



## Projected Hydro-Climate Data Analysis Accelerator (HyDAA) and Visualization of Potential Drought and Flood Events for Peninsular Malaysia

### Overview

- Vertical / Sector: Government
- User Profile: Institut Penyelidikan Hidraulik Kebangsaan Malaysia (NAHRIM) is an agency under the Ministry of Natural Resources and Environment

### Problem Statement

There is a need to monitor and search daily rainfall data and runoff projection data for the after-effects of storm centres.

It is a time-consuming effort to find specific data pattern, magnitude and storm centres from the rainfall data and obtain the corresponding runoff after-effects, which will not be immediate, based on the river basin geographical data

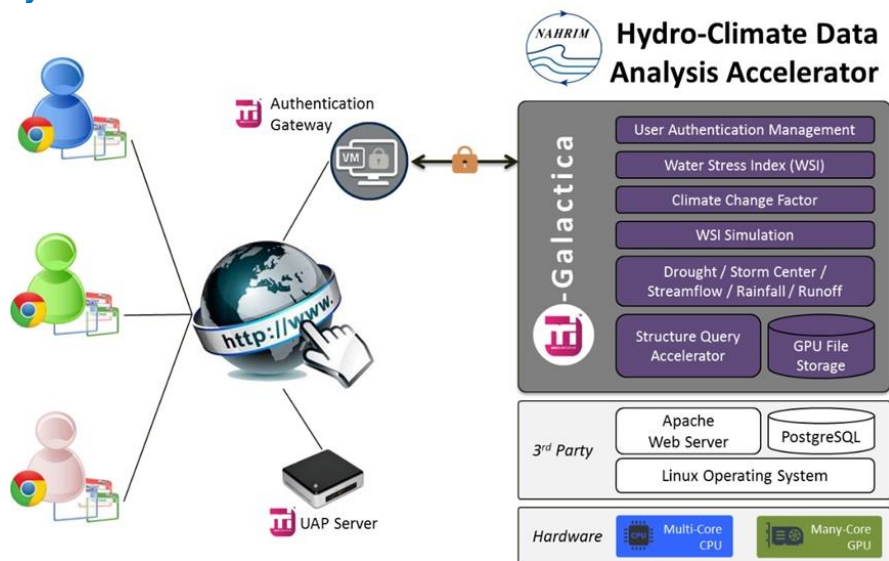
### Technology platform

- Structured Query Accelerator Tool
- Security

### Description

HyDAA is a system that will be able to assist NAHRIM in visualizing the projected hydroclimate data of rainfall and the corresponding runoff after-effects based on the river basin map for Peninsular Malaysia. The system will also help to simulate specific scenarios of Climate Change Factor (CCF), Water Stress Index (WSI) and WSI Simulation.

### System Architecture



### Solution Description

- Two access levels of registration method and authentication system
- Climate Change Factor (CCF) of Future Design Rainstorm, Floods, Low Flow and Drought
- Water Stress Index (WSI) Calculation Method and Water Deficit-Surplus Computation
- Water Stress Index Simulation of Water Yield, Water Demand, Water Provision and Alternative Water Resources

### Features

- User Access Authentication
- Climate Change Factor (CCF)
- Water Stress Index (WSI)
- Water Stress Index Simulation

### Benefits

- Centralized information and analysis on web application; and
- Automated and systematic process will reduce the current manual process and improve the quality and visual of data, which will lead to time and cost savings.



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