

# Search Framework Status

Last Modified on 03/22/2024 4:27 pm CDT

Tool Search: Search Framework Status

The Search Framework Status tool provides a simplified way to quickly and easily identify the health and status of the search framework within Infinite Campus.

**With a shift to a different search framework in Campus.2411, this tool is now obsolete and was removed in said release pack.**

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Framework status details are only displayed on quartz enabled Campus app servers.

Search Framework Status ☆
System Settings > System Processes > Search Framework Status

### Status

One or more of the indices have inconsistent counts.

<b>Enabled</b> Yes	<b>Status</b> <span style="border: 1px solid green; border-radius: 10px; padding: 2px 5px; color: green;">SYNCING</span>	<b>Unique Identifier</b> 7e8b398d-212c-4761-ba5f-0d469b5b796e
<b>Cluster</b> dev-search.infinitecampus.org	<b>Hosting Model</b> CLOUD	<b>Last Registration Time</b> 05/19/22, 03:05:04 AM

### Indices

Type	Enabled / Expect Enabled	Initialized	Campus Count	Framework Count	Sync On / Expect On	Shared
Person...	No / Yes	No			No / No	No
Address	Yes / Yes	Yes	24926	24926	Yes / Yes	No
Campu...	Yes / Yes	Yes	1047	1047	Yes / Yes	No
Course...	Yes / Yes	Yes	552	552	Yes / Yes	No

Users must have the **Student Information System (SIS)** product security role in order to access and use this tool.

All users with the Student Information System (SIS) product security role will receive Process Alert messages when Search Framework issues/errors occur.

## Understanding Status Details

**Status**

The search framework is fully functioning and no recent issues have been detected.

<b>Enabled</b> Yes	<b>Status</b> SYNCING	<b>Unique Identifier</b> a38582e9-6b80-4205-ac5b-5b6624dff1ab
<b>Cluster</b> integ-search.infinitecampus.org	<b>Hosting Model</b> CLOUD	<b>Last Registration Time</b> 05/19/22, 12:56:49 PM

▶ [Click here to expand...](#)

### Syncing: Search Framework Versus DIS

To be clear, the search framework and DIS (Data Interchange Services) utilize completely different underlying technologies and are not interrelated. These are configured and troubleshot as independent systems. Disabling search framework functionality does not disable DIS functionality.

The only similarities are that both systems keep data in sync between the Campus District Edition and another data source, and both are involved in student and staff locator searches on Cloud-hosted environments. Resyncing search framework data does not resync DIS data.

Use the table below to better understand each field provided:

Field	Description
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Field	Description	
<b>Status Indicator</b>	<p>The color-coded status indicator is a quick and easy way to understand the general health of the search framework.</p> <div data-bbox="456 338 1273 528" style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Status</p> <p>The search framework is fully functioning and no recent issues have been detected.</p> </div> <ul style="list-style-type: none"> <li>• <b>Green</b> = Everything is working correctly and no issues are present.</li> <li>• <b>Blue</b> = The site is currently in the middle of configuration or indexing. This may indicate errors or issues occurred during startup but the system was able to recover. These issues should be investigated if they reoccur on a regular basis.</li> <li>• <b>Yellow</b> = At least one medium to high level priority issue has been found. There are issues that need to be investigated but some systems may still be functioning.</li> <li>• <b>Red</b> = The search framework is down. Please contact Campus Support.</li> </ul>	
<b>Enabled</b>	<p>Indicates if the search framework preference is set to Yes (True) or No (False).</p>	
<p><b>Status</b> (displayed as a colored coded pill indicating sync status)</p> <p><b>Status</b></p> <div data-bbox="188 1420 300 1458" style="border: 1px solid green; border-radius: 10px; padding: 2px 5px; display: inline-block;"> <span style="color: green; font-weight: bold;">SYNCING</span> </div>	<b>Syncing</b>	<p>Indicates indexes have successfully been initialized, created, and populated. Everything is running properly and data is actively syncing from Campus to the search framework.</p>
	<b>Differential Sync</b>	<p>A differential (partial) sync for specified indices spanning up to 3 days is underway. This was triggered either manually or automatically as part of self-healing.</p> <p>Previously entered data is still searchable, but new data will not be searchable until the differential sync is complete. This should take considerably less time than a full reindex, but will vary depending on the number and size of records modified during the specified window.</p>
	<b>Indexing</b>	<p>Indices are being populated with data from the Campus database.</p>
	<b>Indices</b>	<p>At least one index has inconsistent counts. This status shows as blue if the personnel index is the only index with an inconsistent count. Note: For all other indices, this status will be yellow.</p>

Field	Description	
		<p>At least one index should be enabled or initialized but is currently set to disabled or not initialized. This status only applies to the personnel index. For all other search based indices, the status will be red.</p>
	Initializing	<p>Indexes are being created and populated for the first time. This may take several minutes or hour.</p>
	Registrations	<p>Search Framework contains a registration for an app instance that does not exist in Camp.</p> <p>An app server may have been removed from the pool and is no longer active. An automated process removes expired app instance registrations after 2 days</p>
	Reindexing	<p>A full reindex for specified indices is underway. This was triggered either manually or automatically as part of self-healing.</p> <p>Previously entered data is still searchable, but new data will not be searchable until the reindex is complete. This may take several minutes, up to hours, depending on the size of your site's indices.</p> <p>At least one forced reindex or differential resync was requested within the past day.</p> <p>This was either triggered manually or automatically as part of self-healing.</p> <p>The search framework encountered an error during the last reindex attempt.</p> <p>This message will appear if the error occurred in the past 24 hours. If the error occurs for longer than 24 hours, the status turns to red.</p> <p>A reindex containing all mapped data for specified indices has been been scheduled, either manually or automatically as part of self-healing.</p> <p>This is a temporary status and should only be visual for a brief period of time (few seconds). Refresh the status page accordingly.</p>
	Syncing	<p>At least one sync failure or veto returned within the past day.</p>

Field	Description	
		<p>A differential (partial) sync, containing data changes from up to 3 days for specified indices, has been scheduled. This was either triggered manually or automatically as part of self-healing.</p> <p>This is a temporary status and should only be visual for a brief period of time (few seconds). Refresh the status page accordingly.</p> <p>One or more indices are enabled when they should be disabled.</p>
Indexing		The search index is taking longer to index than expected. This message appears if a site is taking more than 4 hours to index.
Indices		<p>At least one index has inconsistent counts.</p> <p>Note: This status shows as blue if the personnel index is the only index with an inconsistent count.</p>
Registrations		<p>The last successful quartz registration was more than 24 hours ago.</p> <p>At least one app in the pool has not successfully registered within the past 24 hours.</p> <p>An app instance for at least one of the apps cannot be found in the search framework (missing).</p> <p>Communication error retrieving registration details from Search Framework</p> <p>Communication error retrieving app instance details from Search Framework</p>
Reindexing		<p>The search framework is taking longer to reindex than expected.</p> <p>This message appears if a site is taking more than 4 hours to reindex.</p>
Indexing		<p>The search framework is taking much longer to index than expected.</p> <p>This message appears if a site is taking more than 24 hours to index.</p>
Initialization		The search framework is encountering errors initializing.

Field	Description	
		The search framework encountered errors initializing or the initialization failed.
		The search framework is not initialized (non-quartz).
		The search framework is initialized, but not indexing. The job to create and populate the indices has not yet started. This should only be present for a brief time. If this state persists after refreshing, then this is a problem.
		The search framework is not initialized.
	Offline	The search framework is offline. Either this is intentional or the job to create and populate the indices has failed.
	Registrations	Cannot find registration for this site in search framework. This pertains to the Campus quartz app server.
	Reindexing	The search framework is taking much longer to reindex than expected. This message appears if a site is taking more than 24 hours to reindex.
		The search framework encountered an error during the last reindex attempt. This status appears if the error persists longer than 24 hours.
	Syncing	At least one index should be enabled or initialized but is currently set to disabled or not initialized. This status appears if the issue persists longer than 24 hours.
<b>Unique Identifier</b>	The lowercase value of the Campus database GUID used for unique tracking purposes.	
<b>Cluster</b>	Indicates the search framework cluster for which the site is configured.	
<b>Hosting Model</b>	Indicates your district's hosting model.	
<b>Last Registration Time</b>	Indicates the last time the quartz-enabled Campus app server successfully contacted the centralized search framework, in order to confirm proper registration. This should occur on a daily basis.	

## Indices

The Indices table allows you to review and monitor the status of each index in the search framework. Indices are essentially data sources that can be used for search or data analysis purposes. If an index is not initialized or enabled, it cannot be used for search purposes.

Type	Enabled / Expect Enabled	Initialized	Campus Count	Framework Count	Sync On / Expect On	Shared
Address	Yes / Yes	Yes	16028	16028	Yes / Yes	No
CampusTool	Yes / Yes	Yes	983	983	Yes / Yes	No
CourseMaster	Yes / Yes	Yes	426	426	Yes / Yes	No
CourseSection	Yes / Yes	Yes	51087	51087	Yes / Yes	No
Household	Yes / Yes	Yes	17923	17923	Yes / Yes	No
NewNavPreference	Yes / Yes	Yes	8	8	Yes / Yes	No
POSAccount	Yes / Yes	Yes	16289	16289	Yes / Yes	No
Person	Yes / Yes	Yes	65654	65654	Yes / Yes	No
UserGroup	Yes / Yes	Yes	392	392	Yes / Yes	No
UserNavTools	Yes / Yes	Yes	2184	2184	Yes / Yes	No

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The table below describes each column in the Indices table:

Column	Description
<b>Type</b>	The name of the index. This name usually describes the type of index.
<b>Enabled / Expect Enabled</b>	Indicates whether or not the index is enabled and whether or not it should be enabled.
<b>Initialized</b>	Indicates whether or not the index is initialized.
<b>Campus Count</b>	Indicates a count of records in the Campus database mapped to the corresponding index.
<b>Framework Count</b>	Indicates the count of records in the centralized search framework index. This number is expected to match the Campus Count within ~7 seconds, based on a scheduled 5 second sync quartz job.
<b>Sync On / Expect On</b>	Indicates whether or not the index is currently configured for syncing and whether or not the index is expected to be configured for syncing.
<b>Shared</b>	<p>Indicates whether or not the index is a shared index.</p> <p>Non-shared indices sync data on 5 second intervals and have two aliases mapped to separate index indices, so that data is searchable during a reindex or selective resync.</p> <p>Shared indices are common across all Campus sites and do not sync on 5 second intervals. They are primarily for internal tracking purposes, not Campus search purposes, and are updated on triggered events.</p>

## Tracked Tables

The Tracked Tables section allows you to monitor whether or not change tracking is enabled for each table.

The search framework relies on Microsoft Change Tracking to detect when data has been changed in the Campus datasource. In order for search contexts to provide the most recent and accurate data, change tracking needs to be enabled and working properly for each table shown in this section.

Tracked Tables	
Change Tracking Enabled On Database	
Yes	
Name ↑ 2	Change Tracking Enabled ↑ 1
Address	Yes
Calendar	Yes
CampusAttribute	Yes
CampusTool	Yes
CLLearnerStandard	Yes
Course	Yes
CourseCatalog	Yes
CourseMaster	Yes
Department	Yes
ElasticSearchCampusAttributeLink	Yes

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## Jobs Table

The Jobs table allows you to view information on existing Quartz jobs relevant to the search framework; including the name of each job, the job’s status, trigger name, and trigger status.

Jobs			
Job Name ↑	Job Status	Job Trigger Name	Job Trigger Status
ES create and populate Indices	Active	ESPopulateTrigger	Active
ES data sync with SQL	Active	ESSyncTrigger	Active
ES ReIndex	Active	ESReindexTrigger	Inactive
ESDifferentialSyncJob	Active	ESDifferentialSyncTrigger	Inactive
ESRegistrationJob	Active	ESRegistrationTrigger	Active

5 items per page 1 - 5 of 5 items

The table below describes each job and their function.

Job Name	Function	Expected Trigger Status
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Job Name	Function	Expected Trigger Status
<b>ES create and populate indices</b>	Responsible for building the indices and populating them with data from the source Campus database. Indices are the datasets used for search and query purposes.	Active at all times
<b>ES data sync with SQL</b>	Periodic sync job that checks to see if there are changes in the source SQL Campus database and syncs them to the search framework accordingly. The sync job ensures that the search data is constantly populated with the latest data from the Campus database.	Active, unless the search framework is indexing or an individual index is either performing a full reindex or differential sync.
<b>ES ReIndex</b>	Used for forcing a full reindex intended to fix issues where an index may not contain all data from the source Campus database. This job is either initiated automatically via a watcher or manually.	Inactive, unless a differential sync was fired to fix an issue.
<b>ESDifferentialSyncJob</b>	Used for forcing a differential sync of all changes spanning up to the last 3 days, intended to fix issues where an index may not contain all data from the source Campus database. This job is either initiated automatically via a watcher or manually.	Inactive, unless a differential sync was fired to fix an issue.
<b>ESRegistrationJob</b>	A daily phone home job to validate the Campus application can successfully communicate with the search framework and report back metadata about the site's configuration.	Active at all times.

## App Instances

The App Instances table tracks a list of Campus app servers and the last time they successfully registered with the search framework. If Campus is hosted across multiple app servers, then each of those app servers phones home and registers with the search framework on a daily basis.

It is possible for users to experience search framework issues across all apps or only specific apps.

App Instances

App Server Name	Timestamp
SISDIE06-CMB001	11/12/20, 03:03:03 AM

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## Most Recent Reindex Logs

The Most Recent Reindex Logs table details the 20 more recent reindex/differential resync requests, with information on the reason, the action taken, the indices reindexed, the timestamp, the update time, and the duration of the reindex.

Most Recent Reindex Logs

Start Time ↓	Update Time	Reason	Action	Indices	Duration
01/29/21, 10:50:38 AM	01/29/21, 10:52:19 AM	forcedReindex	quartz.JobFinished	CampusTool	1 minutes, 40 seconds
01/23/21, 12:19:55 AM	01/23/21, 12:24:46 AM	reindexParamsPresentOnStartup	quartz.JobFinished	Person	4 minutes
01/22/21, 12:20:10 AM	01/22/21, 12:25:20 AM	reindexParamsPresentOnStartup	quartz.JobFinished	Person	4 minutes, 20 seconds
01/03/21, 12:20:20 AM	01/03/21, 12:24:02 AM	indicesWithMismatchedCounts	quartz.JobFinished	Person	2 minutes, 53 seconds
12/17/20, 07:43:44 AM	12/17/20, 07:44:54 AM	forcedReindex	quartz.JobFinished	Address	1 minutes, 9 seconds

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## Refresh the Search Framework Status

Click the **Refresh** button near the bottom of the tool to refresh the search framework status.

Search Framework Status ☆ System Settings > System Processes > Search Framework Status

**Status**

The search framework is fully functioning and no recent issues have been detected.

<b>Enabled</b> Yes	<b>Status</b> SYNCING	<b>Unique Identifier</b> a7ab35dc-fdfa-4c2b-bb51-188055f464a4
<b>Cluster</b> integ-search.infinitecampus.org	<b>Hosting Model</b> CLOUD	<b>Last Registration Time</b> 08/17/22, 12:53:15 PM

**Indices**

Type	Enabled / Expect Enabled	Initialized	Campus Count	Framework Count	Sync On / Expect On	Shared
POSAcc...	No / No	No			No / No	No
Personnel	No / No	No			No / No	No

**Refresh** View Diagnostic

# View Diagnostic Information

You can view diagnostic information about your search framework by clicking the **View Diagnostic** button and selecting either **INFO** to view core stateful information or **DEBUG** to view a more comprehensive set of information about the status of the search framework.

Note: The DEBUG option may take a considerable amount of time to load and process data.

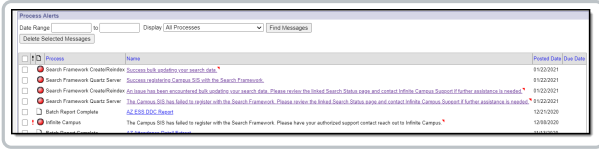
The screenshot shows the 'Search Framework Status' page. At the top, it indicates the search framework is fully functioning. Below this, there are fields for 'Enabled' (Yes), 'Status' (SYNCING), 'Unique Identifier' (a7ab35dc-fdfa-4c2b-bb51-188055f464a4), 'Cluster' (integ-search.infinitecampus.org), 'Hosting Model' (CLOUD), and 'Last Registration Time' (08/17/22, 12:53:15 PM). A table of indices is shown below, with a 'View Diagnostic' button highlighted. A dialog box prompts the user to select 'INFO' or 'DEBUG'. Two resulting diagnostic windows are shown: one for 'INFO' and one for 'DEBUG', both containing JSON data.

Type	Enabled / Expect	Enabled	Initialized	Campus Count	Framework Count	Sync On / Expect On	Shared
POSAcc...	No / No		No			No / No	No
Personnel	No / No		No			No / No	No

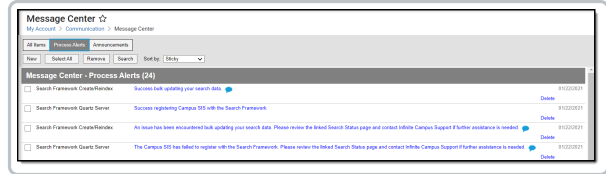
# Process Alert Messages for Issues and Resolutions

The table below details the Process Alert messages generated when search framework issues are encountered, the impact of each issue, and the success message sent once an issue is resolved.

### Classic Campus



### New Look and Feel of Infinite Campus



Process	Name	Details	Impact	Success Message
Search Framework Client Connection	Error [performing action]. Contact support if errors are not resolved for app server: [AppServerName] Example = turning off CampusTool	Inability to reach the search framework.	No search framework functionality, including new look search contexts.	Success [performing action] for app server: [AppServerName]
Search Framework Create/Reindex	An issue has been encountered bulk updating your search data. Please review the linked Search Status page and contact Infinite Campus Support if further assistance is needed.	One or more search framework indices are not populated correctly.	One of the search indices will have no or inaccurate data.	Success bulk updating your search data. Tool Tip: Affected searches [SearchName Array]
Search Framework Index Sync	An issue has been encountered updating your search data. Please review the linked Search Status page and contact Infinite Campus Support if further assistance is needed.	One or more search framework indices are not updating.	One of the search indices will have inaccurate data.	Success updating your search data.

Process	Name	Details	Impact	Success Message
Search Framework Quartz Server	The Campus SIS has failed to register with the Search Framework. Please review the linked Search Status page and contact Infinite Campus Support if further assistance is needed.	The quartz server is not communicating successfully with the search framework.	No available search framework functionality such as new look or campus tool search. or search indices may have out of date data.	Success registering Campus SIS with the Search Framework.
Search Framework Repeated Searches	Failures have been encountered with the following search: [Search Term Would Show Here]. Please contact Infinite Campus support if search errors have not been resolved on app server: [AppServerName]	Users have encountered excessive errors when attempting to perform searches.	Temporary or sustained issues with one or more search indices.	Search errors resolved on app server: [AppServerName]