

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 2.7 and earlier will not work with Mascot 2.8. 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

- Some third party applications require helper scripts to be installed on the Mascot web server. If Mascot security is enabled, you should be aware that such scripts may create security holes.
- All major Linux distributions have now switched from System V init to systemd. The sample init script can still be used with systemd by creating a unit file with content similar to this:

```
[Unit]
Description=Mascot Monitor Service

[Service]
Type=oneshot
ExecStart=/usr/local/mascot/bin/mascot start
ExecStop=/usr/local/mascot/bin/mascot stop
RemainAfterExit=yes

[Install]
WantedBy=multi-user.target
```

This text should be saved to `/usr/lib/systemd/system/mascot.service`, then enabled by executing

```
systemctl enable /usr/lib/systemd/system/mascot.service
```

Platform Specific Notes

Linux Kernel / Distribution

Any Linux distribution that includes a 3.0 or later kernel and glibc 2.5 or later should be sufficient.

Software RAID

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

Network File Systems

GlusterFS is not supported.

ht://Dig

htdig has been removed from the default repositories in recent distributions of RedHat and CentOS. If you want keyword searching of the Mascot Server help pages, you will need to build htdig from source or install it from the Trinity Repository, as described here - https://wiki.trinitydesktop.org/RedHat_Trinity_Repository_Installation_Instructions

libnsl

libnsl is not installed by default in recent versions of RedHat and CentOS. The library is required by Perl. Please install libnsl from the distribution's repository.

Changes since Version 2.7.0

ID	Component	Description
5326	Server	Remove the "MonitorTestTimeout" value
10897	Server	Modernise browser.pl
11120	Server	Number of entries searched in error tolerant mode is incorrect
11198	Server	Use decoy results to set FDR automatically
11228	Server	Make ms-createtime.exe multithreaded
11917	Server	Error tolerant decoy search using fusion decoy database
12002	Server	We should change the interpretation of REPORT for summaries other than family
12447	Parser	Calculate an expect value for error tolerant matches
12552	Server	mzTab glitches prevent PRIDE submission as complete submission
12559	Server	et_sequences set to a wrong total in cluster split by query
12628	Server	Perl relocation path has double slash
12666	Server	XML export fails to validate against mascot_search_results_2.xsd
12790	Server	ms-monitor.exe should bring fasta files with valid compressed files online first
12843	Server	Mascot Daemon does not report the top hit for a Spectral library search
12870	Server	Sign the installer
12969	Parser	Documentation changes roll up for msparser 2.8
13000	Server	Followup search fails to filter out matches from SL search.
13019	Server	CentOS 7: install1.pl says "Can't locate strict.pm: permission denied"
13084	Server	Getting more from Percolator
13129	Server	Remove browser.pl
13224	Server	Flaw in email verification on pubwww4
13317	Server	Full configuration editor for crosslinking methods
13325	Server	If SwissProt fails to compress, PRIDE_Contaminants prevents other databases from compressing
13357	Parser	Announce end of 32-bit Parser on Windows
13378	Parser	Section title "Using STL classes" should mention vectord, vectori, VectorString
13381	Server	Export doesn't fully support pepseq-based FDR
13386	Server	ms-status.exe doesn't accept a Mascot security session ID as a command line argument
13391	Server	Use OpenMP acceleration with Percolator
13396	Server	Export crosslinked matches in CSV and XML format
13404	Server	Remove maximum protein limit on intralinked searches
13406	Parser	getThresholdForFDRAboveIdentity() doesn't always work when Percolator is enabled

13407	Server	Possible bug with double downloading of databases_1.xml
13424	Server	Different Percolator results in Windows vs Linux
13431	Server	Save the build date in Mascot binaries
13434	Server	Changing only numbers in the XML of a quantitation method does not update it
13470	Server	Mascot Daemon does not report the protein description and protein mass for top hit for a Spectral library search
13475	Server	Product licensing POST request should use HTTPS
13476	Server	Multithread crosslink searches where number of accessions is fewer than number of available threads
13477	Daemon	Save as dialog when generating a quantitation summary export can appear behind window
13491	Server	When reference database of a spectral library is not online, ms-monitor.exe outputs 60 log messages every minute
13501	Server	Compile Mascot 2.8 with GCC 7
13508	Server	Remove the limit from linker arrangements
13512	Server	Crawled library compression warns about "2-succinyl (C"
13514	Parser	Parser 2.7.0 C# is built with VS2015, not VS2012
13515	Server	Confirm TLS1.2 is supported for database downloads
13522	Server	install1.pl stops with msparser version error
13523	Server	Remove hardcoded msparser version check from install1.pl
13528	Server	HTML footer of help pages says "Copyright 2016"
13533	Server	Optimise preprocessing and distribution of peak lists at the start of the search and within a chunk
13536	Server	Overflow checking is incorrect in add_with_no_overflow()
13537	Server	Allow ET + decoy to be selected in the search form
13538	Parser	Calculate FDR for ET decoy search in getThresholdForFDRAboveHomology()
13540	Server	Only search unassigned/unmatched queries in second pass of ET search
13541	Server	Protein selection in ET search could be based on target FDR
13542	Server	Protein Family Summary: display expect value for ET matches
13543	Server	Display FDR for ET decoy searches
13544	Server	Mascot 2.7 executables on Linux fail to work on certain AMD Opteron CPUs
13550	Server	Library import fails if start date left at default of --start-date 1970-01-01
13552	Server	Roll-up of changes to Manual, release notes, and HTML pages for 2.8
13553	Server	ms-getseq.exe fails to escape protein reference text; ms-gettaxonomy.exe prints an invalid ending tag in accession lookup mode
13559	Server	ms-gettaxonomy ignores ACCESSION parameter when TAXID is present
13564	Server	xiVIEW CSV export fails to encode fixed mods
13566	Server	Configuration Editor writes empty code and pairs_with attributes

		in usermod.xml
13568	Server	Search gives incorrect results when taxonomy filter specified and database update has stalled
13586	Server	Incorrect protein accessions in result file when in cluster mode, searching multiple databases and last database is smaller than the others
13590	Server	Ion mobility MGF field documentation is incorrect
13592	Server	Deactivate neXtProt and it cannot be activated again
13595	Daemon	Display database details as part of version update warning
13600	Server	Percolator flags can be incorrect when executed by ExecAfterSearch
13601	Server	Progress bar allocation for ms-createpip and Percolator should be 50:50
13602	Server	Update Percolator sources to 3.05
13604	Parser	New setting for number of input file parsing threads
13605	Daemon	Cannot toggle individual checkboxes of sample map
13609	Server	Occasional segfault on cluster node on Windows
13618	Server	Cannot export Fasta on pubwww4
13624	Server	Rare false positive disulfide bridge loopleft match, caused by applying doubled linker mass to calculated precursor mass
13628	Server	mzIdentML takes forever with this file
13633	Parser	updateForInstaller: replace PercolatorFeatures with new feature set
13634	Parser	New options PercolatorTargetRankScoreThreshold and PercolatorTargetRankRelativeThreshold
13638	Server	Bundle VC++ 2012 and VC++ 2015-2019 redistributables with Mascot installer
13639	Parser	Compile Parser 2.8 with VS2017
13652	Server	Add back ExecAfterSearch for ms-createpip.exe
13653	Server	Allow Get me to 1% FDR when Percolator is enabled
13660	Server	Compile Mascot 2.8 with VS2017
13661	Server	Instruments internal fragment size setting not used in search
13662	Server	mzIdentML export does not include internal ions over 700Da
13663	Parser	ms_aahelper never returns internal ions over 700 Da
13664	Daemon	Allow ET + decoy to be selected in search parameters
13665	Daemon	Extend the autoexport to export a merged result
13666	Server	Protein FDR reported incorrectly in CSV, XML, mzIdentML, mzTab export
13668	Server	Exported MGF reports outputs charge state as precursor intensity, plus incorrect charge state ambiguity handling
13673	Parser	ms_proteinsummary needs to check inference flags
13676	Server	Ignore SplitDataFileSize parameter in nph-mascot
13679	Daemon	Update MS Inc address in Daemon help
13696	Parser	New parameter for ms-createpip.exe multithreading
13703	Server	Update SwissProt, PRIDE_contaminants and taxonomy files in shipper package for 2.8

13709	Server	Use TARGET_FDR_PERCENT= at end of target-decoy search and write sigthreshold as first_pass_threshold=
13714	Server	Protein Family Summary should be the default report
13715	Parser	Only return false from getThresholdForFDRAboveHomology() if closest FDR is not within a factor of 2 of target FDR
13724	Server	Unnecessary work when modifications with 0 instances have same specificity
13726	Parser	Logging and error handling documentation is mostly missing
13729	Server	Precursor mass in results file can be wrong when match has looplinks
13730	Parser	Allow zero child elements in mxm:accessions, mxm:filters, mxm:scope, mxm:settings
13732	Server	percolate_rt doesn't work
13734	Server	Update example ET search (F981130.dat) and remove obsolete searches F981126.dat, F981127.dat, F981128.dat
13746	Parser	Remove ICC2016 shippers, add GCC7 internal shippers
13750	Server	Move target FDR selection into format controls
13752	Server	If the crosslinking method cannot be written, stop the search immediately
13753	Server	In cluster split by query, add the warnings from the master to the result file
13757	Server	Warnings from the error tolerant and crosslink pass are not added to the files
13759	Parser	New ms_peptidesummary parameters: target FDR and FDR type
13761	Server	Should looplinks count as +2 towards MaxPepNumModifiedSites?
13762	Server	Replace ActivePerl with own version of Perl
13763	Parser	Add willCreateCache methods which take a ms_mascotresults_params argument
13769	Parser	Update unimod.xml and unimod_xl.xml for 2.8.0
13787	Server	Missing crosslink match to a peptide pair with the same complete string as another match
13790	Server	mascot_search_results_2.xsd fails to compile with xmllint
13803	Server	Replace \$Config{perlpath} with \$^X in Database Manager
13806	Parser	Target FDR algorithm: maximise the number of target matches if FDR is 0%
13808	Parser	Update element descriptions in crosslinking schema for the crosslinking configuration editor
13818	Parser	If alpha and beta are in different proteins, one of them is not assigned to any protein
13821	Server	Precursor mass in results file can be wrong when monolink index > 9
13848	Parser	Add Parser targets for Perl 5.32 and 5.34