














1. Frontend Rendering Process (Ver 4.1.1)





No	Action Title	Filename	Function	Description
1	define path constants	index.php		- Path constants for this site and tslib - include index_ts.php
2	define constants	index_ts.php		TYPO3_OS, TYPO3_MODE - various path constants if not already set
3	init time tracking	index_ts.php	new tslib_timeTrack	init time tracking object (\$TT)
4	include mandatory libs	index_ts.php		class.tslib_div.php, class.tslib_extmgm.php
5	include configuration	index_ts.php		config_default.php, class.tslib_db.php generated from localconf.php and ext_localconf.php
6	init db object	index_ts.php	tslib_div::makeInstance ('tslib_DB')	init db wrapper object (\$TYPO3_DB)
7	check environment	index_ts.php		- php version, \$GLOBALS - Add slashes to GET/POST arrays
8	check extension	index_ts.php		look for extension id to launch alternative output engine
9	include fe libraries	index_ts.php		tslib_fe.php; t3lib_page.php; t3lib_userauth.php; class.tslib_feuserauth.php; t3lib_tstemplate.php; t3lib_cs.php;
10	init fe object	index_ts.php	tslib_div::makeInstance ClassName('tslib_fe')	init TypoScript front end object (\$TSFE)
	tslib_fe-PostProc	class.tslib_fe.php	tslib_fe()	Hook
11	Open db connection	class.tslib_fe.php	connectToDB()	Open database connection
	connectToDB	class.tslib_fe.php	connectToDB()	Hook
12	re-Init FE-object	index_ts.php		keyword authenticated preview generates a temporary preview URL which is accessible without BE login
13	\$TSFE>ADMCMDB_preview	class.tslib_fe.php	ADMCMDB_preview_postini t()	- unsets BE user cookie - force BE user settings according preview configuration
14	\$TSFE>send redirect	class.tslib_fe.php	sendRedirect()	Redirect to a different page (location)
15	Start output buffering	index_ts.php	ob_start()	Data will not be sent to screen until output buffering ends
16	Init FE user	class.tslib_fe.php	See separate diagram	Init the frontend user object (\$TSFE>fe_user)
	preBeUser	index_ts.php		Hook
17	Init BE user	index_ts.php	See separate diagram	Init the backend user object (\$BE_USER)
18	Init BE user for preview	index_ts.php		Init a "dummy" backend user for preview only
19	Init workspace preview	class.tslib_fe.php	workspacePreviewInit()	Init workspace preview functions
20	Check alternative page id	class.tslib_fe.php	checkAlternativeIdMethods ()	Resolve alternative request URL such as "simulate static documents" or "Real URL"
	checkAlternativeIdMethods- PostProc	class.tslib_fe.php	checkAlternativeIdMethods	Hook
21	Determine page id	class.tslib_fe.php	See separate diagram	class.tslib_fe.php Determine the page id
22	validate cache hash	class.tslib_fe.php	makeCacheHash()	Create the hash string based on additional parameters in the URL if get parameter cHash is set
23	Get compressed TCA	class.tslib_fe.php	getCompressedTCAarray()	getting a compressed version of the TCA for the frontend editing
24	Init template	class.tslib_fe.php	initTemplate()	Init the TypoScript template parser > t3lib/class.tslib_tstemplate.php
25	Get page from cache	class.tslib_fe.php	getFromCache()	Query the cache tables for the requested page
	headerNoCache	class.tslib_fe.php	headerNoCache()	Hook
26	Get config array	class.tslib_fe.php	getConfigArray()	Getting the TypoScript config array if not yet existing
27	Convert POST charset	class.tslib_fe.php	convPOSTCharset()	Convert POST data to internal "renderCharset" if different from the metaCharset:
28	Setting language and locales	class.tslib_fe.php	settingLanguage() settingLocale()	Setting the internal var, sys_language_uid + locale settings
29	set jump URL	class.tslib_fe.php	setExternalJumpUrl() checkJumpUrlReferer()	- set the jump URL for page type "External URL" - Checks the jumpurl referer if required

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				Jumpurl is a concept where external links are redirected from the index_ts.php script.
30	Check data submission	class.tslib_fe.php	checkDataSubmission()	Process form input data
	checkDataSubmission	class.tslib_fe.php	checkDataSubmission()	Hook
	sendFormmail-PreProcClass	class.tslib_fe.php	sendFormmail()	Hook
31	Generate the page	class.tslib_fe.php	See separate diagram	..)
32	include non-cached objects	class.tslib_fe.php	INTincScript()	Uncached user functions (USER_INT), php or java scripts
	isOutputting	class.tslib_fe.php	isOutputting()	Hook
33	process page output	class.tslib_fe.php	processOutput()	process the page before output
	contentPostProc-output	class.tslib_fe.php	processOutput()	Hook
34	Include external scripts	class.tslib_fe.php		Include external php scripts
35	Page outputting	index_ts.php	Echo \$content	Generate output
36	Store session data	class.tslib_fe.php	storeSessionData()	Store session data for FE user >class.tslib_feuserauth.php
37	Save hit statistics	class.tslib_fe.php	statistics()	Save hit statistics for page
	sys_stat-PreProcClass	class.tslib_fe.php	Statistics()	Hook
38	Check Jump URL	class.tslib_fe.php	jumpurl()	Sends a header 'Location' to jumpurl, if jumpurl is set
39	Preview info	class.tslib_fe.php	previewInfo()	Generate red preview information box
	hook_eof	index_ts.php		Hook
40	Generate admin panel	class.t3lib_tsfebeuserauth.php	extPrintFeAdminDialog()	Generate admin panel options if applicable
41	Uncompress output	class.tslib_fe.php	gzip_encode()	Uncompress output if compression level set


2. Initialise Frontend User

No	Action Title	Filename	Function	Description
16.1	Init FE use object	class.tslib_feuserauth	\$TSFE>initFEuser()	Init object \$TSFE>fe_user
16.2	Start user session	class.t3lib_userauth.php	Start()	<ul style="list-style-type: none"> - check and set login security level (normal, challenged, superchallenged) - check if a password/username was sent and if so, try to authenticate the user - Lookup a session attached to a user and check timeout etc. - Garbage collection, setting of no-cache headers.
	postUserLookUp	class.t3lib_userauth.php	start()	Hook
16.3	Unpack uc	class.t3lib_userauth.php	unpack_uc()	Unpack user configuration. Contains various user specific settings for page. (e.g state of pagetree, adminpanel)
16.4	Fetch session data	class.tslib_feuserauth	fetchSessionData()	<ul style="list-style-type: none"> - Fetches the session data for the user (from the fe_session_data table) based on the ->id of the current user-session - delete old session data (older than 24 hrs).
	initFEuser	class.tslib_fe.php	initFEuser()	Hook
16.5	Update "is online" timestamp	class.tslib_fe.php	initFEuser()	Update timestamp every 60 seconds





3. Initialise Backend User

No	Action Title	Filename	Function	Description
17.1	Init BE user	index_ts.php class.t3lib_tsfebeuserauth.php	makeInstance ('t3lib_tsfeBeUserAuth')	Init object SBE_user
17.2	Start user session	class.t3lib_userauth.php	Start()	<ul style="list-style-type: none"> - check and set login security level (normal, challenged, superchallenged) - check if a password/username was sent and if so, try to authenticate the user - Lookup a session attached to a user and check timeout etc. - Garbage collection, setting of no-cache headers.
	postUserLookUp	class.t3lib_userauth.php	start()	Hook
17.3	Unpack uc	class.t3lib_userauth.php	unpack_uc()	Unpack user configuration
17.4	Fetch group data	class.tslib_feuserauth	fetchGroupData()	<ul style="list-style-type: none"> - fetch FE groups which the current FE user is member of - accumulate user and group TS config
	fetchGroupQuery	class.t3lib_userauthgroup.php	fetchGroups()	Hook
	fetchGroups_post Processing	class.t3lib_userauthgroup.php	fetchGroups()	Hook
17.5	Unset BE user	index_ts.php		<ul style="list-style-type: none"> Unset BE user initialisation if login validation failed - check lock to ip - check backend access settings
17.6	init admin panel usage	class.t3lib_tsfebeuserauth.php	extInitFeAdmin()	
17.7	Save changes admin panel	class.t3lib_tsfebeuserauth.php	extSaveFeAdminConfig()	Save any changes in admin panel settings
17.8	Load FE editing classes	index_ts.php		class.t3lib_tce_main.php, class.t3lib_tceforms.php, class.t3lib_iconworks.php, class.t3lib_loaddbgroup.php, class.t3lib_transferdata.php
	extEditAction	class.t3lib_tsfebeuserauth.php	extEditAction()	

4. Determine Page ID

No	Action Title	Filename	Function	Description
21.1	set id from ARG-v	class.tslib_fe.php	setIdFromArgV()s	This checks if there are ARGV-parameters in the QUERY_STRING and if so, those are used for the id
21.2	get BE user preview settings	class.tslib_fe.php		If there is a Backend login check for any preview settings:
21.3	check if page is hidden	class.tslib_fe.php		Now it's investigated if the raw page-id points to a hidden page and if so, the flag is set.
21.4	check root line	class.tslib_fe.php	makeInstance('t3lib_pageSelect') Init()	For Live workspace: Check root line for proper connection to tree root (done because of possible preview of page / branch versions)
21.5	set preview flag	class.tslib_fe.php		- The preview flag will be set if a backend user is in an offline workspace -If the front-end is showing a preview, caching MUST be disabled.
21.6	fetch the page id	class.tslib_fe.php	fetch_the_id()	This gets the id of the page, checks if the page is in the domain and if the page is accessible
21.7	fetch id initialise	class.tslib_fe.php	initUserGroups() setSysPageWhereClause()	- init pageSelect object, preview settings - init user groups - extract id from URL
21.8	fetch id domain	class.tslib_fe.php	findDomainRecord() getFirstWebPage()	- check the first visible page of the current domain
21.9	fetch id rootline	class.tslib_fe.php	getPageAndRootlineWithDomain()	- get page and rootline arrays - if page is not accessible, fetch previous page in rootline - if page type is shortcut, fetch rootline of shortcut target page
21.10	check be user access	t3lib_userauthgroup.php	doesUserHaveAccess()	Check if backend user has read access to this page. If not, recalculate the id.
21.11	Clear preview	class.tslib_fe.php		
21.12	Check login allowed in branch	class.tslib_fe.php	checkIfLoginAllowedInBranch()	Checks if user logins are blocked for a certain branch and if so, will unset user login and re-fetch ID
	determineId-PostProc			

5. Generate Page

No	Action Title	Filename	Function	Description
31.1	Generate page pre processing	class.tslib_fe.php	generatePage_preProcessing()	store temporary temporary user message in cache table. (Page is being generated..)
31.2	Determine which script	class.tslib_fe.php	generatePage_whichScript()	Determines to include custom or pagegen.php script. Returns script-filename if a TypoScript (config) script is defined and should be include instead of pagegen.php
31.3	Init pagegen	class.tslib_pagegen.php	pagegenInit()	Setting some vars in TSFE, primarily based on TypoScript config settings.
31.4	Include files	class.tslib_pagegen.php	getIncFiles()	Returns an array with files to include. These files are the ones set up in TypoScript config.
31.5	Render content	class.tslib_pagegen.php	renderContent()	Rendering the page content
31.6	Setting header	class.tslib_pagegen.php	TSpagegen::renderContentWithHeader	rendering normal HTML-page with header by wrapping the generated content (\$pageContent) in body-tags and setting the header accordingly.
31.7	Custom script	class.tslib_fe.php		Generate from custom external script
31.8	Generate page post processing	class.tslib_fe.php	generatePage_postProcessing()	caching and indexing the page
	contentPostProc-all	class.tslib_fe.php	generatePage_postProcessing()	Hook
	contentPostProc-cached	class.tslib_fe.php	generatePage_postProcessing()	Hook
	pageIndexing	class.tslib_fe.php	generatePage_postProcessing()	Hook
	insertPageIncCache	class.tslib_fe.php	realPageCacheContent()	Hook