KAN-30] [Admin] Deleting students and teachers Created: 29/Feb/24 Updated: 22/May/24 Resolved: 12/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Teacher & Admin

Type:	Task	**Priority:**	Medium
Reporter:	Nikolaj Dall	**Assignee:**	Nikolaj Dall
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001z:2

Description

As an Admin,

I want to be able to delete students and teachers from the system, so they do not exists anymore and can't access the system

Acceptance Criteria

1. **[Deletion]** Ability to delete a teacher or a student from the system
2. **[Consistency]** When deleting a student or teacher it should be done in both the keycloak database and the postgres database

↳**[KAN-29] [Admin] Pause a teacher** Created: 29/Feb/24 Updated: 22/May/24 Resolved: 12/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Teacher & Admin

Type:	Task	**Priority:**	Medium
Reporter:	Nikolaj Dall	**Assignee:**	Nikolaj Dall
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001z:4

Description

As an Admin,

I want to be able to pause a teacher, so they appear as paused and can not receive submissions anymore

Acceptance Criteria

1. **[Pause]** Ability to pause a teacher the system, and have it updated in the database

↳**[KAN-28]** **[Admin] Add teachers to the system** Created: 29/Feb/24 Updated: 22/May/24 Resolved: 12/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Teacher & Admin

Type:	Task	**Priority:**	Medium
Reporter:	Nikolaj Dall	**Assignee:**	Nikolaj Dall
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001z:9

Description

As an Admin,

I want to be able to add a teacher from the system, so they can access the system

Acceptance Criteria

1. **[Add]** Ability to add a teacher to the system
2. **[Default Password]** When a teacher is created they get a default password, that needs to be changed on first login
3. **[Consistency]** When a teacher is added it should be done in both the keycloak database and the postgres database

↳[KAN-27] [Teacher] Limit the queue of submissions a student can have at a time
Created: 29/Feb/24 Updated: 22/May/24 Resolved: 10/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Teacher & Admin

Type:	Task	**Priority:**	Medium
Reporter:	William J	**Assignee:**	Unassigned
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:zzm

Description

As a teacher,

I want to be set que of submissions a student can have at a time, such that i can limit the amount of submissions a student can have.

Acceptance Criteria

1. **[Setting]** Ability to set the submissions queue and have it shown in the database

↳[KAN-26] As a user, I want a responsive UI, such that have a nice experience using the system. Created: 29/Feb/24 Updated: 08/May/24 Resolved: 08/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Users

Type:	Task	**Priority:**	Medium
Reporter:	Lukas Brandt	**Assignee:**	Unassigned
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:zy

[KAN-25] [Teacher] Set a vCPU count for running assignment tests Created: 29/Feb/24 Updated: 22/May/24 Resolved: 10/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Teacher & Admin

Type:	Task	**Priority:**	Medium
Reporter:	William J	**Assignee:**	Unassigned
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:zx

Description

As a teacher,

I want to be set vCPU for running assignment test, such that i can control the resources used

Acceptance Criteria

1. **[Setting]** Ability to set the vCPU and have it shown in the database

↳**[KAN-24]** **As a user, I want to cancel a submission if not processed yet, such that I don't submit by mistake.** Created: 29/Feb/24 Updated: 08/May/24

Status:	In Progress
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Users

Type:	Task	Priority:	Medium
Reporter:	Lukas Brandt	**Assignee:**	Unassigned
Resolution:	Unresolved	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:xi

↳[KAN-23] [Teacher] Set max TIME and MEMORY for a submitted program
Created: 29/Feb/24 Updated: 22/May/24 Resolved: 10/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Teacher & Admin

Type:	Task	**Priority:**	Medium
Reporter:	William J	**Assignee:**	Unassigned
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:zr

Description

As a teacher,

I want to be set max TIME, and MEMORY for a submitted program, such that i can control the resources used

Acceptance Criteria

1. **[Setting]** Ability to set the TIME and MEMORY and have it shown in the database

↳[KAN-22] As a user, i want to see the status of my assignment, such that I can see the evaluation/grade Created: 29/Feb/24 Updated: 08/May/24

Status:	In Progress
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Users

Type:	Task	**Priority:**	Medium
Reporter:	Lukas Brandt	**Assignee:**	Unassigned
Resolution:	Unresolved	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:zi

↳**[KAN-21]** **[Teacher] Add students to an assignment** Created: 29/Feb/24 Updated: 22/May/24 Resolved: 15/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Teacher & Admin

Type:	Task	**Priority:**	Medium
Reporter:	William J	**Assignee:**	Nikolaj Dall
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:r0i

Description

As a teacher,

I want to be able to add students to an assignments, such that students are tied to assignments

Acceptance Criteria

1. **[Single Add]** Ability to add a single student to an assignment
2. **[Bulk Add]** Ability to bulk add students to an assignment

↳[KAN-20] **As a user, I want to submit a solution, such that I can answer an assignment.** Created: 29/Feb/24 Updated: 08/May/24 Resolved: 08/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Users

Type:	Task	**Priority:**	Medium
Reporter:	Lukas Brandt	**Assignee:**	Unassigned
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:y

↳**[KAN-19] As a user, I want to get a list of my assignments, such that I can see my progress and commits.** Created: 29/Feb/24 Updated: 08/May/24 Resolved: 08/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Users

Type:	Task	**Priority:**	Medium
Reporter:	Lukas Brandt	**Assignee:**	Unassigned
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:x

↳[KAN-18] **As a user, I want to log in, such that I can use the system** Created:
29/Feb/24 Updated: 08/May/24 Resolved: 08/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Users

Type:	Task	Priority:	Medium
Reporter:	Lukas Brandt	Assignee:	Unassigned
Resolution:	Done	Votes:	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:v

↳**[KAN-17]** **[Teacher] Make a deadline for an assignment** Created: 29/Feb/24 Updated: 22/May/24 Resolved: 22/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Teacher & Admin

Type:	Task	**Priority:**	Medium
Reporter:	William J	**Assignee:**	Nikolaj Dall
Resolution:	Done	**Votes:**	0
Labels:	Teacher		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:r

Description

As a teacher,

I want to be able to set a deadline for an assignment, such that the students now when the due date is

Acceptance Criteria

1. **[Assignment Creation]** Ability to set a deadline when creating an assignment
2. **[Edit Assignment]** Ability to edit the deadline on an assignment

↳**[KAN-16] [Teacher] Set visibility of an assignment** Created: 29/Feb/24 Updated: 21/May/24 Resolved: 15/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Teacher & Admin

Type:	Task	**Priority:**	Medium
Reporter:	William J	**Assignee:**	Nikolaj Dall
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:r1

Description

As a teacher,

I want to be able to set the visibility for an assignment, such that I can set it to visible or not visible

Acceptance Criteria

1. **[Assignment Creation]** Ability to set the visibility when creating an assignment
2. **[Edit Assignment]** Ability to edit the visibility for an assignment

↳[**KAN-14**] **[Teacher] Create an assignment** Created: 29/Feb/24 Updated: 21/May/24 Resolved: 06/Mar/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Teacher & Admin

Type:	Task	**Priority:**	Medium
Reporter:	William J	**Assignee:**	William J
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i00019:

Description

As a teacher,

I want to be able to create an assignment, such that I can communicate to my students what I expect to be done

Acceptance Criteria

1. **[Creation]** Ability to create a basic assignment and add it to the database

Teacher & Admin (KAN-10)

⤷**[KAN-13] [Teacher] Homepage** Created: 29/Feb/24 Updated: 21/May/24 Resolved: 12/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Teacher & Admin

Type:	Task	**Priority:**	Medium
Reporter:	William J	**Assignee:**	Nikolaj Dall
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001a:r4

Description

As a teacher,

I want to be able to see a landing page where I can navigate around

Acceptance Criteria

1. **[Navigation]** Ability to navigate the homepage through the navigation bar
2. **[Login]** Landing on the homepage after logging in

↳[KAN-12] **[Admin] Homepage** Created: 29/Feb/24 Updated: 22/May/24 Resolved: 12/May/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Teacher & Admin

Type:	Task	**Priority:**	Medium
Reporter:	William J	**Assignee:**	Nikolaj Dall
Resolution:	Done	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001z:i

Description

As an admin,

I want to be able to see a landing page where I can navigate around

Acceptance Criteria

1. **[Navigation]** Ability to navigate the homepage through the navigation bar
2. **[Login]** Landing on the homepage after logging in

Status:	In Progress
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None

Type:	Epic	**Priority:**	Medium
Reporter:	Lukas Brandt	**Assignee:**	Bastian Graver
Resolution:	Unresolved	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001j:
Issue color:	dark_orange

[KAN-10] Teacher & Admin Created: 29/Feb/24 Updated: 22/May/24 Due: 24/May/24

Status:	In Progress
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None

Type:	Epic	**Priority:**	Medium
Reporter:	William J	**Assignee:**	Nikolaj Dall
Resolution:	Unresolved	**Votes:**	0
Labels:	None		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0001b:
Start date:	29/Feb/24
Issue color:	purple

Description

This Epic includes the development of the Teacher and the Admin pages.

- Frontend
- Backend

↳[KAN-8] First and Second Contact Point Created: 23/Feb/24 Updated: 11/May/24 Resolved: 29/Feb/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Group Organization

Type:	Task	**Priority:**	Medium
Reporter:	William J	**Assignee:**	Kian Larsen
Resolution:	Done	**Votes:**	0
Labels:	Administration		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0000n:

Description

We have decided the following:

1. First contact point: Kian Banke Larsen
2. Second contact point: Lukas Brandt Madsen

↳**[KAN-7] Send Email to Jacapo Regarding Project Choice** Created: 23/Feb/24 Updated: 11/May/24 Resolved: 29/Feb/24

Status:	Done
Project:	DM885
Components:	None
Affects versions:	None
Fix versions:	None
Parent:	Group Organization

Type:	Task	**Priority:**	Medium
Reporter:	Tobias Svane Mikkelsen	**Assignee:**	Kian Larsen
Resolution:	Done	**Votes:**	0
Labels:	Administration		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original estimate:	Not Specified		

Rank:	0|i0000v: