

# CONNECTING STUDENTS TO KNOWLEDGE

## C3 CLOUD CONTROL

Micro-Clouds provide a localized e-Learning experience in schools, solving a huge issue facing students and schools worldwide. But the same issues that create the need for the micro-clouds in the first place (networking and infrastructure limitations) also make it a challenge to deploy and manage these systems. That's why a well-designed cloud-central portal is so crucial – giving administrators the ability to service literally thousands of micro-clouds across a nation/region from a single point, whenever network resources allow.

The C3 Cloud Control is the leading cloud portal for the deployment and management of education micro-clouds. Resident in either a public or private cloud, the C3 Cloud Control gives administrators one point from which they can manage content, curriculum, users, and systems. Even more important, any updates or changes to these areas (such as new texts, security policies, or system software updates) can be applied to authorized micro-clouds on demand, as they are able to connect with the C3 Micro-Cloud.

## KEY FEATURES



### LEARNING CONTENT/CURRICULUM

Content can be either original content, or that acquired from third-party sources. Examples would be subject texts, e-books, research papers, etc. In addition, content can be selected from either HTTP or HTTPS websites (with applicable permissions) to enrich the materials and resources used in the e-Learning process.



### CENTRALIZED ADMINISTRATION

Once content is selected, the centralized administration can package and upload this to the C3 Micro-Cloud repository. Further, different packages can be defined based upon the type of school or classroom, yet still centrally curated and managed. This centralized paradigm isn't just for content, but for systems-level management, security policies, etc. C3 Cloud Control also supports Active Directory and Azure Active Directory, allowing global policies for users and resources to be applied anywhere in the world.

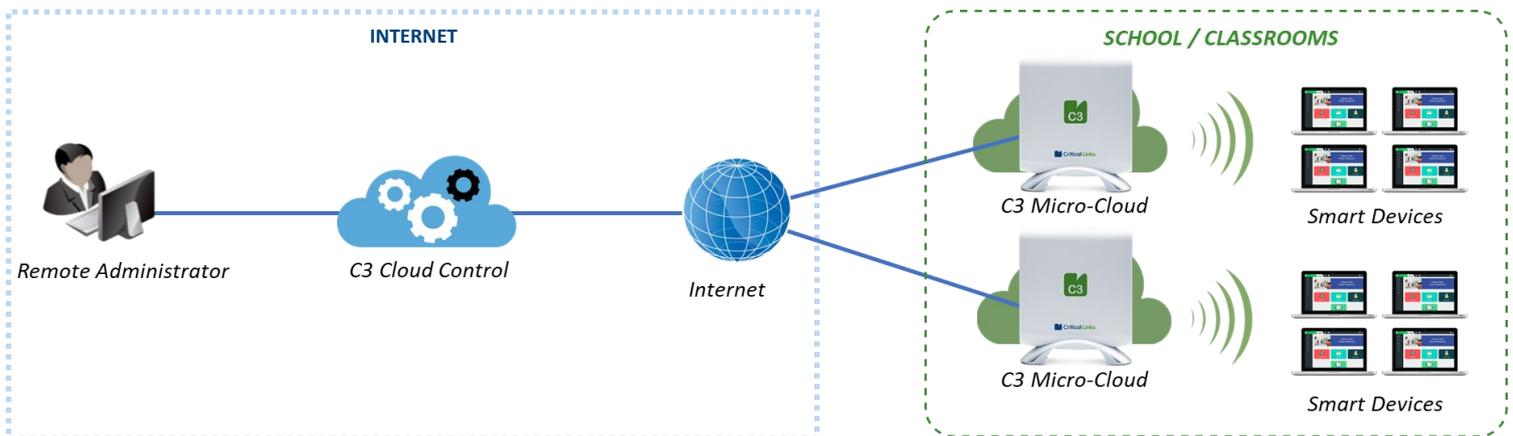


### REMOTE UPDATES

Whenever a connection is available from a local C3 Micro-Cloud, it can check for updates, new content, etc. This allows an entire region to change/edit the content any time, anywhere, and know that it will sync whenever the micro-cloud next connects.

## END-TO-END SOLUTION ARCHITECTURE

1. The C3 Cloud Control is a service offered by Critical Links, or it can be hosted in either a public or private cloud environment
2. All content can be curated centrally, and stored in the C3 Cloud Control Repository
3. When distributed C3 Micro-Clouds have an available internet connection, new/updated content can be pushed to each micro-cloud
4. In a similar manner, administrative and security policies can be set centrally within the C3 Cloud Control, and updated to the authorized C3 Micro-Clouds in the network on demand, ensuring common use of user profiles, security and usage policies, etc
5. Through this approach, thousands of C3 Micro-Clouds throughout a country/region can be managed from a single point, allowing standardization of the e-Learning experience as well as ensuring the richest learning environment possible for any/all schools and their students



## REQUIREMENTS

### HARDWARE

#### Base CPU Required

- ✓ dual core, 1.8GHz
- ✓ Base Memory required: 16GB
- ✓ Base Storage Required: 1TB

#### Hypervisors Supported

- ✓ VMware ESX
- ✓ Microsoft Hyper-V
- ✓ Citrix Xen Server

#### Public Cloud Support

- ✓ AWS EC2
- ✓ Google GCP
- ✓ Microsoft Azure

### SOFTWARE

#### Operative System:

- ✓ Ubuntu Linux Server 16.04 LTS

#### Additional Software:

- ✓ MySQL Server (can be located on a different machine)
- ✓ Pure-FTPd (FTP Server)

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