

# College Cloud 2.0

## Requirements and Draft Plan

Thursday, 02 November 2017

# Why College Cloud 2.0?

- College Cloud is a DPR requirement
- College Cloud 2.0 is an improvisation based on some of the experiences and observations of College Cloud 1.0
  - Low-end machines (4 GB RAM, Single/Dual Core) are available
  - Internet connection to a machine is possible
  - Engineering disciplines vary from college to college
  - Typical class room size is about 60 students
  - System administrators may not always be highly skilled

# Requirements of College Cloud 2.0

## College Requirements

- College cloud should run on 4GB RAM, 100 GB storage with i3 processor machine
  - *Distributed architecture for server side labs usage is an option*
- Set-up should be possible with low skilled administrators
  - *Could be available as an online download with help document or in USB drive for easy shipping*
  - *Wizard based set-up*
- Environment should support 60 concurrent users
  - *Flexibility to select disciplines and labs for the set-up, changeable based on the college cloud configuration*
  - *Flexibility to select lab types (Javascript, Flash, Java, etc.), changeable based on the college cloud configuration*
- ✓ College name and logo should be visible in the set-up

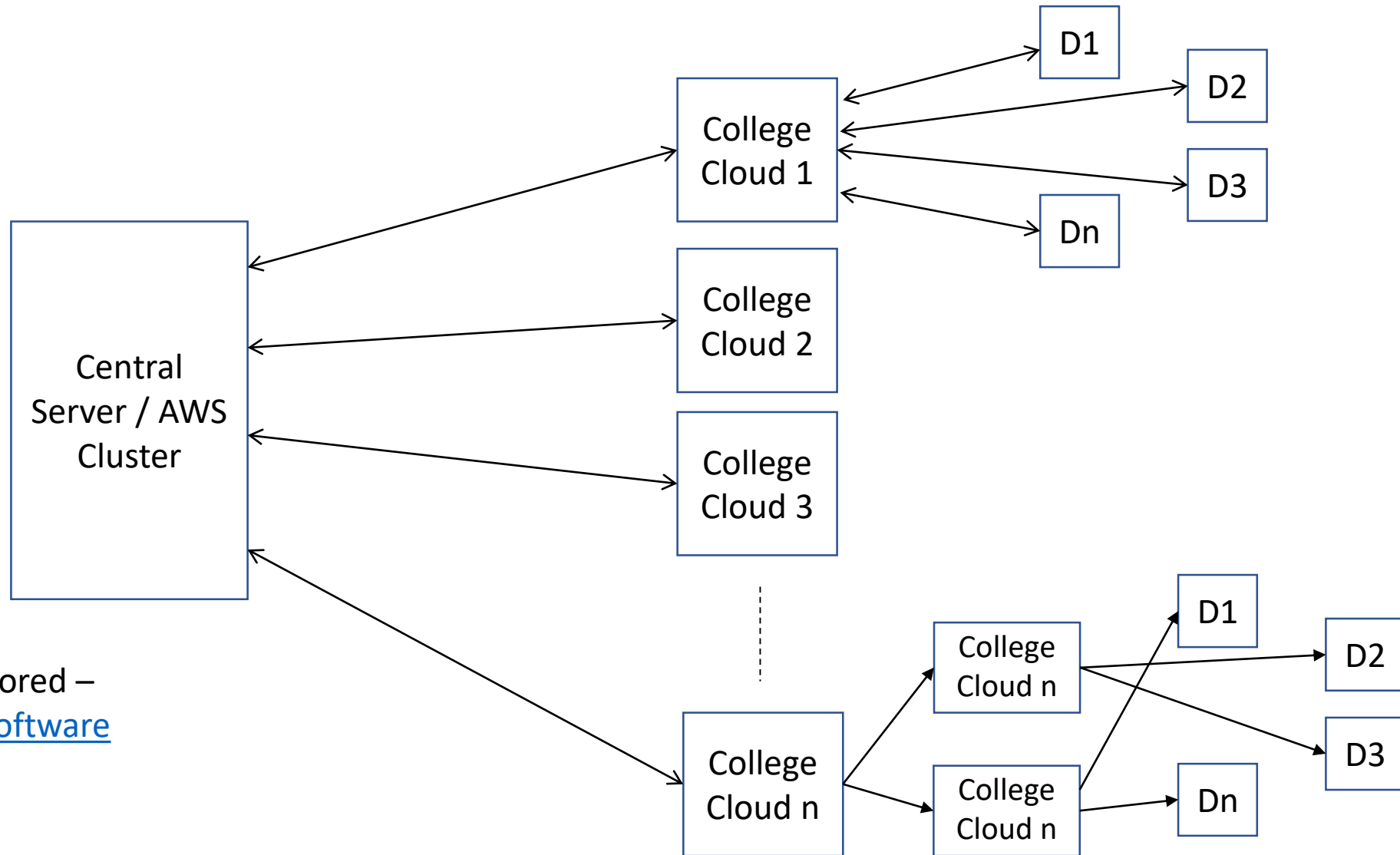
## Reporting and Data requirements

- Students and Faculty should have access to their usage data
- Login credentials and usage data should be sync up with central data store

## System Requirements

- Ability to patch and provide remote support
- Obtain system performance and other usage logs of college cloud

# Draft Architecture Diagram



Tools to be explored –

- 1) [Packaging Software](#)
- 2) Gogs
- 3) Syncthing
- 4) Fence

# Draft timeline for Meeting the Requirements

Agile Scrum Methodology, each sprint is 3 weeks of Development and 1 week of Testing

## Sprint 1

- Interaction with COEP
- Authentication Page
- Deployment of Javascript Labs with relative pathing

## Sprint 3

- Monitoring of College Cloud
- Changes to JS Labs

## Sprint 5

- Server Side Labs
- Load Balancing

## Sprint 2

- Remote patching
- Packaging

## Sprint 4

- Wizard set-up
- Analytics

## Sprint 6

- Buffer

### Resource Requirements

- Hardware – 4 Machines (i3 processors, 2 Test + 2 Prod)
- People – 1 Systems Engineer and 1 Developer

### Risks

- Changing Requirements
- People - Delay in technical ramp-up & possible attrition