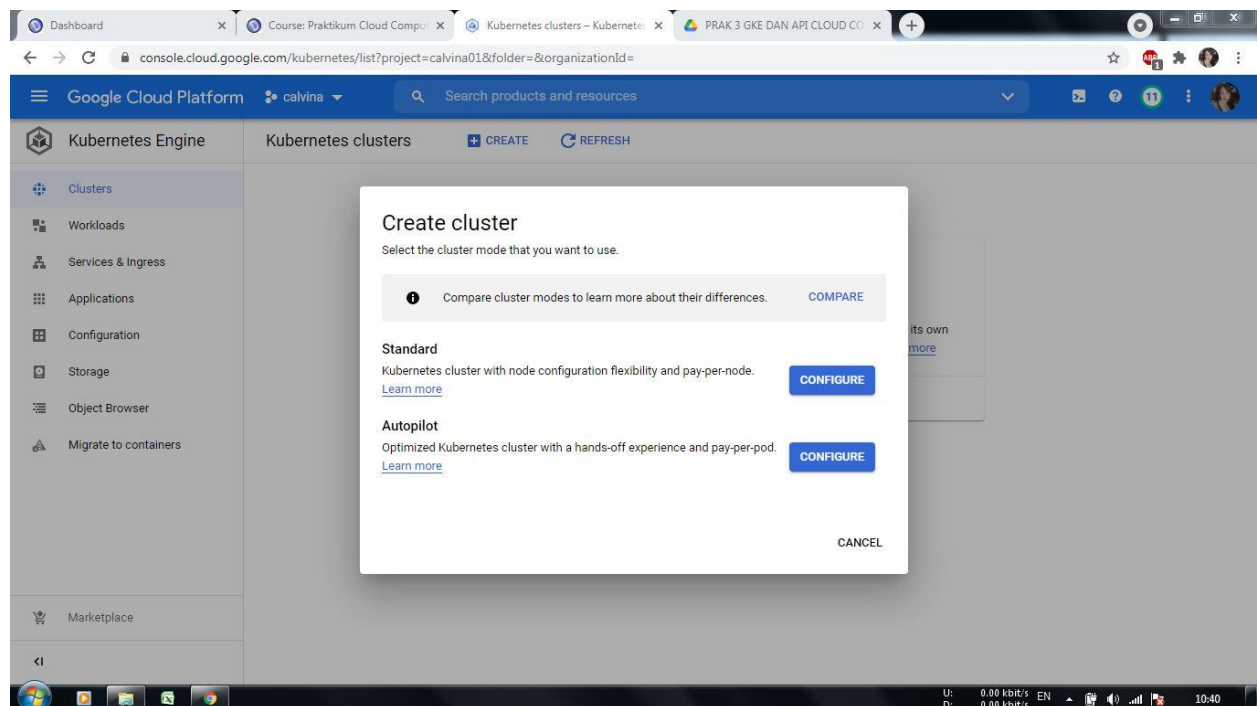
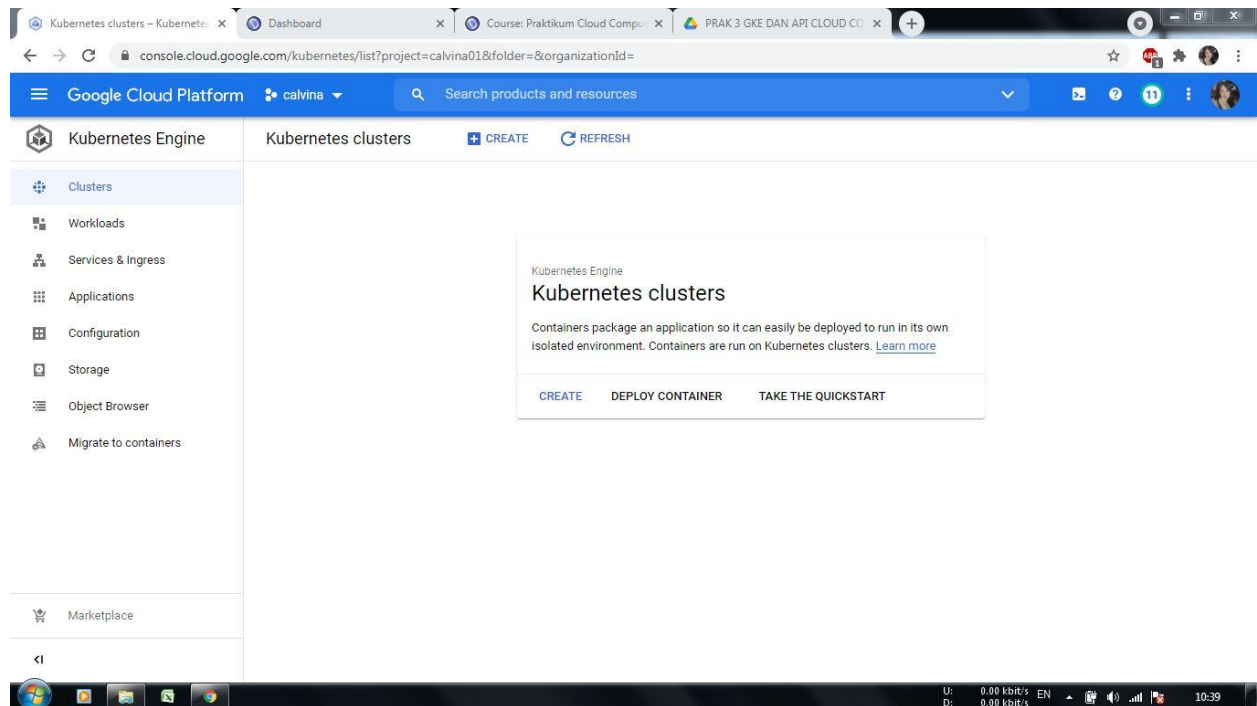


LATIHAN PRAK CLOUD COMPUTING PERTEMUAN KE-4



Dashboard Course: Praktikum Cloud Computing Create a Kubernetes cluster – Ku PRAK 3 GKE DAN API CLOUD CO

console.cloud.google.com/kubernetes/add?project=calvina01&isCreateAndRegister=false&folder=&organizationId=

Google Cloud Platform calvina Search products and resources

Create a Kubernetes cluster + ADD NODE POOL REMOVE NODE POOL

Cluster basics

NODE POOLS

- default-pool

CLUSTER

- Automation
- Networking
- Security
- Metadata
- Features

Name: calvinanodeapp

Location type: ☒ Zonal ☐ Regional

Zone: us-central1-c

☐ Specify default node locations

Current default: us-central1-c

Control plane version

Choose a release channel for automatic management of your cluster's version and upgrade cadence. Choose a static version for more direct management of your cluster's version. [Learn more](#)

☒ Static version ☐ Release channel

Static version: 1.17.17-gke.2800 (default)

CREATE CANCEL Equivalent REST or COMMAND LINE

Dashboard Course: Praktikum Cloud Computing Kubernetes clusters – Kubernetes PRAK 3 GKE DAN API CLOUD CO

console.cloud.google.com/kubernetes/list?project=calvina01

Google Cloud Platform calvina Search products and resources

Kubernetes Engine

Kubernetes clusters + CREATE + DEPLOY REFRESH DELETE OPERATIONS HIDE INFO PANEL LEARN

Clusters

- Workloads
- Services & ingress
- Applications
- Configuration
- Storage
- Object Browser
- Migrate to containers

Marketplace

Introducing Autopilot mode

An optimized cluster with a hands-off experience. When you create a cluster in Autopilot mode, Google provisions and manages the entire cluster's underlying infrastructure, including nodes and node pools. [Compare cluster modes](#)

- ✓ Get a production-ready cluster based on your workload requirements
- ✓ Eliminate the overhead of node management
- ✓ Pay per Pod, only for the resources that you use
- ✓ Increase security with Google best practices built-in
- ✓ Gain higher workload availability

TRY THE DEMO LEARN MORE

Filter Enter property name or value

<input type="checkbox"/>	Name ↑	Location	Number of nodes	Total vCPUs
<input checked="" type="checkbox"/>	calvinanodeapp	us-central1-c	3	6

No clusters selected

Labels help organize your resources (e.g., cost_center:sales or env:prod). [Learn more](#)

No clusters selected

Dashboard Course: Praktikum Cloud Compu... Kubernetes clusters - Kubernet... PRAK 3 GKE DAN API CLOUD CO... console.cloud.google.com/kubernetes/list?project=calvina01

Google Cloud Platform calvina Search products and resources

Kubernetes Engine Kubernetes clusters CREATE DEPLOY REFRESH DELETE OPERATIONS HIDE INFO PANEL LEARN

Clusters Workloads Services & Ingress Applications Configuration Storage Object Browser Migrate to containers

Introducing Autopilot mode

An optimized cluster with a hands-off experience. When you create a cluster in Autopilot mode, Google provisions and manages the entire cluster's underlying infrastructure, including nodes and node pools.

Compare cluster modes

- ✓ Get a production-ready cluster based on your workload requirements
- ✓ Eliminate the overhead of node management
- ✓ Pay per Pod, only for the resources that you use
- ✓ Increase security with Google best practices built-in
- ✓ Gain higher workload availability

TRY THE DEMO LEARN MORE

Filter Enter property name or value

Number of nodes	Total vCPUs	Total memory	Notifications	Labels
3	6	12 GB	—	—

calvinanodeapp

Labels help organize your resources (e.g., cost_center:sales or env:prod). [Learn more](#)

+ ADD LABEL

SAVE DISCARD CHANGES

Edit Connect Delete

Dashboard Course: Praktikum Cloud Compu... Create a deployment - Kubernet... PRAK 3 GKE DAN API CLOUD CO... console.cloud.google.com/kubernetes/workload/deploy?project=calvina01&pageState={"savedViews":{"t":"98eef42c5793408cb43083414ad21f30","c":"%5B%5D","n":"%5B%5D","s":1}} console.cloud.google.com/kubernetes/workload/deploy?project=calvina01

Google Cloud Platform calvina Search products and resources

Kubernetes Engine Create a deployment HIDE INFO PANEL

Clusters Workloads Services & Ingress Applications Configuration Storage Object Browser Migrate to containers

1 Container

Edit container

☐ Existing container image

☒ New container image

Repository Provider Cloud Source Repositories

Building an image requires [Cloud Source Repositories API](#), [Cloud Build API](#)

Repository *

Dockerfile path

Path to the Dockerfile from the root of the repository. Defaults to 'Dockerfile'.

Image name *

The built image will be pushed to Google Container Registry with this name. Supported variables: \$PROJECT_ID, \$REPO_NAME, \$BRANCH_NAME, \$COMMIT_SHA, \$SHORT_SHA

Container image

Before you deploy a workload on a Kubernetes Engine cluster, you must first package the workload into a container.

A container image is a portable machine image which bundles together an application and its dependencies.

The form is pre-filled with a default sample container registered and ready for use.

If you have your own container image just put in the endpoint to its location. You can also register a new container with [Google Container Registry](#).

Dashboard x Course: Praktikum Cloud x Create a deployment - x Cloud Build API - APIs x RPI Cloud Source Repositories x PRAK 3 GKE DAN API C x

console.cloud.google.com/apis/library/sourcerepo.googleapis.com?project=calvina01

Google Cloud Platform calvina

Cloud Source Repositories API

Google

Access source code repositories hosted by Google.

[ENABLE](#) [TRY THIS API](#)

[OVERVIEW](#) [PRICING](#) [DOCUMENTATION](#)

Overview

Access source code repositories hosted by Google.

About Google

Google's mission is to organize the world's information and make it universally accessible and useful. Through products and platforms like Search, Maps, Gmail, Android, Google Play, Chrome and YouTube, Google plays a meaningful role in the daily lives of billions of people.

Additional details

Type: [SaaS](#)
Last updated: 3/19/21
Category: [Google Cloud APIs](#)
Service name: [sourcerepo.googleapis.com](#)

U: 0.00 kbit/s EN D: 0.00 kbit/s 10:51

Dashboard x Course: Praktikum Cloud x Create a deployment - x Cloud Build API - APIs x RPI Overview - APIs & Serv x PRAK 3 GKE DAN API C x

console.cloud.google.com/apis/library/cloudbuild.googleapis.com?project=calvina01

Google Cloud Platform calvina

Cloud Build API

Google

Continuously build, test, and deploy.

[ENABLE](#) [TRY THIS API](#)

[OVERVIEW](#) [PRICING](#) [DOCUMENTATION](#)

Overview

Cloud Build, Google Cloud's continuous integration (CI) and continuous delivery (CD) platform, lets you build software quickly across all languages. Get complete control over defining custom workflows for building, testing, and deploying across multiple environments such as VMs, serverless, Kubernetes, or Firebase.

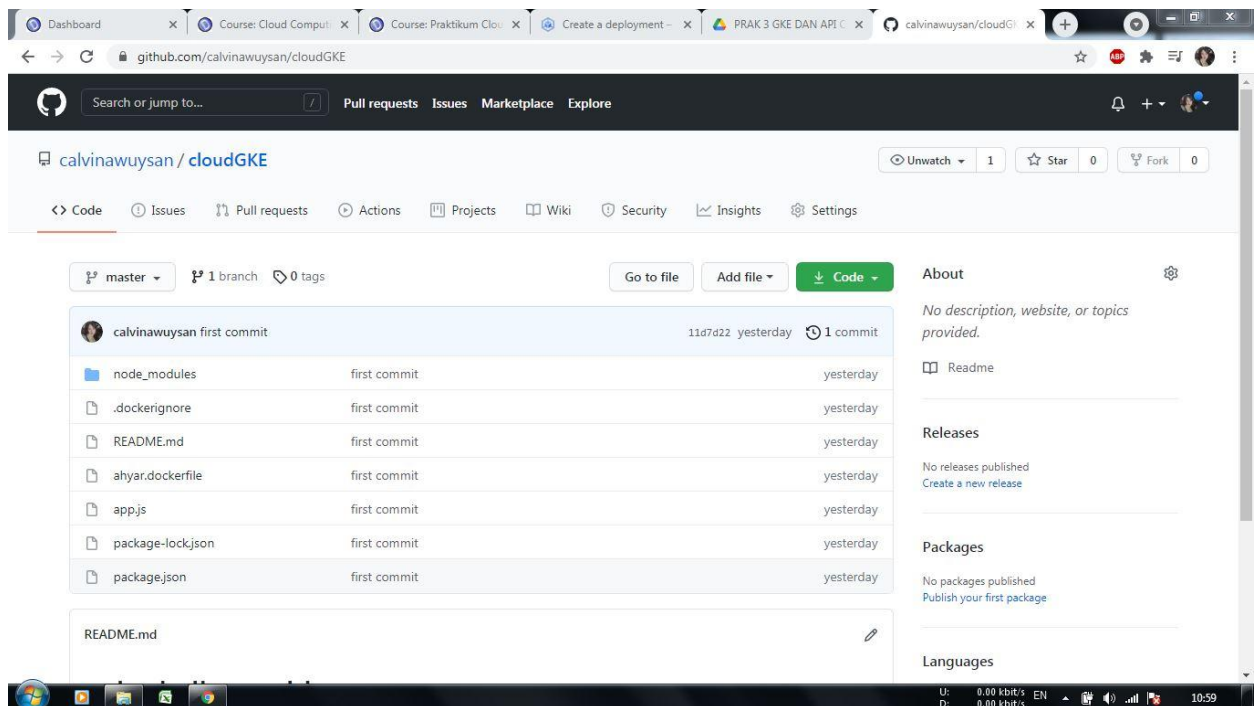
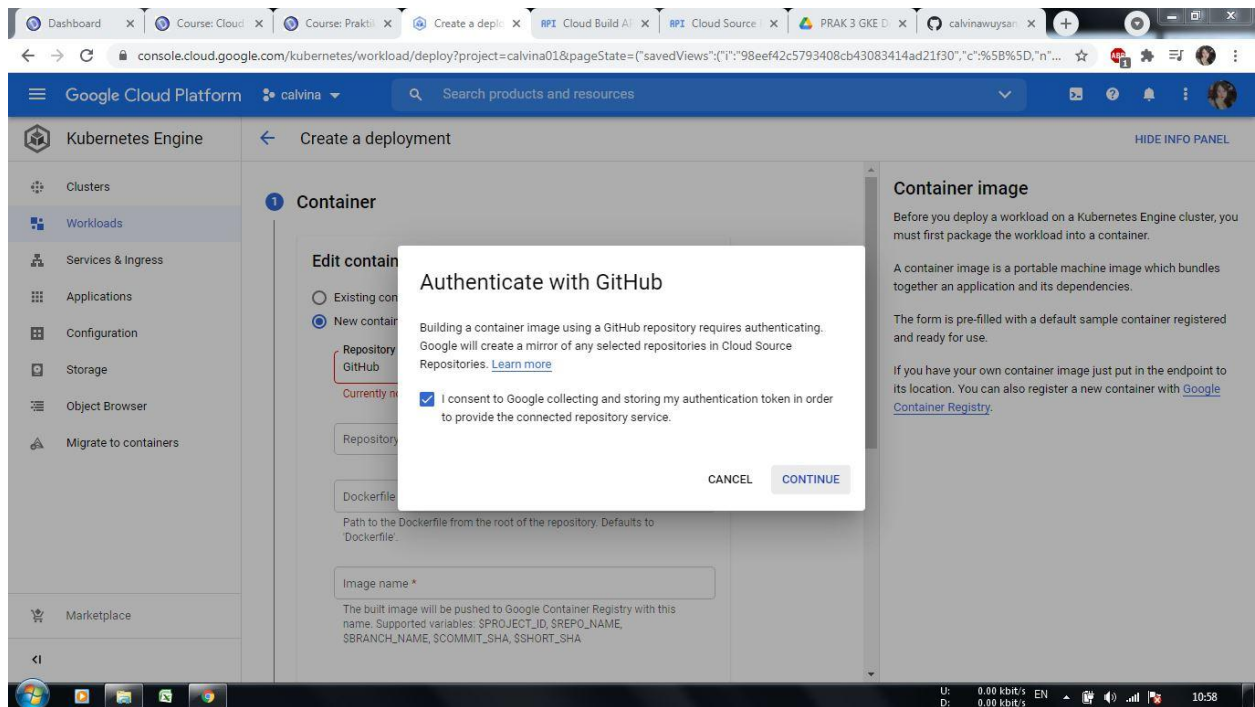
[Learn more](#)

About Google

Additional details

Type: [SaaS](#)
Last updated: 3/19/21
Category: [Developer tools](#), [Google Cloud APIs](#)
Service name: [cloudbuild.googleapis.com](#)

U: 0.00 kbit/s EN D: 0.00 kbit/s 10:51



Dashboard Course: Cloud Computi... Course: Praktikum Clo... Create a deployment - PRAK 3 GKE DAN API C... calvinawuysan/cloudG...

console.cloud.google.com/kubernetes/workload/deploy?project=calvina01&pageState={"savedViews":{"T":"98eef42c5793408cb43083414ad21f30","c":"%5B%5D","n"...

Google Cloud Platform calvina Search products and resources

Kubernetes Engine

Clusters

Workloads

Services & Ingress

Applications

Configuration

Storage

Object Browser

Migrate to containers

Marketplace

Create a deployment

HIDE INFO PANEL

1 Container

Edit container

☐ Existing container image

☒ New container image

Repository Provider

GitHub

Authenticated as calvinawuysan. [Change user](#)

Repository *

calvinawuysan/cloudGKE

Dockerfile path

ahyar.dockerfile

Path to the Dockerfile from the root of the repository. Defaults to Dockerfile..

Image name *

gcr.io/calvina01/github.com/calvinawuysan/cloudgke:\$SHORT_SHA

The built image will be pushed to Google Container Registry with this name. Supported variables: \$PROJECT_ID, \$REPO_NAME, \$BRANCH_NAME, \$COMMIT_SHA, \$SHORT_SHA

Container image

Before you deploy a workload on a Kubernetes Engine cluster, you must first package the workload into a container.

A container image is a portable machine image which bundles together an application and its dependencies.

The form is pre-filled with a default sample container registered and ready for use.

If you have your own container image just put in the endpoint to its location. You can also register a new container with [Google Container Registry](#).

U: 0.00 kbit/s EN D: 0.00 kbit/s 10:59

Dashboard Course: Cloud Computi... Course: Praktikum Clo... Create a deployment - PRAK 3 GKE DAN API C... calvinawuysan/cloudG...

console.cloud.google.com/kubernetes/workload/deploy?project=calvina01&pageState={"savedViews":{"T":"98eef42c5793408cb43083414ad21f30","c":"%5B%5D","n"...

Google Cloud Platform calvina Search products and resources

Kubernetes Engine

Clusters

Workloads

Services & Ingress

Applications

Configuration

Storage

Object Browser

Migrate to containers

Marketplace

Create a deployment

HIDE INFO PANEL

2 Configuration

A deployment is a configuration which defines how Kubernetes deploys, manages, and scales your container image. Kubernetes will ensure your system matches this configuration.

Application name *

calvina-nodejs

Namespace *

default

Labels

Key *

app

Value

calvina-nodejs

+ ADD KUBERNETES LABEL

Configuration YAML

Kubernetes deployments are defined declaratively using YAML files. The best practice is to store these files in version control, so you can track changes to your deployment configuration over time.

Application name

The name of the deployment. Must be unique to the namespace of the cluster, and can be up to 253 characters long and consist of lower case alphanumeric characters, "-" and ".".

U: 0.00 kbit/s EN D: 0.00 kbit/s 11:00

Dashboard Course: Cloud Computi... Course: Praktikum Clo... calvina-nodejs - Deplo... PRAK 3 GKE DAN API C... calvinawuysan/cloudCl...

console.cloud.google.com/kubernetes/deployment/us-central1-c/calvinodeapp/default/calvina-nodejs/overview?project=calvina01&pageState={"savedViews":{...

Google Cloud Platform

calvina

Search products and resources

Kubernetes Engine

- Clusters
- Workloads
- Services & Ingress
- Applications
- Configuration
- Storage
- Object Browser
- Migrate to containers

Marketplace

Deployment details

calvina-nodejs

Set up an automated pipeline for this workload [SET UP](#) [DISMISS](#)

To let others access your deployment, expose it to create a service [EXPOSE](#)

[OVERVIEW](#) [DETAILS](#) [REVISION HISTORY](#) [EVENTS](#) [LOGS](#) [NEW](#) [YA](#)

1 hour 6 hours 12 hours 1 day 2 days 4 days 7 days 14 days 30 days

CPU	Memory	Disk
1.0	1.00B	
0.8	0.75B	
0.6	0.50B	
0.4	0.25B	
0.2		
0		

Apr 07 10:30 11 AM Apr 1

Expose deployment

To let users access your deployment, you can expose it to external traffic

[EXPOSE](#)

Documentation

[Deployments](#) - a replicated, stateless application on your cluster

[Pods](#) - the smallest deployable unit in Kubernetes

[Services](#) - allow your application to receive traffic

[Autoscaling pods](#) - scale the application based on load or custom metrics

Dashboard Course: Cloud Computi... Course: Praktikum Clo... Expose a deployment - PRAK 3 GKE DAN API C... calvinawuysan/cloudCl...

console.cloud.google.com/kubernetes/workload/expose/us-central1-c/calvinodeapp/default/calvina-nodejs?project=calvina01&pageState={"savedViews":{"i":"9...

Google Cloud Platform

calvina

Search products and resources

Kubernetes Engine

- Clusters
- Workloads
- Services & Ingress
- Applications
- Configuration
- Storage
- Object Browser
- Migrate to containers

Marketplace

Expose a deployment

Exposing a deployment creates a Kubernetes Service. A service lets your deployment receive traffic and defines how your deployment is exposed.

Port mapping

Port * Target port Protocol

80 8000 TCP

[+ ADD PORT MAPPING](#)

Service type: Load balancer

Service name: calvina-nodejs-service

[EXPOSE](#) [VIEW YAML](#)

* Indicates required field

External port

This service will provide networking and IP support to your deployment's Pods.

The external port specifies the port number configured on the service. The target port specifies the port number that is used by the Pod.

Google Cloud Platform console showing the details of the **calvina-nodejs-service** in the **calvina** project.

Service details

Overview | DETAILS | EVENTS | LOGS | NEW | YAML

Load balancer

This service has a fixed external IP to route traffic to your application.

The IP address is externally facing. Visit the address to see the deployment.

Suggested next steps

- [Scale the deployment](#) by changing the number of replicas in the deployment
- [Perform a rolling update](#) to change the deployment image
- [Deploy a stateful application](#) to your cluster

Metrics

CPU, Memory, Disk usage over time (1 hour, 6 hours, 12 hours, 1 day, 2 days, 4 days, 7 days, 14 days, 30 days).

Cluster [calvinanodeapp](#)

Namespace default

Labels app: calvina-nodejs

Logs [calvina-nodejs](#)

Web browser showing the external IP address **35.188.29.207**.

Not secure | 35.188.29.207

Hello world!

Windows taskbar showing system tray icons and the time **11:05**.