inBloom – *Environment Specification*

Release 1.0.68

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# Purpose

This document provides a minimum specification guideline for the deployment of the release into the inBloom Production and Sandbox environments, while also setting the expectation for what an environments components are expected to be in existence for the Release.

# Summary

This document provides minimum deployment footprints for this release, as well as an estimated footprint necessary for 5M students, and for the Sandbox developer environment.

Due to the expectation of a continued deployment within an Amazon AWS environment, this document has been geared as such.

# Infrastructure Configuration

## MongoDB (Data Store Layer)

Notice: Ingestion also requires separate MongoDB servers for staging purposes, which are covered within the Ingestion section of this document.

* Minimum Requirements
  + Three MongoDB Servers in a replica set (one shard)  
    This means that there is one master server and two replicated backups.
    - Recommended AWS Instance Class: High-Memory Quadruple Extra Large (m2.4xlarge) 68.4GB
    - Recommended storage: RAID10 EBS with PIOPS
  + Three MongoDB configuration servers  
    MongoDB specifies using exactly 3 config servers
    - Recommended AWS Instance Class: Large (m1.large) 7.5GB
    - Recommended storage: ephemeral
* The Data Store layer is scaled by adding replica sets (shards) where each replica set consists of 3 MongoDB servers as described above
* Requirements for 5M students  
  nine MongoDB replica sets (shards), for a total of twenty seven MongoDB servers.
* Recommendations for Sandbox  
  four MongoDB replica sets (shards), for a total of twelve MongoDB servers

## Ingestion

### Landing Zones

* Two Landing Zone Servers
  + Amazon Large (m1.large) instance providing SFTP services for Ingestion Users via ProFTPD (per Runbook).
  + Mount GlusterFS (per Runbook).

### GlusterFS

* Two GlusterFS instances providing scalable replicated distributed storage services to the Landing Zone servers and the ingestion servers.
* Minimum Requirements
  + Amazon m1.large instances
  + Gluster volume configured with a replica count of two, matching the number of initial storage bricks.
  + PIOPS EBS volume, 500GB size, 2000 IOPS, to be used as GlusterFS storage brick.
    - The storage size amount is purely an estimate based on existing testing in release candidate environments. It must be understood that this must be monitored, and potentially adjusted by the operator. It is very straightforward to add bricks to GlusterFS without incurring any downtime.
* Requirements for 5M  
  Amazon High I/O Quadruple Extra Large (hi1.4xlarge) instances
* Recommendations for Sandbox  
  Minimum requirements as described above

### ActiveMQ

* Two ActiveMQ Servers  
  One active, one secondary
  + Configuration details for ActiveMQ Clustering Configuration can be found at http://activemq.apache.org/networks-of-brokers.html.
  + Recommended AWS Instance Class: Large (m1.large) 7.5GB
  + Recommended storage: ephemeral

### Staging DB

* Three MongoDB Servers  
  One master and two replicated backups.
  + Recommended AWS Instance Class: High-Memory Quadruple Extra Large (m2.4xlarge) 68.4GB
  + Recommended storage: EBS with PIOPS

### Ingestion servers

* This is considered ingestion “standalone” mode as opposed to Maestro/Pit mode, which will be merged in the future releases.
* Minimum Requirements: two servers
  + Recommended AWS Instance Class: High-Memory Quadruple Extra Large (m2.4xlarge) 68.4GB
  + Recommended storage: ephemeral
  + Tomcat service should run as root user.
* Requirements for 5M  
  Four standalone ingestion servers
* Recommendations for 5M students  
  Seven standalone ingestion servers

## Portal

* Recommended Configuration
  + Utilize Amazon Elastic Load Balancer.
  + Two Tomcat web servers running the LifeRay product
    - Recommended AWS Instance Class: Large (m1.large) 7.5GB
    - Recommended storage: ephemeral
  + Use of Amazon RDS for back-end Portal MySQL Data storage
    - Recommended Large Database Instance making use of a Multi-AZ Deployment.

## API

* Minimum Requirements:
  + Utilize Amazon Elastic Load Balancer
  + Two Tomcat web servers  
    These run the Data Infrastructure software for the API servers
    - Recommended AWS Instance Class: Large (m1.large) 7.5GB
    - Recommended storage: ephemeral
* Requirements for 5M students  
  It is estimated that 5 million students will lead to a peak load of 55 pages/second (based on the API Load Estimate spreadsheet). This load will require 5 Tomcat web servers.
* Recommendations for Sandbox  
  For Sandbox, we recommend 3 API servers.

## Data Browser

* Scaling the Data Browser layer is accomplished by scaling Rails Web Servers. It is anticipated that these servers will be sufficient for 5M students and for Sandbox.
  + Minimum Requirements:
    - Utilize Amazon Elastic Load Balancer
    - Two Ruby on Rails web servers  
      These run the Data Infrastructure software for the Dashboard
      * Recommended AWS Instance Class: Large (m1.large) 7.5GB
      * Recommended storage: ephemeral

## Admin Tools

* Scaling the Admin layer is accomplished by scaling Rails Web Servers. It is anticipated that these servers will be sufficient for 5M students and for Sandbox.
  + Minimum Requirements:
    - Utilize Amazon Elastic Load Balancer
    - Two Ruby on Rails web servers  
      These run the Data Infrastructure software for the Dashboard
      * Recommended AWS Instance Class: Large (m1.large) 7.5GB
      * Recommended storage: ephemeral
  + Notice: The Admin Tools are dependent upon the API, and the OpenLDAP servers.

## Simple IDP

* Simple IDP is the Identity Provider for the Admin realms.   
  It is anticipated that these servers will be sufficient for 5M students and for Sandbox.
  + Minimum Requirements:
    - Utilize Amazon Elastic Load Balancer
    - 2 Simple IDP Servers
      * Recommended AWS Instance Class: Large (m1.large) 7.5GB
      * Recommended storage: ephemeral
    - 2 OpenLDAP Servers
      * Recommended AWS Instance Class: Large (m1.large) 7.5GB
      * Recommended storage: EBS

## Search

* Search Servers  
  These servers are used for the Elastic Search functionality.  
  The minimum requirements above will be sufficient for 5M students and for Sandbox.
  + Minimum Requirements:
    - Two Search Engine Servers
      * These instances will host the ElasticSearch infrastructure.
      * Recommended AWS Instance Class: Extra Large m2.2xlarge
      * Recommended storage: EBS
    - Two Index Servers
      * These instances will host the search-indexer.
      * Recommended AWS Instance Class: Large m1.xlarge
      * Recommended storage: EBS
* SARJE Servers  
  SARJE is infrastructure used by Search to run asynchronous jobs. Currently its sole use is for Search. It is anticipated that these servers will be sufficient for 5M students and for Sandbox.
  + Minimum Requirements:
    - Two ActiveMQ Servers
      * These are expected to be dedicated and separated from the Ingestion ActiveMQ instances.
      * Recommended AWS Instance Class: Large (m1.large)
      * Recommended storage: EBS
    - Two OpLog Agent servers
      * Recommended AWS Instance Class: Large (m1.large) 7.5GB
      * Recommended storage: EBS
    - Two Event Subscriber servers - Expected in Release 7.0
      * Recommended AWS Instance Class: Large (m1.large) 7.5GB
      * Recommended storage: EBS

# Platform Migration Steps and Changes

## Change: On-Demand Ingestion Staging Databases

Beginning in Release 6.6, Ingestion Staging Databases are created per ingestion job and are then wiped from the system upon job completion. This results in the “is” database being no longer required.

## Change: Move of ingestion recordHash collection

Beginning in Release 1.0.68, the recordHash collection which was stored in the ingestion\_batch\_job database was moved to the tenant specific databases. This collection is utilize for ingestion record level deduplication to prevent upserting records that have already been ingested but that have not been changed.

There is no migration for this data as it is unnecessary. The previous recordHash collection in the ingestion\_batch\_job database can be safely deleted at any time.

## Tomcat Configuration Change for Ingestion Servers

For ingestion servers, the catalina.sh script should pass different parameters when starting tomcat. This change modifies the behavior of Java to use the Parallel garbage collector, which is better suited for batch jobs such as ingestion. Below are the desired parameters:

-Xms40G -Xmx40G -XX:+UseParallelGC -XX:PermSize=512m -XX:MaxPermSize=512m

Below is an example of what a complete command line would generally look like.

JAVA\_OPTS="-Xms40G -Xmx40G -XX:+UseParallelGC -XX:PermSize=512m -XX:MaxPermSize=512m -Dsli.env=rc -Dsli.encryption.keyStore=/opt/tomcat/encryption/ciKeyStore.jks -Dsli.encryption.properties=/

opt/tomcat/encryption/ciEncryption.properties -Dsli.trust.certificates=/opt/tomcat/trust/

trustedCertificates -Dsli.conf=/opt/tomcat/apache-tomcat-7.0.27/conf/sli.properties -Dlogging.path=/

var/log/tomcat/ -Dapi.perf.log.path=/var/log/tomcat/"

## Database Migration Steps 1.0.65 to 1.0.67

Note: If proceeding to 1.0.68, please follow all of the steps below, starting from a 1.0.65 database.

1) Ensure that all inBloom platform components that interact with the Data Store have been stopped, and ensure that backups have been performed prior to beginning this upgrade process.

2) Execute the opstools/migration/fix\_superdoc\_type.rb script. This script identifies and corrects a potential data issue across tenants. This script is written in ruby, and requires the mongo gem to be installed into the ruby environment in order for the script to be utilized.

Example:

# ruby opstools/migration/fix\_superdoc\_type.rb localhost:27017

Which will generate output similar to this:

superdoc updates for tenantdb Tenant\_1

(collection\_name => updated\_entity\_count)

{"student"=>55}

no updates for tenantdb Tenant\_2

no updates for tenantdb Tenant\_3

3) The opstools/migration/67DbMigration.js script must be applied to the database prior to the completion of the deployment of the 1.0.67 code base. Failure to do so will prevent ingestion from starting.

It would be executed with the following syntax:

mongo sli < opstools/migration/67DbMigration.js

To validate the proper execution of this script, execute the following commands. The second command should indicate that zero records were found if the migration script executed sucessfully.

mongo sli

>db.tenant.find({"dbName" : {$exists : 1}}).count()

4) Once the scripts have been executed, the inBloom platform components can be restarted. If proceeding directly to 1.0.68, the 1.0.67 to 1.0.68 steps can be proceeded with from this point.

5) Post Upgrade to 1.0.67, for the new API Search Functionality to be usable, a search-indexer “extract” operation must be executed in order to pull the existing DAL contents into ElasticSearch. Details on executing search-indexer commands are detailed in the runbook section on the search indexer. This is a non-blocking operation, however the new API Search Functionality may return partial results until the extract is completed.

## Database Migration Steps 1.0.67 to 1.0.68

1) Ensure that all inBloom platform components that interact with the Data Store have been stopped, and ensure that backups have been performed prior to beginning this upgrade process.

2) The opstools/migration/67to68TeacherSchoolDenormalizer.rb script must be executed in order to create a staffEducationOrganizationAssociation for every TeacherSchoolAssociation for use by security autorization. This script requires Ruby 1.9.2, and the mongo gem to be installed in order to be able to be run.

Example:

# ruby opstools/migration/67TeacherSchoolDenormalizer.rb localhost:27017

Establishing connection to SLI database...

[DEPRECATED] The 'safe' write concern option has been deprecated in favor of 'w'.

We found Midgar, Hyrule, RCTestTenant tenants to fix...

Beginning to work on Midgar

We denormalized 20 teacherSchoolAssociations in Midgar

Beginning to work on Hyrule

We denormalized 18 teacherSchoolAssociations in Hyrule

Beginning to work on RCTestTenant

Entity appears to exist already, skipping to the next one...

Entity appears to exist already, skipping to the next one...

Entity appears to exist already, skipping to the next one...

We denormalized 0 teacherSchoolAssociations in RCTestTenant

3) Sandbox Only: The opstools/migration/68SandboxMigration.rb script must be executed against the Sandbox Environment in order to combine the Admin and Sandbox realms in Sandbox mode. This script requires Ruby 1.9.2 and the mongo gem loaded into the ruby environment in order to execute.

Example:

# ruby 68SandboxMigration.rb localhost:27017

I, [2013-01-07T12:03:50.980721 #23916] INFO -- : Deleted old SandboxIDP realm

I, [2013-01-07T12:03:51.064139 #23916] INFO -- : Updated realmId for customRole for tenant db: 02f7abaa9764db2fa3c1ad852247cd4ff06b2c0a

I, [2013-01-07T12:03:51.064468 #23916] INFO -- : Updated realmId for customRole for tenant db: d36f43474916ad310100c9711f21b65bd8231cc6

I, [2013-01-07T12:03:51.065124 #23916] INFO -- : Updated realmId for customRole for tenant db: 2889cee419c2302ed8413b5e9c6737ecfeb9fa73

I, [2013-01-07T12:03:51.083174 #23916] INFO -- : Finished migration.

4) Once the scripts have been executed, the inBloom platform components can be updated to Release 1.0.68.

5) Post upgrade to 1.0.68, if not performed earlier, for the new API Search Functionality to be usable, a search-indexer “extract” operation must be executed in order to pull the existing DAL contents into ElasticSearch. Details on executing search-indexer commands are detailed in the runbook section on the search indexer. This is a non-blocking operation, however the new API Search Functionality may return partial results until the extract is completed.

# Suggested Base Configuration

Note: The configuration examples provided below detail a running system. Due to the rebranding flux, some properties may not have been able to have been identified from a Development point of view, and as such email addresses and URLs that are imbedded in to the configuration should be validated prior to go-live.

## sli.properties

api.perf.log.path = /var/log/tomcat

sli.security.noSession.landing.url = https://rcapi.slidev.org/api/oauth/authorize?response\_type=code

# sli.security.sp.issuerName is the URL of the API service.

sli.security.sp.issuerName = https://rcapi.slidev.org

sli.security.gracePeriod = 2000

sli.trust.certificates = /opt/tomcat/trust/trustedCertificates

# Security events notices are sent to the following email address.

sli.support.email = support@inBloom.org

#The following settings govern user login session lengths, in milliseconds.

sli.session.length = 1800000

sli.session.hardLogout = 28800000

# The following setting must be updated to match the cookie domain of the installation.

sli.api.cookieDomain = .slidev.org

# The following three settings govern Sandbox and API Application creation behavior.

sli.sandbox.enabled = true

sli.autoRegisterApps = true

bootstrap.sandbox.createSandboxRealm = true

# The following bootstrap settings will require the FQDN of service names to be updated.

bootstrap.admin.realm.name = inBloom

bootstrap.admin.realm.tenantId = SLI

bootstrap.admin.realm.idpId = https://rcidp01ext.slidev.org/sliidp?realm=SLIAdmin

bootstrap.admin.realm.redirectEndpoint = https://rcidp01ext.slidev.org/sliidp?realm=SLIAdmin

bootstrap.sandbox.realm.uniqueId = SandboxIDP

bootstrap.sandbox.realm.name = Sandbox Environment

bootstrap.sandbox.realm.idpId = https://rcidp01ext.slidev.org/sliidp

bootstrap.sandbox.realm.redirectEndpoint = https://rcidp01ext.slidev.org/sliidp

bootstrap.app.conf = \${sli.conf}

# sli.tenant.ingestionServers is a depricated setting.

sli.tenant.ingestionServers = rcingest01

# sli.tenant.landingZoneMountPoint governs the file path that the API will utilize when creating tenant collection entries for the Ingestion Service.

sli.tenant.landingZoneMountPoint = /ingestion/lz

sli.landingZone.server = rclz01.slidev.org

sli.useraccount.maximum = 500

# The following settings until sli.ingestion settings generally need to be unmodified with the exception of sli.api.ldap settings.

sli.api.ldap.user = cn=Admin,dc=slidev,dc=org

sli.api.ldap.pass = [LDAP\_ADMIN\_PASS]

sli.application.buildTag = sli.app.buildTag

sli.api.performance.tracking = false

sli.api.security.context.paging = 100000

sli.security.in\_clause\_size = 100000

sli.sandbox.autoRegisterApps = false

sli.mongodb.database = sli

sli.mongodb.host = localhost:27017

sli.mongodb.port = 27017

sli.mongodb.user =

sli.mongodb.pass =

sli.mongodb.keyencoding = \%:\%25,\\.:\%2E

sli.perf.mongodb.database = apiPerf

sli.perf.mongodb.host = localhost

sli.perf.mongodb.port = 27017

sli.mongodb.connections = 20

sli.stagingmongodb.connections = 20

sli.batchjobmongodb.connections = 20

# sli.ingestion settings require server names and potentially database names updated based on the environment configuration. Generally the bulk of the settings here should remain unmodififed.

sli.ingestion.staging.mongodb.database = is

sli.ingestion.staging.mongodb.host = rcmongo10.slidev.org

sli.ingestion.staging.mongodb.port = 27017

sli.ingestion.staging.mongodb.user =

sli.ingestion.staging.mongodb.pass =

sli.ingestion.staging.clearOnCompletion = true

sli.ingestion.batchjob.mongodb.database = ingestion\_batch\_job

sli.ingestion.batchjob.mongodb.host = rcmongo10.slidev.org

sli.ingestion.batchjob.mongodb.port = 27017

sli.ingestion.batchjob.mongodb.user =

sli.ingestion.batchjob.mongodb.pass =

sli.ingestion.errors.tracking = true

sli.ingestion.warnings.tracking = true

sli.test.prop = ci DAL Context Test Property

sli.ingestion.securityEvent.capSize =

sli.ingestion.healthcheck.user = admin

sli.ingestion.healthcheck.pass = admin

sli.mongo.tracking = false

sli.mongo.tracking.interval.seconds = 5

sli.ingestion.mongotemplate.writeConcern = SAFE

sli.ingestion.staging.mongotemplate.writeConcern = SAFE

sli.default.mongotemplate.writeConcern = SAFE

landingzone.inbounddir = /ingestion/lz/

sli.ingestion.lz.readLockCheckInterval = 10000

sli.ingestion.lz.readLockTimeout = 600000

sli.ingestion.lz.pollInterval = 30000

logging.path = /var/log/tomcat

sli.ingestion.topic.command = activemq:topic:ingestion.command

sli.ingestion.exception.message.log = true

sli.ingestion.log.level = info

sli.ingestion.queue.workItem.host = rcingest01.slidev.org

sli.ingestion.queue.workItem.port = 61616

sli.ingestion.queue.workItem.secondaryhost =

sli.ingestion.queue.workItem.secondaryport =

sli.ingestion.queue.options = keepAlive=true&jms.prefetchPolicy.queuePrefetch=0&wireFormat.maxInactivityDurationInitalDelay=60000

sli.ingestion.queue.brokerUrl = tcp://${sli.ingestion.queue.workItem.host}:${sli.ingestion.queue.workItem.port}?${sli.ingestion.queue.options}

sli.ingestion.queue.maxConnections = 25

sli.ingestion.queue.maximumActive = 500

sli.ingestion.queue.workItem.queueURI = seda:IngestionWorkItem

sli.ingestion.queue.workItem.concurrentConsumers = 4

sli.ingestion.queue.workItem.keystore = /opt/tomcat/encryption/tomcat.keystore

sli.ingestion.queue.workItem.keystorePassword = [redacted]

sli.ingestion.queue.maestro.host = rcingest01.slidev.org

sli.ingestion.queue.maestro.port = 61616

sli.ingestion.queue.maestro.queueURI = activemq:queue:ingestion.maestro

sli.ingestion.queue.maestro.consumerQueueURI = txActivemq:queue:ingestion.maestro

sli.ingestion.queue.maestro.concurrentConsumers = 1

sli.ingestion.queue.maestro.uriOptions = &transferExchange=true

sli.ingestion.queue.maestro.keystore = /opt/tomcat/encryption/tomcat.keystore

sli.ingestion.queue.maestro.keystorePassword = [DAL\_KEYSTORE\_PASS]

sli.ingestion.queue.pit.host = rcingest01

sli.ingestion.queue.pit.port = 61616

sli.ingestion.queue.pit.queueURI = activemq:queue:ingestionPit

sli.ingestion.queue.pit.consumerQueueURI = txActivemq:queue:ingestionPit

sli.ingestion.queue.pit.concurrentConsumers = 30

sli.ingestion.queue.pit.uriOptions = &transferExchange=true

sli.ingestion.queue.pit.keystore = /opt/tomcat/encryption/tomcat.keystore

sli.ingestion.queue.pit.keystorePassword = [DAL\_KEYSTORE\_PASS]

sli.ingestion.nodeType = standalone

sli.ingestion.tenant.loadDefaultTenants = true

sli.ingestion.tenant.tenantPollingRepeatInterval = 5s

sli.ingestion.cache.type = inmemory

sli.ingestion.cache.servers =

sli.ingestion.cache.opTimeout = 10

sli.ingestion.split.chunk.size = 500

sli.ingestion.split.threshold.percentage = 0.3

sli.ingestion.referenceSchema.referenceCheckEnabled = false

sli.ingestion.errorsCountPerInterchange = 10000

sli.ingestion.warningsCountPerInterchange = 10000

sli.ingestion.totalRetries = 5

sli.ingestion.dataset.sample = {"small":["SmallSampleDataSet.zip"],"medium":["MediumSampleDataSet.zip"]}

sli.ingestion.file.timeout = 600000

sli.ingestion.file.retryinterval = 30000

sli.ingestion.queue.landingZone.host - rcingest01.slidev.org

sli.ingestion.queue.landingZone.port = 61613

sli.ingestion.queue.landingZone.keystore = /opt/tomcat/encryption/tomcat.keystore

sli.ingestion.queue.landingZone.keystorePassword = [DAL\_KEYSTORE\_PASS]

sli.ingestion.queue.landingZone.queueURI = activemq:queue:ingestion.landingZone

sli.ingestion.queue.landingZone.concurrentConsumers = 1

api.client = apiClient

# api.server.url and security.server.url MUST to be set to the FQDN of the API.

api.server.url = https://rcapi.slidev.org/

security.server.url = https://rcapi.slidev.org/

# Portal.footer.url and portal.header.url are Dashboard settings that are utilize to help render the GUI with Portal integration. NOTICE, FQDN must be modified to match the environment.

portal.footer.url = https://rcportal.slidev.org/headerfooter-portlet/api/secure/jsonws/headerfooter/get-footer

portal.header.url = https://rcportal.slidev.org/headerfooter-portlet/api/secure/jsonws/headerfooter/get-header

dashboard.log.level = warn

# The oauth. settings are utilized by Dashboard for OAUTH.

oauth.client.id = [DASHBOARD\_CLIENT\_ID]

oauth.client.secret = [DASHBOARD\_CLIENT\_SECRET]

oauth.redirect = https://rcdashboard.slidev.org/dashboard/callback

panel.config.driver.dir = config

panel.config.custom.dir = custom

# Dashboard settings generally do not require modification.

dashboard.google\_analytics.id = [GOOGLE\_ANALYTICS\_ID]

dashboard.WSCall.timeout = 3000

dashboard.minify.js = true

dashboard.cache.disable = false

dashboard.encryption.keyStorePass = [DAL\_KEYSTORE\_PASS]

dashboard.encryption.dalKeyAlias = dalKey

dashboard.encryption.dalKeyPass = [DAL\_KEY\_PASS]

dashboard.encryption.keyStore = ../data-access/dal/keyStore/ciKeyStore.jks

# Bootstrap settings are below. URL FQDNs, Client IDs and Secrets must be updated.

# bootstrap.app.keys is a list of the applications to be bootstrapped upon API Start=up.

bootstrap.app.keys = admin,portal,dashboard,databrowser

bootstrap.app.admin.template = applications/admin.json

bootstrap.app.admin.name = Admin Apps

bootstrap.app.admin.description = The inBloom Administration Application allows you to change a variety of system settings.

bootstrap.app.admin.version = 0.0

bootstrap.app.admin.authorized\_for\_all\_edorgs = true

bootstrap.app.admin.allowed\_for\_all\_edorgs = true

bootstrap.app.databrowser.template = applications/databrowser.json

bootstrap.app.databrowser.name = inBloom Data Browser

bootstrap.app.databrowser.description = The inBloom Data Browser allows developers and administrators to access all available information in the inBloom datastore.

bootstrap.app.databrowser.version = 0.0

bootstrap.app.databrowser.authorized\_for\_all\_edorgs = true

bootstrap.app.databrowser.allowed\_for\_all\_edorgs = true

bootstrap.app.dashboard.name = inBloom Dashboards

bootstrap.app.dashboard.description = The inBloom Dashboards allow you to see information about students in lists and profiles.

bootstrap.app.dashboard.template = applications/dashboard.json

bootstrap.app.dashboard.version = A.0

bootstrap.app.dashboard.authorized\_for\_all\_edorgs = true

bootstrap.app.dashboard.allowed\_for\_all\_edorgs = true

bootstrap.app.portal.name = Portal

bootstrap.app.portal.description = The inBloom Portal application is the primary access portal.

bootstrap.app.portal.version = 0.0

bootstrap.app.portal.template = applications/portal.json

bootstrap.app.portal.url = https://rcportal.slidev.org/portal

bootstrap.app.portal.client\_id = [PORTAL\_CLEARTEXT\_CLIENT\_ID]

bootstrap.app.portal.client\_secret = [PORTAL\_CLEARTEXT\_CLIENT\_SECRET]

bootstrap.app.portal.authorized\_for\_all\_edorgs = true

bootstrap.app.portal.allowed\_for\_all\_edorgs = true

bootstrap.app.vendor = inBloom

bootstrap.app.admin.client\_secret = [ADMIN\_CLEARTEXT\_CLIENT\_SECRET]

bootstrap.app.admin.client\_id = [ADMIN\_CLEARTEXT\_CLIENT\_ID]

bootstrap.app.admin.url = https://rcadmin.slidev.org

bootstrap.app.databrowser.client\_secret = [DATABROWSER\_CLEARTEXT\_CLIENT\_SECRET]

bootstrap.app.databrowser.client\_id = [DATABROWSER\_CLEARTEXT\_CLIENT\_ID]

bootstrap.app.databrowser.url = https://rcdatabrowser.slidev.org

bootstrap.app.dashboard.client\_secret = [DASHBOARD\_CLEARTEXT\_CLIENT\_SECRET]

bootstrap.app.dashboard.client\_id = [DASHBOARD\_CLEARTEXT\_CLIENT\_ID]

bootstrap.app.dashboard.url = <https://rcdashboard.slidev.org/dashboard>

sli.encryption.ldapKeyAlias: [LDAP\_KEY\_ALIAS]

sli.encryption.ldapKeyPass: [LDAP\_KEY\_PASSWORD]

sli.encryption.keyStorePass = [DAL\_KEYSTORE\_PASSWORD]

sli.encryption.dalKeyAlias = dalKey

sli.encryption.dalKeyPass = [DAL\_KEY\_PASSWORD]

sli.encryption.dalInitializationVector = aabbccddeeff11223344556677889900

sli.wildcard.x509certificate.alias = wildcard

# sli.simple-idp.issuer-base is the base SimpleIDP URL

sli.simple-idp.issuer-base = https://rcidp01ext.slidev.org/sliidp

# sli.simple-idp.cot contains the information defining the IDP Circle of trust. The FQDN of the API must be updated.

sli.simple-idp.cot = https://rcapi.slidev.org=https://rcapi.slidev.org/api/rest/saml/sso/post

# The next five settings do not need to be modified.

sli.simple-idp.sandbox.users= SmallDatasetUsers,Small Sample Dataset,MediumDatasetUsers,Medium Sample Dataset

sli.simple-idp.userSearchAttribute = uid

sli.simple-idp.userObjectClass = inetOrgPerson

sli.simple-idp.groupSearchAttribute = memberUid

sli.simple-idp.groupObjectClass = posixGroup

sli.simple-idp.sliAdminRealmName = SLIAdmin

# sli.simple-idp.sandboxImpersonationEnabled must be set to true for Sandbox logins to be enabled.

sli.simple-idp.sandboxImpersonationEnabled = false

# sli.simple-idp.ldap.urls is the list of LDAP servers that the Simple IDP can utilize for authenticaiton.

sli.simple-idp.ldap.urls = ldaps://rcldap01.slidev.org/

# sli.simple-idp.ldap.base is the search base for the SimpleIDP.

sli.simple-idp.ldap.base = ou=rcEnvironment,dc=slidev,dc=org

########## Settings below this line do not need to be edited under normal circumstances.

sli.dev.subdomain = ERRORNOTUSED.slidev.org

sli.log4j.rootLogger = INFO, out

sli.log4j.logger.org.apache.camel = WARN

sli.log4j.logger.org.apache.activemq = WARN

sli.log4j.logger.org.springframework = WARN

log.path = /var/log/tomcat/

# sli.sample configuration options are utilized by the Sample Application, and do not need to be edited for any production use.

sli.sample.apiUrl = http://local.slidev.org:8080/

sli.sample.callbackUrl = http://local.slidev.org:8081/sample/callback

sli.sample.clientId = fm67sH6vZZ

sli.sample.clientSecret = sb70uDUEYK1IkE5LB2xdBkTJRIQNhBnaOYu1ig5EZW3UwpP4

# sli.sif-agent confiugraiton is not presently utilized.

sli.sif-agent.agentId = test.subscriber.agent

sli.sif-agent.agentPort = 25100

sli.sif-agent.zoneId = TestZone

sli.sif-agent.zoneUrl = http://local.slidev.org:8087/mock-zis/zis

sli.sif-agent.adk.logFile = sif-openadk.log

sli.sif-agent.idmap = default-idmap.csv

sli.sif-agent.zonemap = default-zonemap.csv

# bootstrap.app.sif settings are presently not required.

bootstrap.app.sif.name = SIF Agent

bootstrap.app.sif.description = SIF Agent

bootstrap.app.sif.template = applications/sif.json

bootstrap.app.sif.version = 0.0

bootstrap.app.sif.url = http://local.slidev.org:1338/

bootstrap.app.sif.apiUrl = http://local.slidev.org:8080/

bootstrap.app.sif.callbackUrl = http://local.slidev.org:8081/

bootstrap.app.sif.guid = 2ad39ff1-65f8-4a16-8912-b49872f1ee97

bootstrap.app.sif.token = e4e9d71c-d674-11e1-9ea4-f9fc6188709b

bootstrap.app.sif.client\_id = [redacted]

bootstrap.app.sif.client\_secret = [redacted]

bootstrap.app.sif.authorized\_for\_all\_edorgs = true

bootstrap.app.sif.allowed\_for\_all\_edorgs = true

# The configuration below needs to be added to API and Search Indexer config file.

sli.search.url = http://[PRIVATE\_ELASTICSEARCH\_LOADBALANCER]:9200

sli.search.username = [SEARCH\_USERNAME]

sli.search.password = [SEARCH\_USER\_PASSWORD]

sli.search.encryption = true

sli.search.embedded = false

sli.search.service.timeout = 3000

sli.search.indexer.log.path = logs

sli.search.indexer.log.level = INFO

sli.search.indexer.dir.inbox = data/inbox

sli.search.indexer.dir.extract = data/tmp

sli.search.indexer.extract.schedule = 0 0 0 ? \* SUN

sli.search.indexer.extract.runOnStartup = false

sli.search.indexer.service.port = 10024

sli.search.indexer.broker.uri = tcp://[ACTIVEMQ\_SERVER\_NAME]:61616

sli.search.indexer.broker.username = system

sli.search.indexer.broker.password = manager

sli.search.indexer.queue.name = search

sli.search.indexer.sarje.sub.topic = /topic/oplog\_subscribe

sli.search.indexer.sarje.sub.req.queue = /queue/subscription/poll

sli.search.indexer.env = local

#Items below this line are added to the API configuration which are for the new Application Developer Production Realm account federation feature.

bootstrap.developer.realm.name = inBloom App Developer

bootstrap.developer.realm.uniqueId = DeveloperIDP

bootstrap.developer.realm.idpId = https://sandboxidp.slidev.org/sliidp?realm=SLIAdmin&developer=true

bootstrap.developer.realm.redirectEndpoint = <https://sandboxidp.slidev.org/sliidp?realm=SLIAdmin&developer=true>

# This item was added for use by API and Ingestion.

sli.security.writeValidation = true

## Portal Application sli.properties

# The security.server.url and api.server.url settings point to the root of the REST API server. The FQDN must be updated to match the environment.

security.server.url=https://rcapi.slidev.org/

api.server.url=https://rcapi.slidev.org/

# The portal.oauth.client.id and portal.oauth.client.secret settings are the same settings that the portal application is bootstrapped with via the API sli.properties file.

portal.oauth.client.id=[PORTAL\_CLIENT\_ID]

portal.oauth.client.secret=[PORTAL\_CLIENT\_SECRET]

# The portal.oauth.encryption setting tells the application if the above settings are encrypted utilizing the encryption tool.

portal.oauth.encryption=true

portal.oauth.redirect=https://rcportal.slidev.org/portal/login

log.path = /opt/portal

log.level = INFO

sli.google\_analytics.id = [GOOGLE\_ANALYTICS\_ID]

sli.domain = slidev.org

api.client=apiClient

# These settings have been depricated, and renamed to the portal.oauth settings.

oauth.encryption=true

oauth.client.id=[REDACTED]

oauth.client.secret=[REDACTED]

oauth.encryption=true

oauth.redirect=https://rcportal.slidev.org/portal/login

## portal-ext.properties

# The following settings define the JDBC Parameters for connecting Liferay to a database. The url, username, and password will need to match the environment configuration.

jdbc.default.driverClassName=com.mysql.jdbc.Driver

jdbc.default.url=jdbc:mysql://rcmysql01.slidev.org/lportal?emulateLocators=true&useUnicode=true&characterEncoding=UTF-8&useFastDateParsing=false&createDatabaseIfNotExists=true&useSSL=true&requireSSL=true

jdbc.default.username=[LIFERAY\_DB\_USER]

jdbc.default.password=[LIFERAY\_DB\_PASS]

# The setting below governs if the two settings above are encrypted or not. The settings can be encrypted utilizing the encryption toolkit that is provided with the software packages.

jdbc.default.encrypted.password=false

# The following setting governs if Liferay is clustered with multiple servers via Tomcat Clustering. Set to false if the server is a stand-alone server without Tomcat clustering.

cluster.link.enabled=true

# The following timeout is the Portal Session Timeout in minutes.

session.timeout=30

mail.session.mail.smtp.host=email-smtp.us-east-1.amazonaws.com

mail.session.mail.smtp.port=587

mail.session.mail.smtp.auth=true

mail.session.mail.smtp.user=[ENCRYPTED\_MAIL\_USERNAME]

mail.session.mail.smtp.password=[ENCRYPTED\_MAIL\_PASSWORD]

mail.session.mail.transport.protocol=smtp

mail.session.mail.smtp.credential.encryption=true

# sli.cookie.domain is the setting for at what context the application should issue cookies for browser storage.

sli.cookie.domain=.slidev.org

# The following setting informs Portal if the application is in Sandbox mode. This setting MAY no longer be utilized.

is\_sandbox = false

# The following settings requires that the sli.encryption.properties variable is defined on the Tomcat Command line. This is utilized to decrypt encrypted configuration.

include-and-override=\${sli.encryption.properties}

########## The following setting below this line should not need to be modified.

portal.ctx=/portal

users.reminder.queries.enabled=false

users.reminder.queries.custom.question.enabled=false

users.reminder.queries.required=false

system.roles=SLI Administrator, Educator

setup.wizard.enabled=false

portlet.event.distribution=layout-set

portlet.public.render.parameter.distribution=ALL\_PORTLETS

org.slc.sli.login.servlet.filter.sso.SLIFilter=true

users.screen.name.validator=com.liferay.portal.security.auth.LiberalScreenNameValidator

users.email.address.required=false

terms.of.use.required=true

sli.sso.logout.on.session.expiration=true

sso.login.error.page=/portal/web/guest/error

sli.role.itadmin=IT Administrator

sli.role.sliadmin=SLI Administrator

sli.role.educator=Educator

sli.role.admin=LEA Administrator,Realm Administrator,IT Administrator,SEA Administrator,SLC Operator,Application Developer,Ingestion User,SEA Super Administrator,LEA Super Administrator,Realm Admin,App Developer

sli.role.liferayadmin=SLC Operator

wsrp.page=/portal/web/guest/wsrp

iframe.page=/portal/web/guest/iframe

template.processing.enabled=false

image.menu\_arrow=menu\_arrow1.png

image.arrow=arrow.png

image.arrow\_w=arrow\_w.png

image.sli\_logo=inBloomBlack.png

layout.user.public.layouts.enabled=false

layout.user.public.layouts.modifiable=true

layout.user.public.layouts.auto.create=false

# IMPORT LAR APPROACH

layout.lar.file.name=layout.lar

auto.deploy.deploy.dir=/opt/deploy

# Set path for error page

layout.friendly.url.page.not.found=/web/guest/error

org.quartz.jobStore.isClustered=true

net.sf.ehcache.configurationResourceName=/ehcache/hibernate-clustered.xml

ehcache.multi.vm.config.location=/ehcache/liferay-multi-vm-clustered.xml

dl.store.impl=com.liferay.portlet.documentlibrary.store.JCRStore

lucene.replicate.write=false

lucene.store.jdbc.auto.clean.up.enabled=true

lucene.store.type=jdbc

layout.user.private.layouts.enabled=false

layout.user.private.layouts.modifiable=true

layout.user.private.layouts.auto.create=false

auto.deploy.copy.log4j=false

browser.cache.signed.in.disabled=true

http.header.version.verbosity= partial

session.timeout.warning=0

## Admin config.yml

production:

# NOTICE: The vast majority of these settings will need to be modified to meet the environment that is being utilized.

# api\_base is the URL to the REST API

api\_base: https://rcapi.slidev.org/api/rest

# client\_id and client\_secret are the credentials utilized for

client\_id: [ADMIN\_CLIENT\_ID]

client\_secret: [ADMIN\_CLIENT\_SECRET]

# This is the redirect URL from the IDP to the application. Only the FQDN of the URL should be updated.

redirect\_uri: https://rcadmin.slidev.org/callback

# The following settings are the settings for connecting to the LDAP server.

ldap\_host: rcldap01.slidev.org

ldap\_port: 636

ldap\_use\_ssl: true

ldap\_base: ou=SLIAdmin,ou=rcEnvironment,dc=slidev,dc=org

# The user defined by ldap\_user and ldap\_pass MUST NOT be the directory manager. It must be a standard account with elevated permissions via access/olcAccess.

ldap\_user: cn=Admin,dc=slidev,dc=org

ldap\_pass: [LDAP\_PASSWORD]

# is\_sandbox defines if the Admin applicaiton is running in Sandbox mode or Production mode.

is\_sandbox: false

# auto\_approve is a setting that controls if Developer Registration requests are automatically approved or not.

auto\_approve: true

# email\_sender\_address\_user\_reg\_app is the email address that a user registration email is sent from.

email\_sender\_address\_user\_reg\_app: [USER\_REGISTRATION\_EMAIL]

# The following settings are the API keys for Google Recaptcha

recaptcha\_pub: [RECAPTCHA\_KEY\_ID]

recaptcha\_priv: [RECAPTCHA\_PRIVATE\_KEY]

# The password\_policy setting is the text returned to the user upon the LDAP server responding that the supplied password is insufficent. This MUST be changed to a text string that defines the implemented password policy.

password\_policy: ["password must satisfy password policy"]

# The following settings are settings governing the application sending electronic email for notices.

support\_email: [SUPPORT\_EMAIL\_ADDRESS]

email\_sender\_name: inBloom Administrator

email\_sender\_address: [SUPPORT\_EMAIL\_ADDRESS]

email\_host: email-smtp.us-east-1.amazonaws.com

email\_port: 587

email\_username: [AMAZON\_SES\_USER]

email\_password: [AMAZON\_SES\_PASS]

email\_tls: true

############ Review settings below this point, however changes MAY not be necessary.

# The following URLs are utilized for links within the Admin application, or for links embedded in emails. They may need to be modified.

portal\_url: https://rcportal.slidev.org/portal

email\_replace\_uri: https://rcadmin.slidev.org

admin\_documentation\_link: https://rcadmin.slidev.org/documentation/link

app\_dev\_documentation\_link: http://dev.inBloom.org/getting-started

redirect\_slc\_url: http://www.inBloom.org

sample\_data\_url: http://dev.inBloom.org/getting-started/sandbox

sample\_data\_url: http://www.inBloom.org

terms\_url: http://dev.inBloom.org/legal/terms-of-use

privacy\_policy\_url: http://dev.inBloom.org/legal/privacy

############ Settings below this point should not need to be changed under normal circumstances.

# Setting recaptcha\_disable to true disables captcha validation.

recaptcha\_disable: false

# Do not modify the admin\_realm text unless it exactly matches the API settings.

admin\_realm: Shared Learning Infrastructure

email\_sender\_name\_user\_reg\_app: inBloom Administrator

reset\_password\_lifespan: 86400

# maximum\_user\_count is the maximum number of registered users that can be permitted into Sandbox.

maximum\_user\_count: 500

encryption\_keyfile: /path/to/rcRailsKey

encryption\_iv: [IV\_VALUE\_FROM\_KEY\_GENERATION

## Data browser config.yml

production:

#Notice: All of the settings below MUST be modified to meet the settings of the environment.

# api\_base must be set to the URL to access the REST API.

api\_base: https://rcapi.slidev.org/api/rest/v1

# The client\_id and client\_secret settings are the settings utilized for application/API interaction. You would utilize the values set as part of bootstrapping the Databrowser application from the sli.properties file.

client\_id: [DATABROWSER\_CLIENT\_ID]

client\_secret: [DATABROWSER\_CLIENT\_SECRET]

# The redirect\_uri setting should be static with the exception of the FQDN of the application. It is the URL that is passed to the IDP for the redirect back to the application.

redirect\_uri: https://rcdatabrowser.slidev.org/callback

# The portal\_url is the setting for the Portal Header/Footer. Only the FQDN of the server name should change in this setting.

portal\_url: https://rcportal.slidev.org/headerfooter-portlet/api/secure/jsonws/headerfooter

## Apache Tomcat

For ingestion tomcat instances, tomcat’s command line needs to have garbage collection settings changed to ensure reliable batch job runs. Below is an example addition of these properties on the java command line:

-Xms40G -Xmx40G -XX:+UseParallelGC -XX:PermSize=512m -XX:MaxPermSize=512m

Additionally, Tomcat connectors for the API should have the following setting appended to the connector statement:

maxHttpHeaderSize="16384"

## ActiveMQ

ActiveMQ Configuration Blocks from the default configuration, conf/activemq.xml file. The bolded lines below contain the suggested settings.

Note: Between Release 6.5 and 6.8, the producerFlowControl was changed from “true” to “false”.

<destinationPolicy>

<policyMap>

<policyEntries>

**<policyEntry topic=">" producerFlowControl="false" memoryLimit="750mb">**

<pendingSubscriberPolicy>

<vmCursor />

</pendingSubscriberPolicy>

</policyEntry>

**<policyEntry queue=">" producerFlowControl="false" memoryLimit="750mb">**

</policyEntry>

</policyEntries>

</policyMap>

</destinationPolicy>

<systemUsage>

<systemUsage>

<memoryUsage>

**<memoryUsage limit="1gb"/>**

</memoryUsage>

<storeUsage>

<storeUsage limit="100 gb"/>

</storeUsage>

<tempUsage>

<tempUsage limit="50 gb"/>

</tempUsage>

</systemUsage>

</systemUsage>

<transportConnectors>

<transportConnector name="openwire" uri="tcp://0.0.0.0:61616"/>

**<transportConnector name="stomp" uri="stomp://0.0.0.0:61613"/>**

</transportConnectors>