

```
graph LR
    WebUI[Web UI] <--> RPLB[Reverse Proxy / Load Balancer]
    RPLB -.-> CMService[Content Management Service]
    RPLB -.-> SearchService[Search Service]
    CMService <--> mongoDB[(mongoDB)]
    CMService --> PublishingService[Publishing Service]
    PublishingService --> elasticsearch[(elasticsearch)]
    SearchService <--> elasticsearch
    ego[ego (Authorization Service)] <--> NIH_iTrust[(NIH iTrust)]
    ego <--> CMService
    ego <--> PublishingService
    ego <--> SearchService
```

## System architecture diagram

The HCMC Catalog will be composed of four loosely-coupled micro services. These services will be seamlessly integrated with Web UI.

Content Management, Publishing and Search Service will be Web based APIs. ***An Apache Server will be used to proxy calls from web to these Services.***

**Another Apache server will be used to serve Web UI which is composed static HTML files and Javascript.**

More details about Architecture can be found on Pages: 5 and 6 of [HCMI Architecture - v1.1](#) document.

### Software/System Requirements:

1. Standard NIH Linux Installation
2. All Application server instances need to have:
  - a. [Node v 8.0+](#), [NPM](#), [PM2](#), [Yarn](#), Oracle Java 8, Maven 3.5.x
3. Two Database servers: ElasticSearch v6.0+ and MongoDB
4. (Potentially, depends on NIH iTrust integration details) Another database server: Postgres 9.5.x

5. All Web server instances will be Apache web servers

More details on number of each instance type for each dev/staging/prod can be found on Pages 8 and 9 of [HCMI Architecture - v1.1](#) document.