**MAP:**

1. Install linux\_defaults
2. Install yum
3. Install yum-epel
4. Install yum-appsydev
5. Install yum-nginx
6. Install yum-remi
7. Install chef-client
8. Install nrpe
9. Install nrpe\_plugins
10. Install ntp
11. Install ulimit
12. Install fuse62 node plugins (to do several container health checks (cpu, memory, open file descriptors, threads).
13. Create directory /opt/map with owner=map and group=map
14. Putting limits on map resources:
    1. Filehandle limit = 64000
    2. Filehandle soft limit = 64000
    3. Filehandle hard limit = 64000
    4. Process limit = 64000
    5. Process soft limit = 64000
    6. Process hard limit = 64000
15. **MAP::nginxphp**
    1. Remove/uninstall apache2 package (httpd)
    2. Install Nginx package (nginx)
    3. Install php-common package containing files used by both the php package and the php-cli package (php-common)
    4. Install php support package => FastCGI Process Manager (php-fpm)
    5. Install php GD Graphics library (php-gd)
    6. Install php multi-byte string support for storing and displaying multi-byte characters (php-mbstring)
    7. Copy file nginx-logrotate to /etc/logrotate.d/nginx
    8. Create directory /var/log/nginx with owner=nginx and group=nginx
    9. Create directory /etc/nginx/upstreams/
    10. Create directory /etc/nginx/endpoints/
    11. Create directory /etc/nginx/cache/
    12. Copy template nginx.conf.erb to /etc/nginx/nginx.conf

Restart the nginx service

* 1. Copy template default.conf.erb to /etc/nginx/conf.d/default.conf

i.e.

Restart the nginx service

* 1. Copy template map-upstreams.conf.erb to /etc/nginx/upstreams/map-upstreams.conf

**i.e.** Search for all mes nodes (upstream servers). List down their ip addresses and their listening port in the config file.

Restart the nginx service

* 1. Copy template map-endpoints.conf.erb to /etc/nginx/endpoints/map-endpoints.conf

Set all the endpoints of the map-server:

1. MES i.e. <http://mes/Mes/>
2. MAP/image
3. MAP/1.0 i.e. <http://127.0.0.1:8080/MAP/1.0/>
4. MAP/FuseConsole i.e. <http://127.0.0.1:8181/hawtio>
5. MAP/metadata i.e. <http://127.0.0.1:8080/MAP/metadata>
6. MAP/personalcontent i.e. http://127.0.0.1:8081/MAP/personalcontent/

Restart the nginx service

* 1. Copy template map-cache.conf.erb to /etc/nginx/cache/map-cache.conf

Restart the nginx service

* 1. Copy template status.conf.erb to /etc/nginx/conf.d/status.conf

**i.e.** Search for all Nagios(role) nodes. Allow access from these Nagios nodes to the web server.

* 1. Copy template [www.conf.erb](http://www.conf.erb) to /etc/php-fpm.d/www.conf
  2. Enable service php-fpm
  3. Enable service nginx
  4. Start service php-fpm
  5. Start service nginx
  6. Putting limits on nginx resources:
     + 1. Filehandle limit = 8192
       2. Filehandle soft limit = 8192
       3. Filehandle hard limit = 8192
       4. Process limit = 16000
       5. Process soft limit = 16000
       6. Process hard limit = 16000

1. **MAP::image**
   1. Copy file tt/tt.php to /srv/www/timthumb/php/tt.php

Set owner=nginx and group=nginx

* 1. Copy file tt/tt-config.php to /srv/www/timthumb/php/tt-config.php

owner=nginx and group=nginx

* 1. Set owner=nginx and group=nginx and mode=0755

For [/srv /srv/www /srv/www/timthumb /srv/www/timthumb/php /var/cache/nginx/metadata /var/cache/nginx/images]

1. **MAP::monitoring**
   1. Install net-snmp-utils
   2. Install net-snmp
   3. Install perl-XML-Simple
   4. Install perl-Digest-SHA
   5. Install nagios-plugins-http
   6. Install nagios-plugins-tcp
   7. Install collectd
   8. Install logstash
   9. Install sysstat
   10. Set Nagios to check/test the current system load average of the server.

warning\_condition 10

critical\_condition 15

* 1. Set Nagios to check the amount of used disk space on a mounted file system of the server and generates an alert if free space is less than one of the threshold values

warning\_condition 15%

critical\_condition 10%

* 1. Set Nagios to check the percentage of memory usage of the server with performance data

warning\_condition 90

critical\_condition 95

* 1. Set Nagios to check cpu utilization of the server (user, system, iowait, idle in %)

warning\_condition 80

critical\_condition 90

* 1. Add fuse62 (gateway & broker) nrpe cpu (process cpu load) for container check:

warning = 80

critical = 90

* 1. Add fuse62 (gateway & broker) nrpe memory (heap memory usage) for container check:

warning 800\*1024\*1024

critical 900\*1024\*1024

* 1. Add fuse62 (gateway & broker) nrpe ofd (open file descriptor count) for container check:

warning 500

critical 600

* 1. Add fuse62 (gateway & broker) nrpe threads (threading count) for container check:

warning 600

critical 900

* 1. Copy template log-map-metadata.conf.erb to /etc/logstash/conf.d/log-map-metadata.conf

Configure logstash to receive all nginx metadata logs and store them in elastic search nodes (state the ip address and port i.e. 9200 of all elastic search nodes).

Restart the service logstash

* 1. Copy template log-map-images.conf.erb to /etc/logstash/conf.d/log-map-images.conf

Configure logstash to receive all nginx images logs and store them in elastic search nodes (state the ip address and port i.e. 9200 of all elastic search nodes).

Restart the service logstash.

* 1. Copy template log-map-containers.conf.erb to /etc/logstash/conf.d/log-map-containers.conf

Configure logstash to receive all map fuse logs and store them in elastic search nodes (state the ip address and port i.e. 9200 of all elastic search nodes).

Restart the service logstash.

* 1. Copy template log-map-filters.conf.erb to /etc/logstash/conf.d/log-map-filters.conf

Configure logstash to log filters for all elastic search nodes.

Restart the service logstash.

* 1. Copy template log-collectd.conf.erb to /etc/logstash/conf.d/ log-collectd.conf

Configure the udp port (25826), buffer size (1452) to collect logs on the logstash.

Restart the service logstash.

* 1. Enable service “ logstash”
  2. Copy collectd.conf to /etc/collectd.conf

Restart the service collectd.

* 1. Enable the service collectd.

1. Fuse62 gateway profile setup

Import the profile from “mvn:com.lgi.bs.map/gateway-connector-profile/#{node['MAP']['Version']}/zip/profile”

Set the MAP version to be the version of the node

1. mes.api.url config setup

Set the pid to "com.lgi.bs.map.gateway.connector.shared.resources"

Set the map-gateway profile to be the profile

Set the target value to MES host

1. Create broker container

Start the container

1. Create gateway container

Start the container

1. Upgrade the gateway container
2. Create the broker’s profile
3. Add the broker’s profile to the broker’s container
4. Add the gateway’s profile to the gateway’s container
5. log4j.rootLogger config setup

Set the pid to " org.ops4j.pax.logging"

Set the karaf profile to be the profile

Set the target value to osgi container

**MES:**

1. Install linux\_defaults
2. Install yum
3. Install yum-epel
4. Install yum-appsysdev
5. Install yum-nginx
6. Install yum-remi
7. Install chef-client
8. Install nrpe
9. Install nrpe\_plugins
10. Install ntp
11. Install ulimit
12. Install fuse62 node plugins
13. Install package perl-JSON
14. Create directory /opt/map with owner=map and group=map
15. Create directory /opt/mes with owner=map and group=map
16. Create directory /opt/mes/tools with owner=map and group=map
17. Create directory /opt/mes/tools/exports with owner=map and group=map
18. Create directory /opt/map/mes-tools with owner=map and group=map
19. Copy RedbeeExportImporter.pl.erb to /opt/map/mes-tools/RedbeeExportImporter\_{countrycode}.pl with owner=map, group=map and mode=0755.

Parses and stores Redbee TVAMAIN data for all supported countries in the MES data nodes.

1. Copy EditorialOverrideTableImporter.pl.erb to /opt/map/mes-tools/ EditorialOverrideTableImporter\_{countrycode}.pl with owner=map, group=map and mode=0755.

Parses and stores Redbee Editorial Override table data for all supported countries in the MES data nodes.

1. Create cron entry to import Redbee TVAMAIN data from all supported countries every 1 hour 45 minutes
2. Create cron entry to import Redbee Editorial Override table data from all supported countries every 50 minutes
3. Delete non country-specific cron entry for importing Redbee TVAMAIN from the crontab
4. Delete non country-specific cron entry for importing Redbee Editorial Override table data from the crontab
5. Putting limits on map resources:
   1. Filehandle limit = 64000
   2. Filehandle soft limit = 64000
   3. Filehandle hard limit = 64000
   4. Process limit = 64000
   5. Process soft limit = 64000
   6. Process hard limit = 64000
6. **MES::nginxphp**
   1. Remove/uninstall apache2 package (httpd)
   2. Install Nginx package (nginx)
   3. Copy file nginx-logrotate to /etc/logrotate.d/nginx
   4. Create directory /var/log/nginx with owner=nginx and group=nginx
   5. Create directory /etc/nginx/upstreams/
   6. Create directory /etc/nginx/endpoints/
   7. Create directory /etc/nginx/cache/
   8. Create directory /srv/www
   9. Create directory /srv/www/preindexing
   10. Create directory /srv/www/timthumb
   11. Create directory /srv/www/timthumb/php
   12. Create directory /srv/www/timthumb/cache
   13. Copy template nginx.conf.erb to /etc/nginx/nginx.conf

Restart the nginx service

* 1. Copy template default.conf.erb to /etc/nginx/conf.d/default.conf

Restart the nginx service

* 1. Copy template mes-cache.conf.erb to /etc/nginx/cache/mes-cache.conf

Sets the time for nginx to keep the Redbee cache for 50 minutes

Sets how long response will be stored in Redbee cache after last use for 4 hours

Sets maximum size of the Redbee cache to 1024 MB

Sets the time for nginx to keep the Traxis cache **per country** for 50 minutes

Sets how long response will be stored in Traxis cache **per country** after last use for 4 hours

Sets maximum size of the Traxis cache **per country** to 1024 MB

Restart the nginx service

* 1. Copy template mes-upstreams.conf.erb to /etc/nginx/upstreams/mes-upstreams.conf

Search for all Elastic Search nodes (upstream servers). List down their ip addresses and their listening port in the config file.

Restart the nginx service

* 1. Copy template preindexing\_status.html.erb to /srv/www/preindexing/index.html.
  2. Copy file jquery.canvasjs.min.js to /srv/www/preindexing/jquery.canvasjs.min.js
  3. Copy template mes-endpoints.conf.erb to /etc/nginx/endpoints/mes-endpoints.conf

Set all the endpoints of the mes-server:

1. Export directory i.e. /opt/map/tools/exports/
2. Elastic Search i.e. <http://elasticsearch/>
3. RedBee i.e. Redbee host => <https://mds.redbeemedia.com/>
4. Traxis/countrycode/language i.e. traxis url **per country**
5. Kibana i.e. <http://localhost:5601>
6. Mes i.e. <http://localhost:@mes-port>
7. Mes/status i.e. /srv/www/preindexing/
8. Themoviedb i.e. <https://api.themoviedb.org/3/>

Restart service nginx

* 1. Copy template status.conf.erb to /etc/nginx/conf.d/status.conf

**i.e.** Search for all Nagios(role) nodes. Allow access from these Nagios nodes to the web server.

* 1. Enable service nginx
  2. Start service nginx
  3. Reload service nginx
  4. Putting limits on nginx resources:
     + 1. Filehandle limit = 8192
       2. Filehandle soft limit = 8192
       3. Filehandle hard limit = 8192
       4. Process limit = 16000
       5. Process soft limit = 16000
       6. Process hard limit = 16000

1. **MES::monitoring**
   1. Install net-snmp-utils
   2. Install net-snmp
   3. Install perl-XML-Simple
   4. Install perl-Digest-SHA
   5. Install nagios-plugins-http
   6. Install nagios-plugins-tcp
   7. Install collectd
   8. Install logstash version 2.3.1-1
   9. Install sysstat

**Monitoring**

* 1. Set Nagios to check/test the current system load average of the server.

warning\_condition 10

critical\_condition 15

* 1. Set Nagios to check the amount of used disk space on a mounted file system of the server and generates an alert if free space is less than one of the threshold values

warning\_condition 15

critical\_condition 10

* 1. Set Nagios to check the percentage of memory usage of the server with performance data

warning\_condition 90

critical\_condition 95

* 1. Set Nagios to check cpu utilization of the server (user, system, iowait, idle in %)

warning\_condition 80

critical\_condition 90

* 1. Copy file CheckLastPreindex.rb to ${node[‘nrpe’][‘plugin\_dir’]/CheckLastPreindex.rb

owner root

group root

mode 0755

* 1. Copy file MESCheckEndpoint.rb to ${node[‘nrpe’][‘plugin\_dir’]/MESCheckEndpoint.rb

owner root

group root

mode 0755

* 1. Check MES endpoint on all supported countries
  2. Check last preindex for enrichmentprocess on all supported countries
  3. Set Nagios to check ElasticSearch connectivity
  4. Set Nagios to check poster server connectivity
  5. Set Nagios to check traxis connectivity on all supported countries
  6. Set Nagios to check Redbee api connectivity
  7. Set Nagios to check Redbee ftp connectivity
  8. Add mes-enricher & mes-server nrpe cpu (process cpu load) for container check:

warning = 80

critical = 90

* 1. Add mes-enricher & mes-server nrpe memory (heap memory usage) for container check:

warning 800\*1024\*1024

critical 900\*1024\*1024

* 1. Add mes-enricher & mes-server nrpe ofd (open file descriptor count) for container check:

warning 500

critical 600

* 1. Add mes-enricher & mes-server nrpe threads (threading count) for container check:

warning 600

critical 900

**Logging**

* 1. Copy template log-map-metadata.conf.erb to /etc/logstash/conf.d/log-map-metadata.conf

Configure logstash to receive all nginx metadata logs and store them in elastic search nodes (state the ip address and port i.e. 9200 of all elastic search nodes).

Restart the service logstash.

* 1. Copy template log-map-images.conf.erb to /etc/logstash/conf.d/log-map-images.conf

Configure logstash to receive all nginx images logs and store them in elastic search nodes (state the ip address and port i.e. 9200 of all elastic search nodes).

Restart the service logstash.

* 1. Copy template log-map-containers.conf.erb to /etc/logstash/conf.d/log-map-containers.conf

Configure logstash to receive all map fuse logs and store them in elastic search nodes (state the ip address and port i.e. 9200 of all elastic search nodes).

Restart the service logstash.

* 1. Copy template log-map-filters.conf.erb to /etc/logstash/conf.d/log-map-filters.conf

Configure logstash to log filters for all elastic search nodes.

Restart the service logstash.

* 1. Copy template log-mes-preindexing.conf.erb to /etc/logstash/conf.d/log-mes-preindexing.conf.

Configure logstash to receive all preindexing logs during enrichment process from all countries and store them in elastic search nodes (state the ip address and port i.e. 9200 of all elastic search nodes).

Restart the service logstash.

* 1. Copy template log-collectd.conf.erb to /etc/logstash/conf.d/ log-collectd.conf

Configure the udp port (25826), buffer size (1452) to collect logs on logstash.

Restart the service logstash.

* 1. Enable service “logstash”
  2. Copy collectd.conf to /etc/collectd.conf

Restart the service collectd.

* 1. Enable the service collectd.

**Settings**

1. Fuse62 mes-enricher profile setup

Import the profile from “mvn:com.lgi.bs.mes/mes-enricher-impl-profile/#{node['MES']['Version']}/zip/profile”

Set the MES version to be the version of the node

1. Fuse62 mes-server datastore profile setup

Import the profile from “mvn:com.lgi.bs.mes/mes-server-impl-datastore-profile/#{node['MES']['Version']}/zip/profile”

Set the MES version to be the version of the node

1. Sets the preindexing string (countrycode|language|crid)
2. Stores new Elasticsearch ip addresses
3. elasticsearch.clustername config setup

Set the pid to "com.lgi.bs.mes.datastore"

Set mes-enricher profile to be the profile

Set the target value to mapdatacluster

1. elasticsearch.hosts config setup

Set the pid to "com.lgi.bs.mes.datastore"

Set mes-enricher profile to be the profile

Set the target value to Elasticsearch ip addresses

1. elasticsearch.clustername config setup

Set the pid to "com.lgi.bs.mes.datastore"

Set mes-server.datastore.impl profile to be the profile

Set the target value to mapdatacluster

1. elasticsearch.hosts config setup

Set the pid to "com.lgi.bs.mes.datastore"

Set mes-server.datastore.impl profile to be the profile

Set the target value to Elasticsearch ip addresses

1. traxisvodcatalog.list config setup

Set the pid to "com.lgi.bs.mes.enricher.impl.shared.resources"

Set mes-enricher profile to be the profile

Set the target value to the preindexing string

1. traxis.supportedCountriesForLanguageParameterInRequest config setup

Set the pid to "com.lgi.bs.mes.traxis.retrieval.impl.shared.resources”

Set mes-enricher profile to be the profile

Set the target value to language-parameter-countries

1. traxis.supportedCountriesForSeriesDataFromCategory config setup

Set the pid to "com.lgi.bs.mes.traxis.retrieval.impl.shared.resources”

Set mes-enricher profile to be the profile

Set the target value to series-category-countries

1. traxis.receive.timeout config setup

Set the pid to "com.lgi.bs.mes.traxis.retrieval.impl.shared.resources”

Set mes-enricher profile to be the profile

Set the target value to receive-timeout

1. traxis.server.service.user.agent config setup

Set the pid to "com.lgi.bs.mes.traxis.retrieval.impl.shared.resources”

Set mes-enricher profile to be the profile

Set the target value to useragent

1. redbee.server.auth.username config setup

Set the pid to "com.lgi.bs.mes.redbee.enrichment.impl.shared.resources”

Set mes-enricher profile to be the profile

Set the target value to Redbee username

1. redbee.server.auth.password config setup

Set the pid to "com.lgi.bs.mes.redbee.enrichment.impl.shared.resources”

Set mes-enricher profile to be the profile

Set the target value to Redbee password

1. tmdb.server.api.key config setup

Set the pid to "com.lgi.bs.mes.itmdb.enrichment.impl.shared.resources”

Set mes-enricher profile to be the profile

Set the target value to TMDB apikey

1. itmdb.enrichment.hours.to.refresh.case.found config setup

Set the pid to "com.lgi.bs.mes.itmdb.enrichment.impl.shared.resources”

Set mes-enricher profile to be the profile

Set the target value to ITMDB hours-to-refresh-case-found

1. itmdb.enrichment.hours.to.refresh.case.not.found config setup

Set the pid to "com.lgi.bs.mes.itmdb.enrichment.impl.shared.resources”

Set mes-enricher profile to be the profile

Set the target value to ITMDB hours-to-refresh-case-not-found

1. redbee.enrichment.hours.to.refresh.case.found config setup

Set the pid to "com.lgi.bs.mes.redbee.enrichment.impl.shared.resources”

Set mes-enricher profile to be the profile

Set the target value to Redbee hours-to-refresh-case-found

1. redbee.enrichment.hours.to.refresh.case.not.found config setup

Set the pid to "com.lgi.bs.mes.redbee.enrichment.impl.shared.resources”

Set mes-enricher profile to be the profile

Set the target value to Redbee hours-to-refresh-case-not-found

1. skipItmdbEnrichmentForCountries config setup

Set the pid to "com.lgi.bs.mes.enricher.impl.shared.resources”

Set mes-enricher profile to be the profile

Set the target value to MES itmdb skip-for-countries

1. skipRedBeeEnrichmentForCountries config setup

Set the pid to "com.lgi.bs.mes.enricher.impl.shared.resources”

Set mes-enricher profile to be the profile

Set the target value to MES redbee skip-for-countries

1. maxAllowedReductionPercentageInAssetCount config setup

Set the pid to "com.lgi.bs.mes.enricher.impl.shared.resources”

Set mes-enricher profile to be the profile

Set the target value to MES traxis maxAllowedReductionPercentageInAssetCount

**Reporting**

1. exportfolder.path config setup

Set the pid to "com.lgi.bs.mes.reporting.coverage.report.shared.resources”

Set mes-enricher profile to be the profile

Set the target value to MES reporting exportfolder.path

1. assetbase.size config setup

Set the pid to "com.lgi.bs.mes.reporting.coverage.report.shared.resources”

Set mes-enricher profile to be the profile

Set the target value to MES reporting assetbase.size

1. personbase.size config setup

Set the pid to "com.lgi.bs.mes.reporting.coverage.report.shared.resources”

Set mes-enricher profile to be the profile

Set the target value to MES reporting personbase.size

1. seriesbase.size config setup

Set the pid to "com.lgi.bs.mes.reporting.coverage.report.shared.resources”

Set mes-enricher profile to be the profile

Set the target value to MES reporting seriesbase.size

1. source.list config setup

Set the pid to "com.lgi.bs.mes.reporting.coverage.report.shared.resources”

Set mes-enricher profile to be the profile

Set the target value to MES reporting source.list

1. Sets the countryandlanguagelist string (countrycode|language)
2. countryandlanguage.list config setup

Set the pid to "com.lgi.bs.mes.reporting.coverage.report.shared.resources”

Set mes-enricher profile to be the profile

Set the target value to the countryandlanguagelist

1. Create mes-server container

Start the container

1. Create mes-elasticsearch container

Start the container

1. Create mes-enricher container

Start the container

1. Upgrade mes-server container
2. Upgrade mes-enricher container
3. Add the mes-enricher profile to the mes-enricher container
4. Add the mes-server.datastore.impl profile to the mes-server container
5. Add the mq-client-default profile to the mes-enricher container
6. Add the mq-client-default profile to the mes-server container
7. Add the gateway-http profile to the mes-server container
8. Add the feature-cxf profile to the mes-server container
9. log4j.rootLogger config setup

Set the pid to " org.ops4j.pax.logging"

Set the karaf profile to be the profile

Set the target value to osgi container

**Elastic Search:**

1. Install linux\_defaults
2. Install yum
3. Install yum-epel
4. Install yum-appsysdev
5. Install chef-client
6. Install nrpe
7. Install nrpe\_plugins
8. Install ntp
9. Install package net-snmp-utils
10. Install package elasticsearch

Version 1.4.4-1

1. Copy template elasticsearch.yml.erb to /etc/elasticsearch/elasticsearch.yml

Restart service elasticsearch

1. Copy template elasticsearch.erb to /etc/sysconfig/elasticsearch

Restart service elasticsearch

1. Enable and start service elasticsearch
2. Set Nagios to check/test the current system load average of the server.

warning\_condition 10

critical\_condition 15

1. Set Nagios to check the amount of used disk space on a mounted file system of the server and generates an alert if free space is less than one of the threshold values

warning\_condition 15%

critical\_condition 10%

1. Set Nagios to check the percentage of memory usage of the server with performance data

warning\_condition 90

critical\_condition 95

1. Set Nagios to check cpu utilization of the server (user, system, iowait, idle in %)

warning\_condition 80

critical\_condition 90

1. Install ulimit
2. Set memory\_limit of user\_ulimit elasticsearch to unlimited