

# ***READ ME FIRST!***

## **Installing Mascot for the first time**

If you are installing Mascot for the first time, please read the 'last minute additions' on page 2 and the 'platform specific notes' on page 3 before following the installation instructions in Chapter 2 of the Installation and Setup Manual. A complete, up-to-date copy of the Manual can be found in the Mascot installation files (*manual.pdf*).

## **Installing as version update**

Licence files used for Mascot 2.8 and earlier will not work with Mascot 3.0. You will need to register online using the supplied product key. If you are moving to new hardware at the same time as making a version update, you'll need to contact Matrix Science support for a new product key.

## **Changes since last release**

Details of individual changes since the previous major release of Mascot are listed on page 4 of these notes.

## **Last minute additions to documentation**

See page 2.

# *Last minute additions to documentation*

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## **Database compression**

After updating to Mascot Server 3.0, all sequence databases will be automatically recompressed. This is because the compressed file format has changed in 3.0. If you have a large number of databases, please set aside sufficient time for the maintenance window to allow database compression to complete.

# *Platform Specific Notes*

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## **Linux Kernel / Distribution**

Any Linux distribution that includes glibc 2.17 or later should be sufficient. A table of common distributions and minimum versions is on our website:

[https://www.matrixscience.com/help/pc\\_specs.html#LINUX](https://www.matrixscience.com/help/pc_specs.html#LINUX)

## **Software RAID**

Software RAID systems, such as Lustre, are not supported.

## **Network File Systems**

GlusterFS is not supported.

## *New features since version 2.8*

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A summary of new features, changes to defaults and removal of obsolete functionality is available on our website:

[https://www.matrixscience.com/help/mascot\\_server\\_3\\_0\\_release.html](https://www.matrixscience.com/help/mascot_server_3_0_release.html)

The summary is also available in the online help after installing Mascot Server 3.0. Go to your local Mascot home page, Help, "What's new in Mascot Server 3.0".

## *Detailed change log since version 2.8.3*

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<b>ID</b>	<b>Component</b>	<b>Description</b>
<b>6442</b>	Daemon	Daemon assumes all new MDRO providers are files not folders
<b>6486</b>	nph-mascot.exe	Takes a long time to create the Fxxxxxx.dat.que.y files (Windows disk bottleneck in "Query prep time")
<b>6847</b>	master_results_2.pl	Browser performance improvements in Protein Family Summary
<b>10876</b>	master_results_2.pl	master_results_2.pl doesn't cope with missing mascot.dat
<b>11568</b>	Security	Remove references to Integra and Insight in Mascot Security
<b>11865</b>	nph-mascot.exe	Scaling with number of threads in SMP mode on yabby very disappointing (Windows disk bottleneck in "Searching... time")
<b>12535</b>	System	Slash the amount of time spent in preprocessing peak lists and postprocessing search results (soup to nuts)
<b>12701</b>	master_results_2.pl	Protein Family Summary should support tag searches
<b>12743</b>	Not determined	Searching for a sequence in a result file with a lot of identical sequences takes 30 minutes
<b>12801</b>	ms-status.exe	Link to error log produces a CGI error if ms-monitor.exe isn't running
<b>12825</b>	master_results_2.pl	Inconsistent treatment of DECOY=ON and DECOY=OFF
<b>12892</b>	Search results	Zero value for Observed in unassigned list for query whose only match is a chimeric duplicate
<b>13106</b>	Not determined	Add new method ms_inputquery::getQueryNumber()
<b>13130</b>	dbman_scan_for_library.pl	Failed to run dbman_msp_from_results_file.pl and crawl results on some Linux systems
<b>13201</b>	Documentation	ms-service.exe documentation is incorrect
<b>13267</b>	nph-mascot.exe	Allow user to select application-specific sub-set of mods for second pass of error tolerant search
<b>13303</b>	System	M00135 message is out of date
<b>13345</b>	Documentation	Search parameter help for instrument uses different row labels than Configuration Editor
<b>13422</b>	Import filters	MGF peak lists saved from Distiller Data import filter have peak picking parameters commented out.
<b>13447</b>	Search results	Add getPeakCharge method
<b>13480</b>	Search results	get_ms_mascotresults() defaults to old protein grouping for sequence tag searches
<b>13483</b>	nph-mascot.exe	Negative protein mass in MS/MS search
<b>13486</b>	master_results_2.pl	Repeat search of sequence tag from Protein Family Summary fails to pass through fixed and variable modifications
<b>13516</b>	master_results.pl	Show Mascot errors on the Wot no results page
<b>13531</b>	Performance	Reduce the time spent in caching search results
<b>13632</b>	nph-mascot.exe	Remove obsolete pip code from nph-mascot.exe
<b>13678</b>	Performance	Support new .msr file format
<b>13765</b>	Import filters	Output ion mobility values from MDRO if associated Mascot Server

		is 2.7 or later
<b>13797</b>	System	Update Boost to 1.79.0
<b>13799</b>	Percolator	Replace Percolator RT feature with MS2RescoreAdapter (DeepLC, MS2PIP)
<b>13856</b>	Perl interpreter	Update Perl on Windows to 5.38 and update prerequisites and modules
<b>13858</b>	Documentation	Roll-up of changes to Manual, release notes, and HTML pages for 3.0
<b>13870</b>	Percolator	Make sure Percolator is built with 64-bit, not 32-bit boost_regex
<b>13872</b>	Daemon	Review the need for 32-bit Parser
<b>13976</b>	Results display	Show more detailed information about search stage in addition to percentage
<b>13988</b>	ms-status.exe	Click on "view error log" when Mascot isn't running and get HTTP Error 502.2 - Bad Gateway
<b>14017</b>	export_dat_2.pl	New cache files are created when exporting a decoy search and a target FDR is set.
<b>14033</b>	System	Change from four-component to three-component versioning
<b>14034</b>	Installer	Migrate from WiX 3.7 to WiX 3.11 for Windows installer
<b>14053</b>	Documentation	Add documentation for setting up SSL
<b>14058</b>	ms-gettaxonomy.exe	ms-gettaxonomy.exe works correctly even when taxonomy block is disabled (Enabled=0)
<b>14068</b>	Installation	Remove directory gnu/7.2.0 from Linux shipper image
<b>14109</b>	Configuration files	MascotFileProcessingThreads set to -1 should automatically use all possible threads
<b>14111</b>	Search results	Rename ms_mascotresfile to ms_mascotresfile_dat
<b>14117</b>	nph-mascot.exe	nph-mascot.exe, write search results in MSR v0.9 format
<b>14118</b>	client.pl	Download .msr file using client.pl, and reconstruct full .dat from slim .dat and MSR
<b>14119</b>	export_dat_2.pl	Export MSR file in dat28 format (export_format=MascotDAT) and MSR format (export_format=MascotMSR)
<b>14120</b>	ms-createtip.exe	Create tip file from .dat or .msr results file
<b>14121</b>	Search results	New API for .msr results files, and implement parsing and interpretation of MSR v0.9 files
<b>14125</b>	Perl interpreter	Update Perl on Linux to 5.38 and update prerequisites and modules
<b>14127</b>	Building	Drop VS2012 and VS2013 shippers
<b>14129</b>	System	Compile Mascot with GCC11 and VS2019
<b>14131</b>	nph-mascot.exe	Uncaught exceptions are reported as meaningless exit code '-1073740791'
<b>14133</b>	Sample code	Update Parser examples for MSR files
<b>14138</b>	nph-mascot.exe	Crash in library search in cluster mode with fewer queries than SplitNumberOfQueries
<b>14139</b>	nph-mascot.exe	A search against a Spectral Library should always split by queries
<b>14146</b>	master_results_2.pl	Change the title of Percolator progress bar to "Refining with machine learning"
<b>14147</b>	master_results_2.pl	Display a warning in Protein Family Summary if Percolator is on and did not improve sensitivity

<b>14152</b>	nph-mascot.exe	The mass of the crosslinker is always unsigned in nph-mascot
<b>14156</b>	Installer	Ship Mascot with the latest VS2015-VS2022 redistributable
<b>14157</b>	Search results	Undefined behaviour in ms_fdr_query_processor::getThresholdForFDR()
<b>14172</b>	Database Manager	URL for PRIDE spectral libraries has changed
<b>14173</b>	Database Manager	UniProt REST URLs have changed
<b>14179</b>	Documentation	MinGW instructions
<b>14181</b>	MS1 Quantitation	Support target FDR in ms_distiller_data_search
<b>14186</b>	search_form.pl	Disallow TargetFDR and ET+Decoy on FORMVER=3 (Distiller 2.8)
<b>14192</b>	Installation	Upgrade Linux shippers to GCC 5.5.0 and MinGW to GCC 7.1.0
<b>14208</b>	Search results	ms_searchparams::getVarModsNeutralLosses() doesn't return satellite NLs
<b>14211</b>	nph-mascot.exe	Unexpected difference in query sort order in cluster mode
<b>14217</b>	Search results	Failing to read local mods NL string, fault introduced in Parser 2.7.0
<b>14238</b>	nph-mascot.exe	New command-line argument to nph-mascot.exe to specify output format
<b>14239</b>	search_form.pl	Specify output format as MSR when submitting a search
<b>14240</b>	Configuration files	New mascot.dat option SearchSubmitOutputFormat
<b>14241</b>	System	Script and help text for processing TMTpro complementary ions
<b>14244</b>	Documentation	Apache example config supplied with Mascot should include LimitRequestBody
<b>14247</b>	Configuration files	New mascot.dat option to diagnose MSR generation
<b>14257</b>	MS1 Quantitation	Move Quantlib/Distiller time alignment code to Parser and save/load in cdb/xml
<b>14262</b>	MS2 Quantitation	TMTpro 16-plex and 18-plex mod groups should be required=false
<b>14265</b>	nph-mascot.exe	Allow embedded config files in MIME format input
<b>14274</b>	Errors & warnings	Methods and classes not wrapped properly by SWIG for Perl, Python, Java and C#
<b>14276</b>	nph-mascot.exe	Memory leaks in nph-mascot searches
<b>14280</b>	System	View/process MSR format search results in Perl scripts
<b>14282</b>	Documentation	Add distiller_time_align_1.xsd to the website
<b>14285</b>	MS1 Quantitation	Implement New Imputation Methods in Parser
<b>14287</b>	nph-mascot.exe	Count all the accessions when creating the index files of a sequence database
<b>14293</b>	Threading	Further thread safety issues : getPeptideThreshold()
<b>14300</b>	peptide_view.pl	Peptide View, ET match, Use of uninitialized value in subroutine entry
<b>14302</b>	nph-mascot.exe	mzML file with a very large peak list segfaults nph-mascot.exe
<b>14315</b>	HTTP	Add getStage method to ms_http_client_search
<b>14320</b>	Documentation	Update Doxygen to version 1.9.6
<b>14323</b>	MS1 Quantitation	ms_ms1quantitation should allow a search without a quantitation method to load replicate or average results
<b>14326</b>	ms-config.exe	View modifications, linkers, quant method, crosslinking method from MSR file (ms-config.exe)
<b>14331</b>	System	Adapter interface for ML predictors, which inserts custom columns

		to pip file
<b>14337</b>	Documentation	Roll-up of changes to API doc and release notes for 2.9
<b>14344</b>	Installer	Unable to install on Windows 10 21H2 due to "QueryIISConfig: Failed to wait for child process (0x80070006)"
<b>14357</b>	External Processes	Ship Mascot Daemon Export Extender with Daemon
<b>14361</b>	Search results	ms_inputquery::getPeakMass(): Ions2 and Ions3 lines are missing the first peak
<b>14362</b>	export_dat_2.pl	pep_isbold field is confusing
<b>14371</b>	nph-mascot.exe	Heap Buffer Overflow when copying data from the nodes
<b>14377</b>	Search results	getQmatch() returns INT_MAX if called with non-existent query number, should return 0
<b>14389</b>	Search results	Implement schema changes for MSR v0.99; implement MSR parsing/processing for v0.99; fix bugs in MSR parsing/processing; implement schema changes for SDB v0.99; implement SDB writing/processing for v0.99; fix bugs in SDB parsing/processing; rename headers
<b>14390</b>	nph-mascot.exe	nph-mascot.exe, write search results in MSR v0.99 format
<b>14392</b>	Test harness	Add MSR files to the Parser test harness
<b>14396</b>	Parameters	When selecting data file format for Distiller, set processing option file to the default for that instrument
<b>14415</b>	client.pl	Add an interface to client.pl to remotely initiate percolator, and then track progress
<b>14422</b>	HTTP	Support MSR file download in ms_http_client_search::downloadResultsFile()
<b>14423</b>	search_form.pl	Add Percolator controls to the search form
<b>14429</b>	nph-mascot.exe	Embed a 'slim' .dat file in the Mascot Search Results (MSR) file
<b>14432</b>	Utilities	Add streaming decompression to ms_zip
<b>14433</b>	Errors & warnings	Parser should give a warning if reading a file from future version of Mascot
<b>14441</b>	Search results	New Parser class for retrieving MSR file in .dat format
<b>14445</b>	Configuration files	New option AlwaysCreateDat28ResultsFile
<b>14446</b>	Installer	Update SwissProt, PRIDE_contaminants and taxonomy files in shipper package for 3.0
<b>14447</b>	search_form.pl	Add clarification to "Peptide charge" search parameter that it's a fallback default
<b>14457</b>	ms-status.exe	ms-status.exe Show=RESULTFILE needs to print MSR in binary format
<b>14462</b>	System	Drop Windows Vista, 7, 8, Server 2008, Server 2008 R2 and Server 2012
<b>14466</b>	Installer	Ownership in shipper tar package on Linux should be root:root
<b>14469</b>	export_dat_2.pl	mzIdentML export specifies UseUnigeneClustering=1 and IncludeErrorTolerantMatches=1 when it shouldn't
<b>14481</b>	Search results	All methods of ms_inputquery should be const
<b>14483</b>	Search results	ms_inputquery::getNumUsed() always returns 0 despite docs say it always returns -1
<b>14497</b>	ms-searchcontrol.exe	Move results_file_mime2 implementation from client.pl to ms-searchcontrol.exe



<b>14498</b>	ms-searchcontrol.exe	New command ms-searchcontrol.exe --result_file_sql
<b>14499</b>	ms-searchcontrol.exe	ms-searchcontrol.exe --result_file_mime should return dat28 format stream if input is MSR
<b>14501</b>	ms-monitor.exe	Stop creating obsolete config files (mod_file, masses, substitutions) if CreateLegacyModAndSubstitutionFiles is false
<b>14515</b>	Results display	Hide the quantitation summary context menu if you don't have the "Task Database" node selected or allow the summary to be run by selecting specific searches
<b>14516</b>	Results display	Quantitation summary disabled for reporter datasets if you don't have the Daemon toolbox
<b>14530</b>	ms-makesearchlog.exe	Support MSR files in ms-makesearchlog.exe
<b>14531</b>	ms-searchcontrol.exe	Add MSR support for ms-searchcontrol.exe commands --create_results_cache, --results_cache_status, --results and --results_header
<b>14532</b>	client.pl	When using client.pl commands kill_job and nice_job from the command line, and if sessionID argument gives an invalid session, the script mistakenly defaults to the command line session
<b>14533</b>	client.pl	Switch from task-based to results-based permission check for client.pl commands result_file_mime, result_file_ini, results, xmlresults and results_header (only user spoofing is affected)
<b>14537</b>	ms-searchcontrol.exe	Disallow downloading MSR file using client.pl?result_file_ini
<b>14544</b>	Masses	Change ms_modfile private member std::auto_ptr<ms_masses> to std::unique_ptr
<b>14546</b>	master_results_2.pl	Inadequate browser caching in Protein Family Summary when Mascot Security is enabled and using guest session or web authentication or IP/hostname/agent string authentication
<b>14548</b>	Search results	Clarify protein inference rules for multi-SL searches with same or different reference databases
<b>14549</b>	Search results	Display emPAI in integrated error tolerant searches
<b>14551</b>	Search results	ms_searchparams::getLIBRARY_SEARCH() returns -1 when LIBRARY_SEARCH=1 in search params
<b>14552</b>	System	Remove ms-lockmem.exe
<b>14553</b>	Configuration files	Remove ms_mascotoptions::getSeparateLockMem()
<b>14554</b>	Building	Compile SWIG modules with GCC11 and VS2019 (Perl, Python, C#, Java)
<b>14558</b>	Building	Update SWIG to 4.2.1
<b>14560</b>	System	Use the VS2019 and GCC 11 Perl modules with Mascot
<b>14571</b>	Search results	Unstable order of sameset accessions in integrated SL searches
<b>14575</b>	nph-mascot.exe	Incorrect fragment charge (Ions1_charge) when using Bruker XML input
<b>14576</b>	nph-mascot.exe	Automatic target-decoy by default
<b>14577</b>	Installation	Add wrapper for Perl 5.36 on Linux
<b>14578</b>	Search results	Add new method ms_mascotresfilebase::getSLExecCommand()
<b>14584</b>	Database Manager	Environmental_EST parse rule has changed; remove obsolete IPI databases; and SARS-CoV-2 is moved from pre-release to official Uniprot database
<b>14588</b>	MS2 Quantitation	Add accessor method ms_ms2quantitation::getPeptideSummary()

<b>14590</b>	MS1 Quantitation	Update mergeCdbFiles and mergeXmlFiles to support msr
<b>14591</b>	Daemon	Display and write a warning to the event log when the installation drive is low on space
<b>14593</b>	ms-searchcontrol.exe	Failing to fetch protein description for top hit in integrated spectral library search if top hit is not from SL
<b>14596</b>	export_dat_2.pl	If export_dat_2.pl ends with an error, the error message is duplicated in HTML output
<b>14598</b>	ms-status.exe	Remove BrowserSafe parameter from ms-status.exe; always use text/plain with Show=RESULTFILE when results file is dat28 format
<b>14600</b>	Daemon	Capture and check standard error if about to report MDS1129 with no error message
<b>14604</b>	nph-mascot.exe	Set SQLite application_id for MSR files
<b>14605</b>	nph-mascot.exe	Update Mascot Server version and schema version to final ones for beta release
<b>14614</b>	search_form.pl	Search form controls for Unimod classifications with error tolerant search
<b>14615</b>	Parameters	Search params for Unimod classifications with error tolerant search
<b>14628</b>	nph-mascot.exe	Support repeat searching from MSR file
<b>14629</b>	TaskDB	Allow user to delete multiple tasks from Daemon
<b>14636</b>	Utilities	ms_fileutilities::getLastModificationTime() fails on Windows if the file has been opened without shared read access
<b>14637</b>	Installation	Drop version-specific Python libraries and ship a single 'universal' library
<b>14645</b>	ms-createtime.exe	Median precursor error is missing the match to the last query
<b>14647</b>	Search results	New argument to ms_mascotresfilebase::setPercolatorFeatures(): a vector of ML adapter parameters
<b>14649</b>	Search results	ms_mascotresfilebase constructor, if XMLschemaDirectory is empty string, treat it the same as null pointer
<b>14665</b>	Configuration files	Add a ms_modification::getClassification() method
<b>14667</b>	master_results_2.pl	New format controls for activating MS2Rescore and selecting MS2PIP and DeepLC models
<b>14673</b>	Search results	ms_linker_site_vector fails to initialise alpha and beta peptide lengths to zero
<b>14674</b>	Configuration files	Add quantitation option to choose type of time alignment
<b>14682</b>	master_results.pl	Add a deprecation warning at the top of master_results.pl
<b>14686</b>	master_results_2.pl	Display machine learning quality report in Protein Family Summary
<b>14691</b>	System	Include new third-party Perl modules: TOML::XS, Devel::NYTprof, MIME::Lite, DBD::SQLite
<b>14692</b>	Installation	Internal shipper for Perl 5.38 built with VS2019 and GCC 11
<b>14696</b>	search_form.pl	Remove obsolete support for Isf.dat in the search form
<b>14702</b>	nph-mascot.exe	NA translation looks wrong in error tolerant decoy search against an NA database
<b>14703</b>	ms-createtime.exe	ms-createtime.exe should not write match data for chimeric duplicates
<b>14704</b>	ms-createtime.exe	ms-createtime.exe calculates -nan(ind) for RMS, RMSppm, meanAbsFragDa, meanAbsFragPPM

<b>14707</b>	Configuration files	ms_datfile::updateForInstaller(), Replace ResultsCache with a default
<b>14714</b>	Quantitation Summary	Support replicate quantitation via the quantitation summary
<b>14716</b>	peptide_view.pl	Default Peptide View to annotating all fragments, not just matched fragments
<b>14718</b>	System	Default to sequence FDR in Mascot Server
<b>14721</b>	System	Increase SplitNumberOfQueries to 2000
<b>14732</b>	get_params.pl	New CGI script get_ml_adapter_params.pl to list the available ML adapter parameters
<b>14743</b>	refine_results_with_ml.pl	New executable refine_results_with_ml.pl for backend use
<b>14744</b>	client.pl	client.pl?create_results_cache and client.pl?results should default to Percolator and ML adapter params specified as search parameters
<b>14745</b>	System	Default report scripts to Percolator and ML adapter parameters defined in the search form
<b>14746</b>	nph-mascot.exe	Pass through PERCOLATE and ML_ADAPTER_PARAM search parameters
<b>14748</b>	Search results	New methods ms_searchparams::getPERCOLATE() and ms_searchparams::getML_ADAPTER_PARAM()
<b>14749</b>	Search results	When setting Percolator flag in ms_mascotresfilebase::get_ms_mascotresults_params(), check the new search param PERCOLATE, then mascot.dat options
<b>14750</b>	Search results	ms_mascotresfile::get_ms_mascotresults_params() treats DECOY=-1 as DECOY=1 when deciding whether to set MSPEPSUM_PERCOLATOR
<b>14752</b>	Search results	ms_mascotresfilebase::get_ms_mascotresults_params() should not set MSPEPSUM_PERCOLATOR for error tolerant search
<b>14754</b>	MS2RescoreReport.py	Change machine learning quality report template so it has Matrix Science branding
<b>14755</b>	tidy_data.pl	tidy_data.pl needs to delete old pip and pop files
<b>14759</b>	nph-daemon_helper.pl	Remove nph-daemon_helper.pl (legacy script for ABI GPS Explorer)
<b>14766</b>	Installation	Update unimod.xml and unimod_xl.xml to the latest versions for 3.0
<b>14775</b>	Building	Python msparser library cannot be used with xgboost or tensorflow libraries
<b>14776</b>	Configuration files	ms_datfile::updateForInstaller(), change SplitNumberOfQueries from 1000 to 2000
<b>14777</b>	Configuration files	New option CreateLegacyModAndSubstitutionFiles
<b>14778</b>	Configuration files	New option AlwaysEnableAutoDecoySearch
<b>14782</b>	System	Ship unimod_tables.xml with Mascot
<b>14783</b>	master_results_2.pl	Always expand Sensitivity and FDR section in Protein Family Summary
<b>14784</b>	master_results_2.pl	Remove "Not what you expected" link
<b>14785</b>	Configuration files	ms_datfile::updateForInstaller(), set PercolatorUseRT to 0
<b>14786</b>	master_results_2.pl	Display a warning if percolate_rt=1 or PercolatorUseRT is enabled
<b>14788</b>	search_form.pl	Hide Monoisotopic/Average choice in search form
<b>14789</b>	Configuration files	New mascot.dat option SearchSubmitAcceptedFileTypes

<b>14790</b>	search_form.pl	Hide obsolete file formats from search form
<b>14791</b>	export_dat_2.pl	Remove DTASelect and pepXML as export format choices
<b>14795</b>	MS1 Quantitation	ms_ms1quant_time_align::getRToffset() looks in wrong part of array in some cases
<b>14797</b>	Configuration files	LabelAll option is obsolete
<b>14798</b>	ms-config.exe	ms-config.exe needs to download unimod_tables.xml when user clicks Check Unimod
<b>14811</b>	Configuration files	Quantitation method for TMT 32/35-plex
<b>14812</b>	ms-createtime.exe	Percolator features based on matched fragments are incorrectly calculated.
<b>14814</b>	search_form.pl	Default target FDR to 1% in the search form
<b>14818</b>	search_form.pl	Javascript error in SQ search form
<b>14820</b>	Search results	Default to sequence FDR in get_ms_mascotresults_params()
<b>14821</b>	MS1 Quantitation	getRToffset() code is not treating the "to" consensus and "from" consensus properly
<b>14825</b>	Import filters	Make peak picking with the Distiller Daemon Toolbox Processor group aware on Windows 11 based systems
<b>14829</b>	Parameters	Daemon should take the list of peaklist formats from the SearchSubmitAcceptedFileTypes Mascot.dat option
<b>14833</b>	Search results	Change behavior of ms_mascotresfilebase::get_ms_mascotresults_params() to set the target FDR
<b>14834</b>	dbman_scan_for_library.pl	Set target FDR to zero when creating MSP file so that homology threshold (reported as hs= metadata field) is consistent
<b>14837</b>	master_results_2.pl	Prevent refining results if the search is sequence query with no MS/MS data
<b>14842</b>	ms-status.exe	ms-status.exe Show=MS_MODFILE should return mod_file contents from unimod.xml
<b>14844</b>	Configuration files	Add new method ms_masses::saveToString()
<b>14848</b>	ms-createtime.exe	The isoSysDMz feature is set to Inf when the query charge is unknown
<b>14849</b>	client.pl	Implicitly create pop files (refine results) when calling client.pl?result_file_pop
<b>14850</b>	ms-createtime.exe	ms-createtime.exe sometimes crashes when calculating the median precursor error
<b>14858</b>	System	Supply ms-win8-perl538.exe with Mascot on Windows to work around Perl 5.38 locale bug on Windows 8.1/Server 2012 R2 when active code page is not Latin1 or Unicode