SLI Learning Search Connect

For Magento 2

User Guide v1.3.1

The Learning Search Connect module integrates with SLI Systems' Search and provides an outstanding level of search customizability.

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1. Overview

Learning Search Connect for Magento 2 provides an easy integration path with SLI Systems services for E-Commerce stores using the Magento 2 platform. This extension makes it easy to export and send a data feed to SLI Systems that can be used for building site search. It can also be used for switching the search functionality of your Magento 2 installation to SLI systems Learning Search. This user guide explains the functionality and user interface of the extension and how it can be added to a Magento 2 environment and used to integrate with SLI Systems.

1.1 Compatibility

Learning Search Connect for Magento2 (LSC-m2) v1.3.1 is compatible with Magento Enterprise Edition and Community Edition versions 2.2.0 and onwards. If you are looking for LSC for Magento version 1, you can download it from https://www.sli-systems.com/solutions/learning-search-connect-magento .

1.1.1 Compatibility issues with other extensions and themes

When Learning Search Connect's Search Form is turned on, it replaces the default catalog search that is built into Magento. The catalog search functionality then uses SLI's Learning Search by default, platform wide.

Should there be compatibility issues with other extensions or themes using catalog search, then there are ways for these extensions to be using their own catalog search or the Magento built in one, instead of SLI's Learning Search.

It is the website owner's responsibility to choose the extensions and themes that are placed onto their ecommerce platform. SLI can provide recommendations on how to address such incompatibilities however these are mere recommendations and there is no guarantee that these recommendations will address all combinations and permutations introduced by extension incompatibilities.

Please contact your Customer Success Manager in case you are affected by compatibility issues and need these recommendations.

1.1.2 Compatibility issues with the Operating System and Middleware

For 'Learning Search Connect for Magento 2' to function properly, it needs to be installed on a system that is capable of running the Magento 2 eCommerce platform without any problems.

Please consult the following installation guide for further information:
http://devdocs.magento.com/guides/v2.0/install-gde/bk-install-guide.html

2. Installation

1. Unzip the module into the Magento root directory. One of the ways of doing this is to execute the following command from the Magento root directory:
   tar -zxvf SLI_LSC_M2-x.y.z.full.zip
   Note: By default, ownership of all module directories and files will be set to the current user – ownership of these may need to change. See the Magento 2 Installation Guide for more details on file system ownership and permissions.
2. Clear the Magento cache via the Magento Admin UI located at System -> Cache Management.
   Click on the following buttons:

a. Flush Magento Cache
b. Flush Cache Storage

In case after the Cache Storage is flushed some cache types are still shown as stale, please mark all page types and refresh them all.

3. Execute the following command from the Magento root directory:
   ./bin/magento setup:upgrade
4. Configure module to desired settings following the Setup section

2.1 Deployment and source control

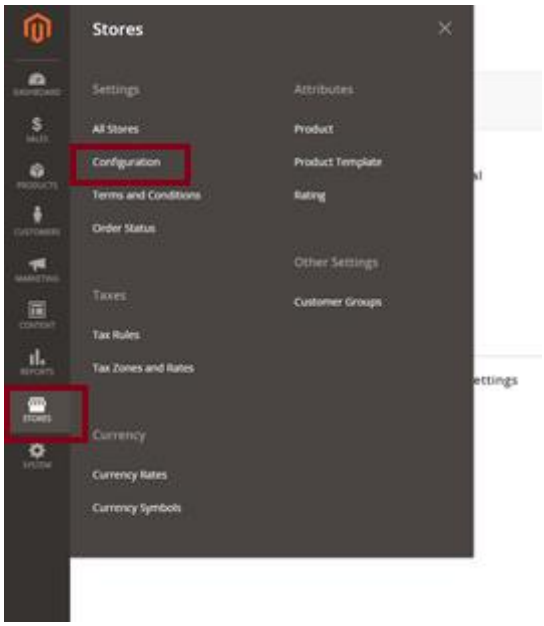
In environments where updates are not directly installed on target systems but deployed via source control, the installation approach is different.
All files contained within the module's archive need to be extracted and then submitted into the source control repository.

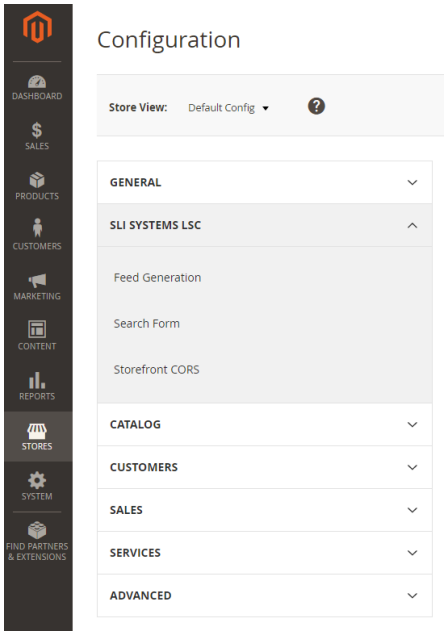
Please keep in mind that the module archive has been created using Unix tar and gzip tools. In case extraction of the module files is done on environments other than Unix/Linux the extraction tools used need to be capable of working with tar/gzip archives.
An example of such a tool for the Windows platform is the free tool 7-Zip.

3. Setup – Configuring Feed Generation

One of the first steps in the integration process with SLI is exporting and sending product data in XML format to SLI. The Feed Generation module is used for doing this. Once the extension has been installed, SLI related Configurations are placed under Stores -> Configuration -> SLI Systems LSC in the Magento Admin Web UI. This can be found on the left hand side of the screen (see below). The configuration UI is broken into Feed Generation and Search Form. This section gives an overview of various configuration options available for Feed Generation in SLI Admin UI. For other operational considerations and setting up scheduled feed generation, please refer to *Section 6. Feed Generation – Operational Considerations*.

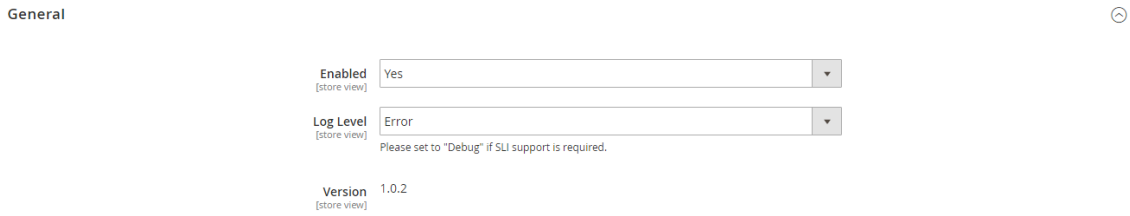
SLI Learning Search Connect comes with default settings appropriate for most stores. This includes all sections other than the Product Attribute section. It is expected that the product attributes selected here will vary across all installations.





3.1 General

These settings can be found in the General Section of the Feed Generation Module.



3.1.1 Enabled

The enabled setting can set the Feed Generation module into 2 states: enabled or disabled. This setting can apply to each store or website in scope. Turning off the module for a specific store or website prevents feed generation functionality of the module for that store or website. Please note that this will not have an impact on the Search Form, and that will need to be updated separately, if required.

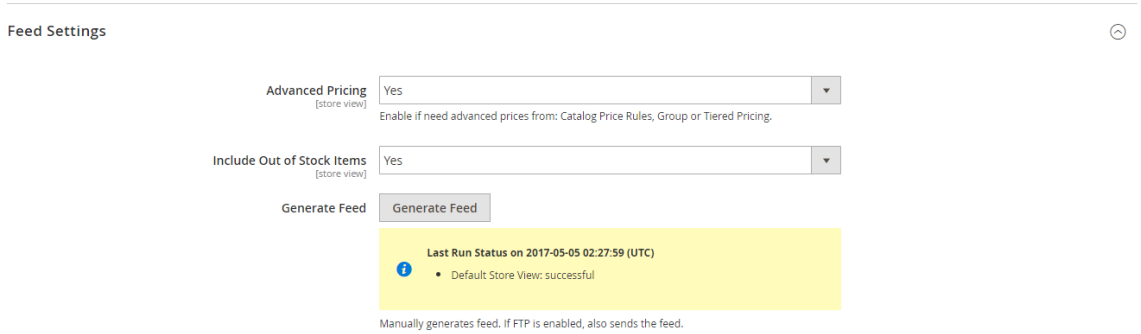
3.1.2 Log Level

This is set to "Error" per default and should be left that way. This way only errors are logged resulting in the least impact on performance and storage required for log files. Should there be issues with the feed creation this setting can be changed to "Error" or "Debug". Changing this setting should only be done in consultation with SLI.

3.1.3 Version

Shows the version of extension module

3.2 Feed Settings



All feed settings are only available at the global level.

3.2.1 Include Out of Stock Items

Enabling 'Advanced Pricing' in the feed allows exporting Catalog Price Rules, Group pricing and Tiered pricing for products.

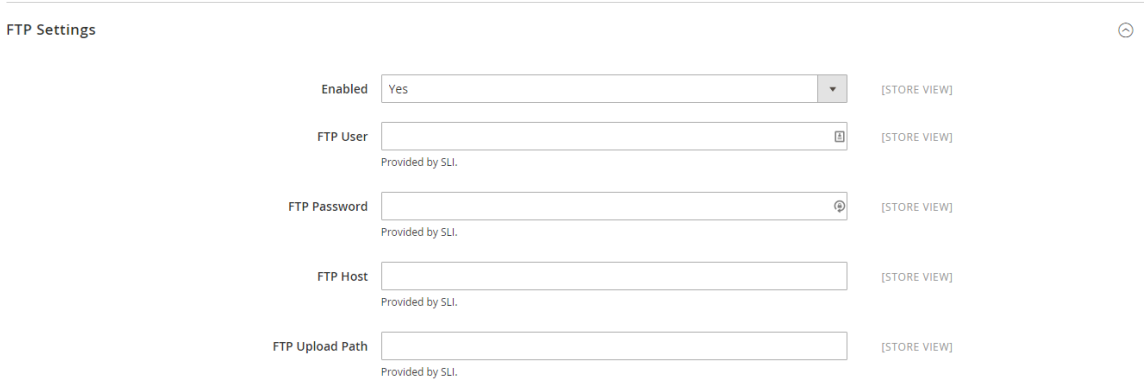
3.2.2 Include Out of Stock Items

By default, Out of Stock items are included in the feed. Items can be marked as being Out of Stock in Magento. This is done in the 'Products' > 'Catalog' section of Magento Admin UI by selecting a product and setting dropdown in "Stock Availability" to "Out of Stock". If Out of Stock items are not used within SLI provided functionality such as Learning Search or Learning Navigation then "Include Out of Stock Items" can be set to "No".

3.2.3 Generate Feed Button

This button manually generates the SLI feeds for all stores. A status update will be displayed below the button upon running as output of the generation. As of the time of this writing, there is no individual feed generation button on a store by store basis as this setting is only available in the global scope.

3.3 FTP Settings



These are details required to upload the Feed to SLI after generation. All FTP settings are provided by SLI. To receive FTP settings for the feed generation, please contact SLI.

3.3.1 Enabled

If the FTP enabled is set to no, then the feed will not be sent anywhere upon generation. Set to yes, then the feed will go to the specified ftp upload path using the host and credentials specified below.

3.3.2 FTP User

User to authenticate to the FTP Host

3.3.3 FTP Password

Password to authenticate the FTP User to the FTP Host

3.3.4 FTP Host

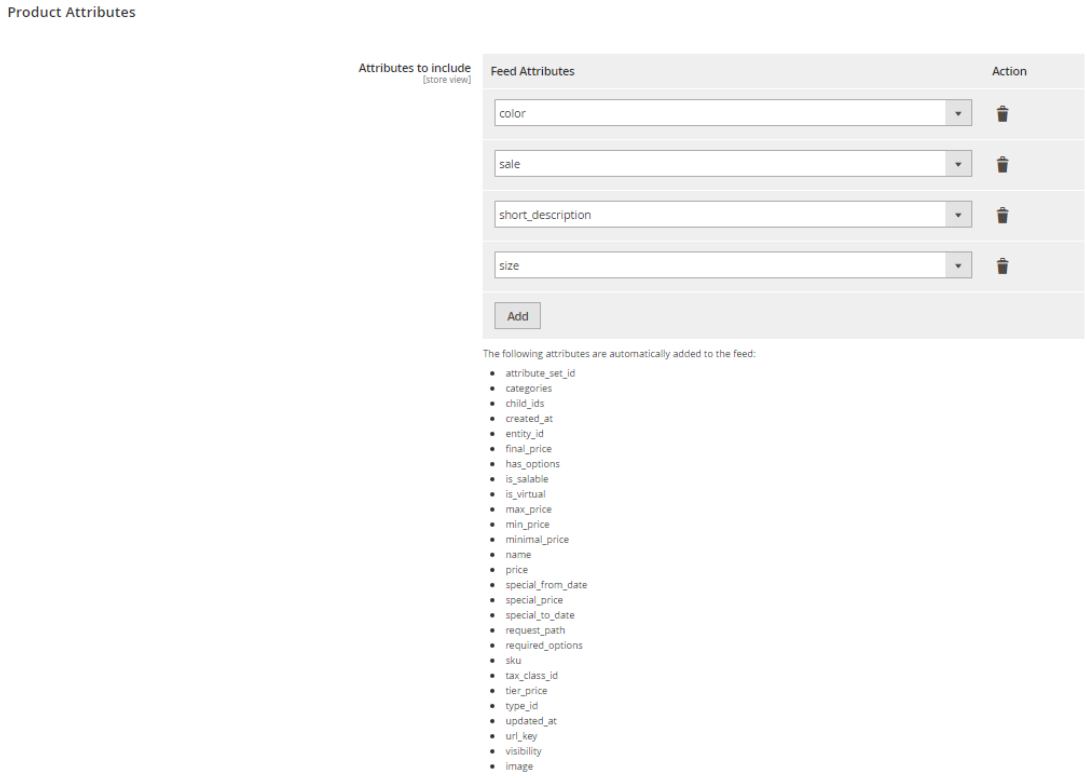
Target Host for the FTP upload

3.3.5 FTP Upload Path

Relative or absolute FTP upload path for placement of the feed on the FTP server. Should you choose to install Learning Search Connect on multiple environments it is recommended that you choose a different FTP Upload Path for each of the environments.

3.4 Product Attributes

Product attributes settings by default apply to all stores on the implementation. However, this can be changed so that each store on the implementation can have its individual Product Attribute selection.



3.4.1 Attributes to include

A default list of attributes that are included in the feed automatically are shown below the input box and do not need to be re-entered. Any other custom attributes that need to be included in the feed should be selected using the dropdowns. Clicking the Add button will add more dropdown boxes, so that more attributes can be included. Use the delete button next to the

dropdown to remove attributes. Once you have made the required changes, click 'Save Config' button.

In addition to Product attributes, attributes from other categories can be added. One such attribute category is Review information.

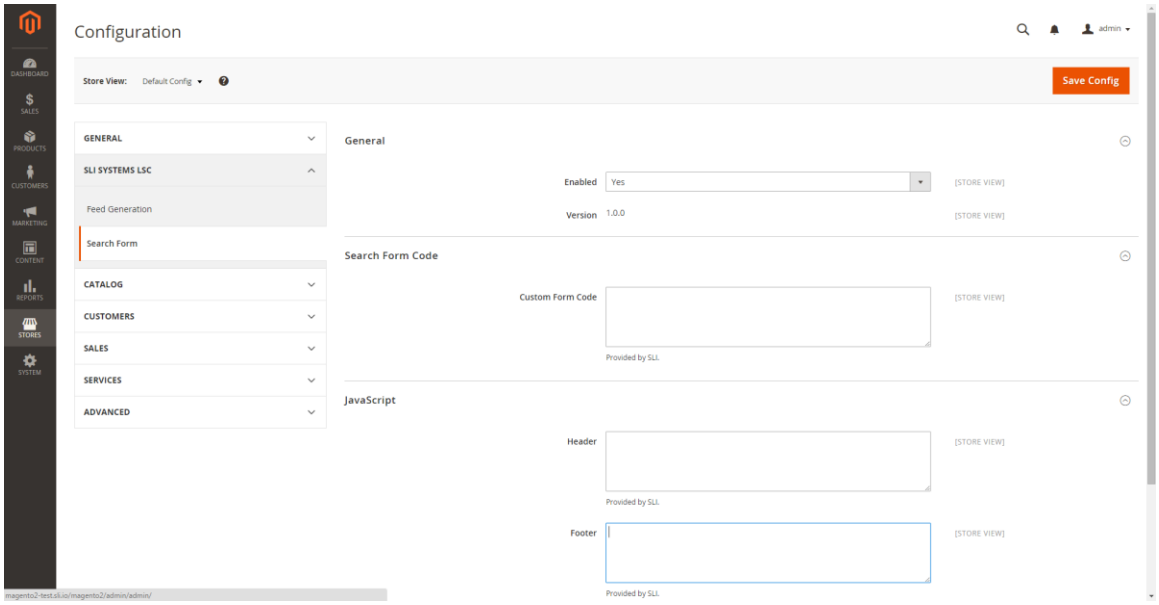
- rating_summary contains the average rating in %
- reviews_count contains the total number of reviews the product received

3.4.2 Supported Parent Child relationships

Parent child relationships (children sometimes referred to as sub-products or sub-documents) might be represented in a number of ways within the Magento platform. SLI's Learning Search Connect natively supports parent child relationships when they are represented via the "Associated Products" functionality. The children are "Simple Products" that are related to the Parent (which is a "Configurable Product") via a specially configured product attribute (called "super product attribute") that links the two.
The parents' min and max price are computed using the prices associated with the super product attribute values used to link the parent with its children. If for example, the children's prices vary between 1 and 3 (the unit being the system base currency), the min_price of the parent product would be 1 and max_price would be 3.

4. Setup – Configuring Search Form

Search Form module settings can be found under SLI Systems LSC tab in Stores -> Configuration.



4.1 General

4.1.1 Enabled

This setting can be used to switch to SLI custom form code (by selecting "Yes") or Magento default form code (by selecting "No"). Note that enabling the form code would switch your site search functionality to SLI Search.

4.1.2 Version Information

The version of this module.

4.2 Search Form Code

Custom form code that is provided by SLI when client is given access to production search.

4.3 JavaScript

All JavaScript settings (Header and Footer) are provided by SLI (when client is given access to production search).

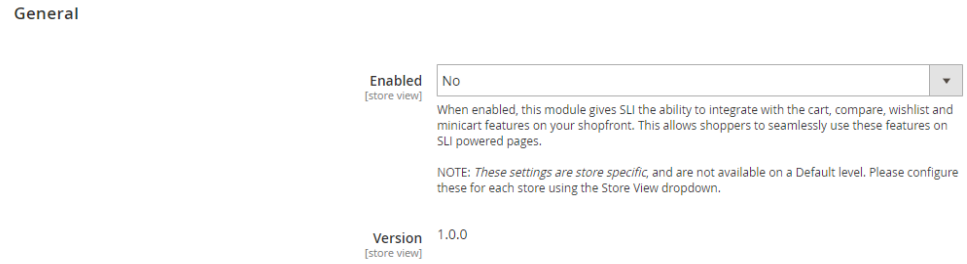
5. Setup – Configuring Storefront CORS

This module was introduced in SLI Learning Search Connect for Magento 2 v 1.2.0. It helps SLI integrate with Magento storefront features such as add-to-cart, compare, and wishlists. This allows shoppers to seamlessly use these features on SLI Pages, as well as the Magento powered pages. It simplifies Cross Origin Resource Sharing setup (https://developer.mozilla.org/en-US/docs/Web/HTTP/Access_control_CORS).

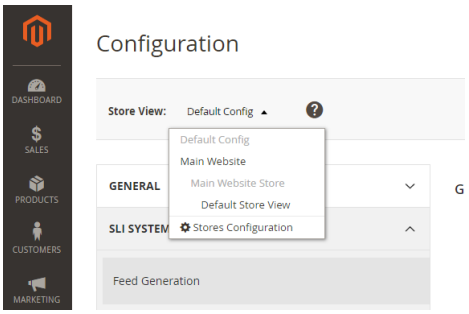
Note: This is only relevant to Magento Stores that integrate with SLI Systems using a *subdomain* approach (if your store domain is www.example.com and SLI Search pages are hosted on www.search.example.com). If you are integrating via Proxy or API setup, this configuration step is not relevant, and this module can be left disabled.

5.1 General

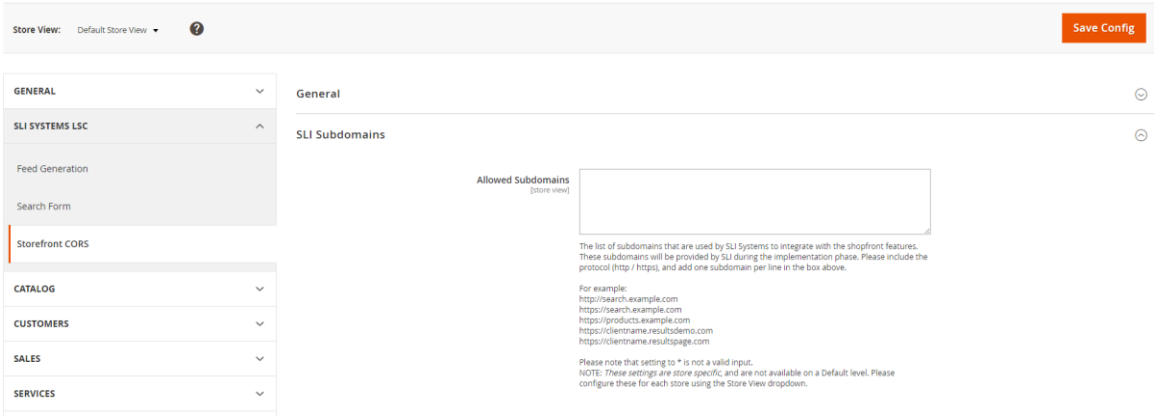
This section describes the general settings for this module.



The module can be enabled at a *Default Config* view level but other configuration settings are not available at this level. Once enabled, it needs to be configured at a store level. Use the 'Store View' switcher in Magento to change stores before configuring this module. The settings required for this module will be provided to you by your SLI support contact during the implementation process.



Once the module is enabled, and the Store specific view has been selected, other configuration settings will be exposed in the Admin interface.



5.2 SLI Subdomains

5.2.2 Allowed SLI Subdomains

The list of subdomains that are used by SLI Systems to integrate with the shopfront features. These subdomains will be provided by SLI during the implementation phase. Please include the protocol (http / https), and add one subdomain per line in the box above.

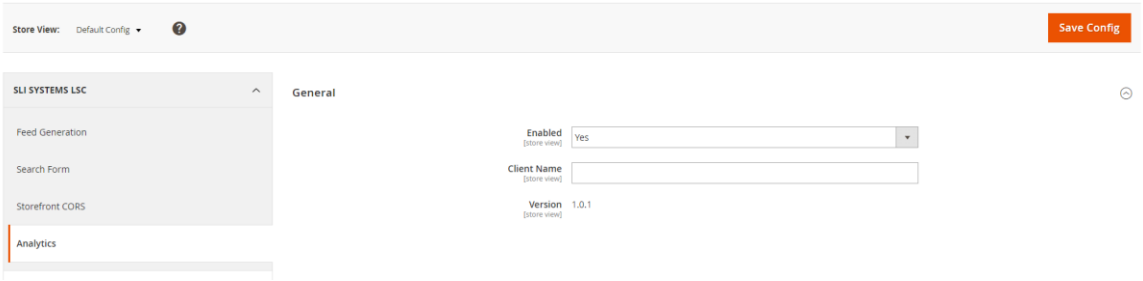
For example:
http://search.example.com
https://search.example.com
https://products.example.com
https://clientname.resultsdemo.com
https://clientname.resultspage.com

Please note that setting to * is not a valid input.
NOTE: These settings are store specific, and are not available on a Default level. Please configure these for each store using the Store View dropdown.

6. Analytics

6.1 General

This section allows to enable the SLI conversion tracking.



6.1.1 Enabled

The enabled setting can set the SLI conversion tracking into 2 states: enabled or disabled. This setting can apply to each store or website in scope. Turning off SLI conversion tracking for a specific store or website prevents to track revenue for that store or website.

6.1.2 Client Name

To receive Client Name settings for the SLI conversion tracking, please contact SLI.

6.1.3 Version

Shows the version of extension module

7. Feed Generation - Operational Considerations

Feed generation can occur one of three ways: Manually, Scheduled, or through the CLI. For updates on feeds that are being generated asynchronously, check the logs located at var/log/sli/. Feed generation is locked when triggered by any means, this ensures that no more than one feed generation process is running at any time.

7.1 Manual Feed Generation

The system configuration provides a "Generate Feed" button under the "Feed Settings" section of the Feed Generation Module. The "Generate Feed" button, will start the generation for all stores.

7.2 CLI Feed Generation

The feeds can be generated from the command line using a Magento 2 CLI command. With no arguments, feeds for all stores are generated. With the store ID argument set, the feed for the store with the specified ID will be generated. All generated feeds will be sent via FTP if this is configured in the LSC UI, unless this is skipped using the option on the command line.

7.2.1 CLI Usage Documentation

From the Magento root directory:

- Generate feeds for all stores:
  - ./bin/magento sli:feed:process
- Generate feed for store 1:
  - ./bin/magento sli:feed:process 1
- [options] are:
  - --skip-ftp - Skip FTP and only run feed generation

- --force - Force feed generation even if locked

7.3 Scheduled Feed Generation

The feed generation can be set on a schedule using a linux Cron job to execute a Magento 2 CLI command (see section above). The following Cron line generates and sends a feed via FTP (when configured) for all stores at 5am every morning:

0 5 * * * <web server docroot>/<magento2 base dir>/bin/magento sli:feed:process –-quiet

The --quiet option suppresses all output from Magento 2 CLI commands.

7.4 Trimming of log files

The extension produces separate log files for each store that is defined in the Magento implementations. These log files can grow quite large if they are not trimmed from time to time. We recommend deleting them once a week and setting the log level to "Error" after implementation efforts are completed.

The extension's log files are created in <web server docroot>/<magento2 base dir>/var/log/sli/

7.5 Ongoing monitoring of feed generation

We recommend monitoring of feed generation on an ongoing basis. If for whatever reason feed generation stops then this won't cause an alert within the catalog processing parts of the SLI infrastructure.

Other than using Monitoring and Alerting solutions this can be done via scheduled shell script execution.

Checks can also be performed manually by checking the feed generation log files for error messages (see section above on Trimming of log files for the location of the log files).

8. Troubleshooting

8.1 Product feed not arriving on the SLI's FTP servers

This section is for trouble shooting scenarios where configuration has been completed under Stores -> Configuration -> SLI Systems LSC -> Feed Generation and manual feed generation seems to work.

8.2 Feeds and FTP

First, confirm that feeds are actually created. 1 Feed is generated per store. The feeds exist under <web server docroot>/<magento2 base dir>/var/sli/feeds and their time stamps correlate with last feed generation.

If the feeds are not present then feed generation has failed. If the feeds are present, but they have failed to be sent to SLI, then the FTP process has failed. Please check for any errors in the <web server docroot>/<magento2 base dir>/var/logs/sli files. If these do not contain anything of significance pass a copy of these to us, which may help speed up troubleshooting.

If analysis of the log files doesn't reveal the source of the issue then feed creation may have to be retried with an increased log level.

8.3 Operating Learning Search Connect in a load balanced Production Environment

In a load balanced production environment there is typically a load balancer in front of a web farm. The web farm has multiple search nodes but only one active admin node. Only the admin node should run any cron jobs. In case manually triggering feed generation from the admin UI is not working reliably then a configuration has to be put in place that ensures requests for certain URLs are only executed by the admin node. A shared file system should be in use for the web farm to ensure that the Magento /var folder is shared amongst all nodes. Implementing and supporting your redundant Magento implementation is not the responsibility of SLI.

9. Disabling the extension

The extension can be disabled using the Magento CLI. This will disable functionality provided and remove the admin UI SLI LSC pages but will not remove the code from the system. From the Magento root directory:

```
./bin/magento module:disable SLI_Feed SLI_Form
```

Magento cache clearing may be required, along with all users logging back into the Magento Admin UI for changes to be seen.

10. Uninstalling the extension

To completely remove the module from your system you must:

- Complete disabling of the extension
    - See section above

- Remove all code, configuration and other files from the file system.
    - The extension adds artifacts to:
        - Code folders: <web server docroot>/<magento2 base dir>/app/code/SLI/
        - Feeds: <web server docroot>/<magento2 base dir>/var/sli/feeds
        - Logs: <web server docroot>/<magento2 base dir>/var/log/sli

- Remove all customizations provided by SLI, this could include but is not limited to:
    - Manual Unix cron jobs
    - Customizations to the extension resulting in files added now shown by the Unix tar command above.