



# Virtual Labs Engineering & Architecture Division

The Virtual Labs engineering and architecture division (VLEAD) is the central engineering team of Virtual Labs that takes care of both the research and development needs of the laboratory.

At VLEAD, engineers work on cutting edge technology to provide engineering support to Virtual Labs. VLEAD has teams at IIIT-Hyd and IIT-Bombay.

## Systems

Builds the next infrastructure backbone of the Virtual Labs project that serves thousands of users and host hundreds of labs on the cloud. The team manages interesting challenges such as networking, server provisioning, and security. The team also uses Open Source software like Apache, GNU/Linux, Ansible, among others.

## Web Services

The team provides Virtual Labs as a service platform by clustering together a host of micro-services such as single sign-on, data-as-a-service, persistence-as-a-service, analytics and security-as-a-service etc. to all the labs on the cloud. Using Python as their favorite language on the backend, the team uses No-SQL databases and RDBMS in their stack.

## Outreach

This team is responsible for making Virtual Labs available to users across the world. They conduct workshops, set up nodal centers, and partner with institutes to spread the awareness of Virtual Labs.



## Integration

This team ensures that the labs meet the acceptance criteria of being deployed on the cloud. This team re-engineers labs to make them responsive, open-source, device-independent and updated.

AUTO DEPLOYMENT

WEB SERVICES

INTEGRATION

CLOUD SERVICES



Virtual Labs is an initiative by MHRD under NMEICT. The objective is to make engineering education engaging, enjoyable, immersive and online.



VLEAD, IIIT-HYD, VINDHYA C6  
GACHIBOWLI

[www.virtual-labs.ac.in](http://www.virtual-labs.ac.in)