RAL SEMINAR SERIES

WMS: Cloud-Based Microservice Web Map Service

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The Web Map Service (WMS) plays a crucial role in integrating geographical datasets into cohesive visual displays within systems developed at NCAR and UCP. However, managing these systems presents a variety of challenges throughout the project lifecycle, including capacity planning, web server configuration, encryption certificate management, OS maintenance, and hardware acquisition and upkeep.

In recent years, our work has highlighted the advantages of leveraging cloud hosting through Platform as a Service (PaaS) solutions. This approach simplifies capacity planning, eliminates the need for OS and web server configuration, and allows for a flexible pay-as-you-go model for computing and storage. Despite its importance, migrating the WMS to a serverless environment has proven challenging. To address this, RAL is spearheading a small initiative aimed at demonstrating the feasibility of deploying WMS using a microservice architecture in the cloud. This project utilizes AWS services, including API Gateway, Lambda, S3, and DynamoDB to create a scalable solution.

The primary objective of this talk is to present a proof of concept, including results from load testing to evaluate scalability. Attendees will gain insights into our findings and updates from this innovative project, showcasing the potential of cloud-based WMS implementations. Event website

μWMS
micro WEB MAP SERVICE