

# Sakai 11 Install Guides

## Installation tip

Sakai is highly customizable for your local institution's needs.

- [Learn how to create a custom skin](#)
- [Review the default Sakai properties](#)

## Demo install

The Sakai demo no longer supports HSQLDB available as of Sakai 11. If you wish to use the demo you will need to download a MySQL connector and configure Sakai properties.. Discussions are happening to make an improved demo for the future. See <http://farm.apereo.org>

## Binary install

[Sakai 11 Install Binary](#)

## Source install

[Sakai 11 Install from Source](#)

## Sakai 11 ReadMe

- [Recommend storing files on your file system instead of database](#)
- [Lessons management of HTML pages](#)
- [Dashboard not included](#)
- [STEP - Delivery Exceptions will be in 11.2 or later](#)
- [Features on by default in Sakai 10, turned off by default in Sakai 11](#)
- [Features off by default in Sakai 10, turned on by default in Sakai 11](#)
- [Highly recommended settings to override default values](#)
- [Significant changes to existing features](#)
- [Sakai 11 skins using Morpheus](#)
- [Sakai 11 changes the way sites are marked as "favorites"](#)
- [Sakai Properties](#)
- [Open and Awaiting Review Jira tickets](#)

## Recommend storing files on your file system instead of database

Sakai will store the file content in the database as BLOBs by default. Set this value to change it to store the content on the filesystem instead.

The file system root for content hosting's external stored files (default is null, i.e. store them in the db).

```
# bodyPath@org.sakaiproject.content.api.ContentHostingService=/someplace/
```

```
# KNL-309 : To enable support for deleted files set this property to some location
```

```
# bodyPathDeleted@org.sakaiproject.content.api.ContentHostingService=${sakai.home}db/bodyContentDeleted/
```

```
# When storing content hosting's body bits in files, an optional set of folders just within the bodyPath -
```

```
# to act as volumes to distribute the files among - a comma separate list of folders. If left out, no volumes will be used.
```

```
# see the readme file (2.2.7 File Based Content Hosting) for more details
```

```
# bodyVolumes@org.sakaiproject.content.api.ContentHostingService=vol1,vol2,vol3
```

# Set to true to enable the release/retract and hiding of resources in ContentHostingService, Default: true

# [availabilityChecksEnabled@org.sakaiproject.content.api.ContentHostingService=true](#)

# Set to true to enable custom sorts within folders in ContentHostingService and the Resources tool

# DEFAULT: true

# [prioritySortEnabled@org.sakaiproject.content.api.ContentHostingService=true](#)

You might also want to enable the soft deletion feature of Sakai

Soft site deletion.

If enabled, sites that are deleted will be inaccessible to normal users but won't be deleted immediately, in case they need to be recovered.

You also need to set the gracetime value, in days. After this period, the softly deleted sites will be hard deleted. Defaults to 30 days.

There is a Quartz job that must be configured to run periodically (once per day or so) to expunge those sites.

site.soft.deletion=true (default is false)

site.soft.deletion.gracetime=30

## Lessons management of HTML pages

By default, Lessons uses Content Security Policy headers to restrict what an HTML page can do, when the page is loaded from Sakai.

This is a security tradeoff. There are security risks from opening a web page written by someone else. That page can contain Javascript, which will execute with your own permissions. For this reason, by default Sakai will not open web pages in Resources. If you click on an HTML file there, it will download. We considered this inaccessible for Lessons, since the whole point of Lessons is to present content online. But we still had to deal with the security problem. So the page is served with an HTTP header that causes browsers to open the page in a "sandbox." This restricts what the page can do.

This is new in 11. In Sakai 10, Lessons would simply open any HTML page specified.

You can restore the Sakai 10 behavior by adding the following to sakai.properties:

lessonbuilder.use-csp-headers=false

The recommended approach for dealing with this security risk is to use Sakai's content domain support. This causes HTML pages stored in resources to be served from a different hostname than the main Sakai hostname. E.g. if your institution uses [sakai.univ.edu](#), you might use [content.sakai.univ.edu](#) for content, resulting in URL such as <https://content.sakai.univ.edu/access/content/group> .... Using a separate domain prevents web pages from executing with your Sakai privileges. Thus if you are using a [separate content domain](#), Lessons does not add the Content Security Policy headers.

Note that it is up to the browser to enforce Content Security Policy. Safari, Chrome, and Edge do. Firefox does not. Thus Firefox users are still at risk when opening HTML pages in Lessons. I believe IE 10 and 11 also support it.

## Dashboard not included

The Dashboard tool, new for Sakai 11, has not been included in the 11.0 release because too many technical issues existed and not enough person-power to address them in time for the release.

[List of Dashboard issues \(not included in 11.0\)](#) .

**STEP - Delivery Exceptions will be in 11.2 or later**

STEP (Samigo Test and Quizzes Enhancement Project) feature to allow different delivery settings for specific sections, groups, and individuals, did not make it into Sakai 11.0 due to issues with the Auto Submit feature and data storage and retrieval issues. We are hoping to have this go into a later 11.x maintenance release. [SAM-1408](#) - Getting issue details...

A number of other features were delivered as a result of STEP for 11.0 including:

[SAM-1369](#) - Getting issue details...

[SAM-1263](#) - Getting issue details...

[SAM-1596](#) - Getting issue details...

## Features on by default in Sakai 10, turned off by default in Sakai 11

Release	Tool /Service	Ticket	Notes
11.0	Samigo Test and Quizzes	<a href="#">SAM-2806</a> - Getting issue details... <input type="button" value="STATUS"/>	The Extended Matching Question type has been turned off by default. A number of issues have surfaced that need attention. See <a href="https://jira.sakaiproject.org/issues/?filter=15806">https://jira.sakaiproject.org/issues/?filter=15806</a>
11.0	Samigo Test and Quizzes	<a href="#">SAM-2715</a> - Getting issue details... <input type="button" value="STATUS"/>	Assessment Templates are confusing. Once a Template is used, certain settings may be unavailable to the instructor. For this reason Assessment templates have been turned off by default. You can turn it on by setting <code>samigo.showAssessmentTypes= true</code> in <code>sakai.properties</code> .

## Features off by default in Sakai 10, turned on by default in Sakai 11

Release	Tool /Service	Ticket	Notes
11.0	Site	<a href="#">INFRSTR-333</a> - Getting issue details... <input type="button" value="STATUS"/>	# Allow a specific icon for sites. Should we allow sites to supply a specific icon for their site. # DEFAULT: true # portal.siteicon.allow=false
11.0	Calendar	<a href="#">SAK-31414</a> - Getting issue details... <input type="button" value="STATUS"/>	# calendar.external.subscriptions.enable=false
11.0	Calendar	<a href="#">SAK-31413</a> - Getting issue details... <input type="button" value="STATUS"/>	ical.opaqueurl.subscribe
11.0	Content	<a href="#">SAK-31415</a> - Getting issue details... <input type="button" value="STATUS"/>	

## Highly recommended settings to override default values

Release	Tool /Service	Ticket	Notes
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11.0	HikariCP	<a href="#">KNL-1333 - Getting issue details...</a> <input type="button" value="STATUS"/>	<p>In Oracle 11c, the default maximum number of database connections in the connection pool may be too low for a production server.</p> <p>This setting and others for <b>HikariCP</b> can be configured in <code>kernel/kernel-component/src/main/webapp/WEB-INF/db-components.xml</code>, or overridden in <code>sakai.properties</code> in the form:</p> <pre> maximumPoolSize@javax.sql.BaseDataSource=50 </pre>
11.0	Feedback tool	<a href="#">SAK-31184 - Getting issue details...</a> <input type="button" value="STATUS"/>	<pre> ##### # SAK-29271 Feedback Tool Properties # ##### # Recipient address that will receive the contact emails # feedback.technicalAddress = someaddress@institution.org  # Enable/Disable the content panel # DEFAULT: true # feedback.show.content.panel = false  # Enable/Disable the help panel # DEFAULT: true # feedback.show.help.panel = false  # Enable/Disable the technical panel # DEFAULT: true # feedback.show.technical.panel = false  # Enable/Disable the suggestions panel # DEFAULT: true # feedback.show.suggestions.panel = false  # Configure the help link destination (Sakai help by default) # feedback.helpPagesUrl = /portal/help/main  # Configure the help link target # feedback.helpPagesTarget = _blank  # Configure the helpdesk destination # feedback.helpdeskUrl = https://helpdesk.institution.org  # Configure the suggestion link destination # feedback.featureSuggestionUrl = https://suggestions.institution.org  # Add supplementary information at the right side of the tool # feedback.supplementaryInfo = Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum  # Maximum size for the feedback attachments. This value should be lower than content.upload.max value, if it's higher the tool will use content.upload.max value # feedback.attach.max = 10 </pre>

## Significant changes to existing features

Release	Tool /Service	Ticket	Notes
11.0	Assignments	<a href="#">SAK-29406 - Getting issue details...</a> <input type="button" value="STATUS"/>	The default number of decimal places for grading in Assignments is 2, expanded from 1.
11.0	Dropbox	<a href="#">SAK-11647 - Getting issue details...</a> <input type="button" value="STATUS"/>	New for 11.

## Sakai 11 skins using Morpheus

Documentation is stored with [Sakai on Github](#)

# Sakai 11 changes the way sites are marked as "favorites"

Sakai 11 changes the way that sites marked as "favorites" are stored in the database. If you are upgrading from an earlier version of Sakai, you should run the "ConvertUserFavoriteSitesSakai11" script to migrate your users' existing favorite sites to the new format.

You can run this script at any time following the upgrade to Sakai 11, and Sakai does not need to be running for the script to work. If you are planning an upgrade, a good time to run this is right before starting Sakai 11 up for the first time.

The time required for the conversion will depend on how many users you have in your system. As a rule of thumb, you can expect it to take between 2-5 minutes per hundred thousand users.

To run the script, open a shell and run the following commands:

```
cd /path/to/your/tomcat-directory
```

Then, for Unix systems:

```
java -cp "lib/*" -Dtomcat.dir="$PWD" org.sakaiproject.user.util.ConvertUserFavoriteSitesSakai11
```

Or under Windows:

```
java -cp "lib\*" -Dtomcat.dir=%cd% org.sakaiproject.user.util.ConvertUserFavoriteSitesSakai11
```

## Sakai Properties

Release	Tool /Service	Property	Ticket	Change
11.0	Dropbox	dropbox.maintain.own.groups	<a href="#">SAK-11647</a>	Courses with multiple TAs (teaching assistants) managing multiple discussion sections have a need for the TAs to be able to access student dropboxes by their sections.
11.0	Samigo Test and Quizzes	samigo.pdf.convertformattedtext	<a href="#">SAM-2502</a>	<ol style="list-style-type: none"> <li>In the PDF print output, setting this to true will remove all HTML formatting from the questions and answers (This was a legacy setting just added incase someone was using it or it was causing problems)           <ul style="list-style-type: none"> <li>+# Default: false</li> <li>+# samigo.pdf.convertformattedtext=true</li> </ul> </li> </ol>
11.0	Samigo Test and Quizzes	samigo.SelectAssessmentBean.warnUserOfModification	<a href="#">SAM-1331</a>	<ul style="list-style-type: none"> <li># SAM-1331: Warn user of modification to edited quiz</li> <li># DEFAULT: true</li> <li># samigo.SelectAssessmentBean.warnUserOfModification=false</li> </ul>
11.0	Samigo Test and Quizzes	samigo.fromAddress	<a href="#">SAM-1947</a>	<ul style="list-style-type: none"> <li>+# SAM-1947 Email notifications on Samigo Submission</li> <li>+# The from address for individual submission notifications</li> <li>+# DEFAULT: no-reply@serverName</li> <li>+# samigo.fromAddress=&lt;SAMIGO_SSMTP_FROM&gt;</li> </ul>
10.0	Samigo Test and Quizzes	varies by question type	<a href="#">SAM-2296</a>	Allow question types to be selectively disabled via Sakai properties. Added in Sakai 10
11.0	Samigo Test and Quizzes	samigo.allowMinScore	<a href="#">SAM-948</a>	<ul style="list-style-type: none"> <li>## TEST &amp; QUIZZES (SAMIGO)</li> <li># SAM-948 - Minimum value option for questions</li> <li># DEFAULT: FALSE</li> <li># samigo.allowMinScore=true</li> </ul>
11.0	CK Editor (Rich Text Editor)	auto save	<a href="#">SAK-22495</a>	<p>not a Sakai property!</p> <p>ckeditor.launch.properties in the source code, so there <b>are</b> properties but not Sakai properties like we think of them. We're really just including a CKEditor community plugin so the configuration and code maintenance of the plugin is up to them (<a href="http://ckeditor.com/addon/autosave">http://ckeditor.com/addon/autosave</a>).</p>
11.0	MathJax	on by default. several properties.	<a href="#">SAK-22384</a>	<ul style="list-style-type: none"> <li>+# SAK-22384 - MathJax support is enabled by default</li> <li># See <a href="https://jira.sakaiproject.org/browse/SAK-22384">https://jira.sakaiproject.org/browse/SAK-22384</a> for more details and a demo.</li> <li>+# URL to MathJax.js, you can use the one on the mathjax CDN or put one locally. Currently this is not included with Sakai.</li> <li>+# The current default is the MathJax CDN latest (<a href="https://cdn.mathjax.org/mathjax/latest/MathJax.js?config=default,Safe">https://cdn.mathjax.org/mathjax/latest/MathJax.js?config=default,Safe</a>)</li> <li>+#portal.mathjax.src.path=</li> <li>+# Whether to allow users to enable or disable MathJAX, this still has to be enabled on a per site basis (default is true)</li> <li>+#portal.mathjax.enabled=false</li> </ul>

			SAK-23256	
			SAK-30270	
			SAK-26283	
			SAK-29182	
11.0	Site Info	site.setup.import.addmissingtools	SAK-28069	<ol style="list-style-type: none"> <li>1. SAK-28069: Enable the automatic addition of any missing tools into a site when content from another site is selected for import</li> <li>2. DEFAULT: false</li> <li>3. site.setup.import.addmissingtools=true</li> </ol>
			SAK-28059	
			SAK-28990	
			SAK-29000	
			SAK-28997	
11.0	Gateway page	site.types.publicChangeable site.types.publicOnly	SAK-28119	<p>It enables an institution to define what site types are by default publicly available via the "Site Browser" tool on the Gateway.</p> <p>It also enables an institution to define what site types are or are not changeable by the maintainer, with regards to the "public" vs. "private" setting (site browser).</p>
			SAK-29019	
			SAK-22537	
			SAK-29478	
			SAK-29935	
			SAK-24398	
			SAK-24393	
			SAK-27743	
			SAK-29408	
			SAK-29701	
			SAK-29458	
			SAK-29001	
			SAK-23556	
			SAK-27774	
			SAK-29138	
11.0	Portal	moresites.externalConfig.siteTypes moresites.externalConfig.prefix	SAK-30712	<p>Currently, More Sites tab classifies the sites by their site type and course term if there is one, but this has several issues.</p> <ul style="list-style-type: none"> <li>-New site types can't be classified apart without hardcoding them.</li> <li>-New course-like site types or project-like site types can't be isolated from courses/projects.</li> </ul> <p>Our proposal is two optional properties in sakai.properties. One (moresites.externalConfig.siteTypes) with the list of site types and other (moresites.externalConfig.prefix) with the prefix to use in the properties files, so every site type in the list can be classified in More Sites tab by its internationalized property key.</p> <p>For example, for setting two new site types (courseAsig is a new course type and course 2 is a new site type), sakai.properties would have this:</p> <pre>moresites.externalConfig.siteTypes=course_asig,course_2 moresites.externalConfig.prefix=moresites_</pre> <p>And the properties "moresites_course_asig" and "moresites_course_2" would be used for the i18n texts in sitenav.properties.</p> <p>If moresites.externalConfig.siteTypes is not set or is empty, the usual logic is applied.</p>

			SAK-29702	
			SAK-25494	
			SAK-29180	
			SAK-29113	
			SAK-29560	
			SAK-29156	
			SAK-27809	
			SAK-25768	
			SAK-29736	
			SAK-25877	
			SAK-27973	
			SAK-31414	
			SAK-24618	
			SAK-27902	
			SAK-31417	
11.0	CK Editor	wysiwyg.editor. ckeditor.browser	SAK-29884	# The file browser to use for picking files in ckeditor # The only other option is fckeditor. # DEFAULT: elfinder # wysiwyg.editor.ckeditor.browser=fckeditor
			SAK-27769	
			SAK-27757	
			SAK-26318	
			SAK-26601	
			SAK-31415	
			SAK-30267	
			SAK-29389	
			SAK-29402	
			SAK-29135	
			SAK-31325	
			SAK-31413	
			SAK-25381	
			SAK-30424	
		basicliti.provider contentitem. provider	SAK-30418	
			SAK-30372	

11.0	Assignments	assignment.grading.decimals	SAK-29406	<pre> ##### +# SAK-29406 Allow Assignment tool to grade with two decimal points +# ##### +# decimal points used to grade in new assignments (created after this code was applied), +# old assignments (created before this code) will continue using 1 decimal point to grade +# DEFAULT: 2 (new assignments will use 2 decimal places for grading by default) +# assignment.grading.decimals=1 </pre>
			SAK-28055	
			SAK-25556	
			SAK-28184	
			LSNBLDR-316	
			LSNBLDR-444	
			KNL-101	
			KNL-1063	
			KNL-1306	
			KNL-1221	
			KNL-1361	
			KNL-1163	
			KNL-1123	

## Open and Awaiting Review Jira tickets

For listings of all open issues see:

[Blocker Critical Major Minor, trivial](#)