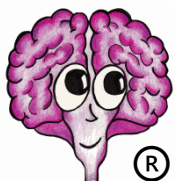


DocuBrain® TechDoc Release Notes



A DocuBrain® Product

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By Prevo Technologies, Inc.

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DocuBrain® TechDoc 11.0.2 Release Notes

These release notes document the changes from TechDoc 10.1 to TechDoc 11.0.2. If you are upgrading from TechDoc 10, you should also consult the release notes for TechDoc 10.1 to see what changes were introduced as part of that release as well.

The most significant changes include Cloud support, moving to Java 11, and an extensive security review that included the removal of many third-party libraries, updates on all libraries and components wherever possible, and code changes based on reviews and static code analysis.

Important notes: TechDoc 11 no longer supports SQL Server 2012 R2 since it is already end of life. TechDoc 11 will drop support for Windows Server 2012 R2 by the end of 2023 since Microsoft support will end 10/10/2023.

If you are currently using either Microsoft product, please update to a newer, supported version of the operating system and/or database before installing or upgrading to TechDoc 11. TechDoc 11 currently supports Windows Server 2012 R2 – 2022, SQL Server 2014 – 2022, and Azure SQL database.

NASA customers: As NASA has continued to harden their IT infrastructure, the DocuBrain team lost their access to test TechDoc in the NASA environment prior to release. Please be aware that it is always important (but especially now) that you thoroughly test an upgrade or fresh install of TechDoc 11 in your NASA test environment before deploying it to production. In the unlikely event that there is an issue, please reach out to us and we will attempt to address the problem as quickly as possible.

Changes from TechDoc 11 to TechDoc 11.0.1 are marked with the superscripted version number surrounded with square brackets; like this ^[11.0.1]. Changes from TechDoc 11.0.1 to TechDoc 11.0.2 are marked with the superscripted version number surrounded with square brackets; like this ^[11.0.2] or ^[11.0.2-1].

Security-Related Issues

DM-828: Update DM's Java to Security Baseline 11u19

Due to numerous security weaknesses prior to 11u19, TechDoc's DM bundled Java JRE has been updated to 11u19, which includes the latest 11u19 security fixes. Note that TechDoc 11 is the first release of TechDoc that uses Java 11 instead of Java 8.

DM-831: Fix Issue with Some Newer Privileges Not Working as Default Privileges

Certain newer privileges have large internal values that didn't work properly with default user privileges when creating a user. These newer privileges can now be used as default user privileges.

DM-832: Fix Security and Quality Issues Identified in DM by SpotBugs

The TechDoc DM was analyzed using SpotBugs, a Java static analysis tool. Several security issues were identified where values placed in SQL statements were not properly escaped. Multiple quality issues were identified which could result in unexpected null pointer exceptions and unclosed resources. In addition, several minor performance issues were identified as part of the move to Java 11.

DM-833: Update TechDoc DM to Tomcat 9.0.76

The TechDoc DM has been updated to Tomcat 9.0.76 for various vulnerabilities contained in Tomcat used by the prior release of TechDoc.

DM-834: Update Workflow Engine's Usage of External Libraries and Functionalities

Due to recent security events with third-party libraries, a complete audit was conducted for the Workflow Engine due to the large number of dependencies that it had on third-party libraries. As a result, numerous libraries were removed, including Apache Logging, Java JAI, Joda-Time, and Spring. In addition, all other libraries were updated wherever possible.

DM-860: Update TLS Socket Factory to Default to TLS V1.2 ^[11.0.2]

The DM's TLS factory has been updated to default to TLS V1.2. V1.3 was considered for the new default but there are still a lot of products that don't support that version yet. If a customer wants, they can still raise or lower the TLS protocol in the dm.ini file by going to the [ServerKeyStore] section and adding or changing the TLSProtocol to something like TLSProtocol=TLSv1.3.

DM-862: Update SSL Socket Factory to Default to TLS V1.2 ^[11.0.2]

The DM's SSL factory has been updated to default to TLS V1.2. V1.3 was considered for the new default but there are still a lot of products that don't support that version yet. If a customer wants, they can still raise or lower the TLS protocol in the dm.ini file by going to the [ServerKeyStore] section and adding or changing the SSLProtocol to something like SSLProtocol=TLSv1.3.

DM-863: Update TechDoc DM to Tomcat 9.0.80 ^[11.0.1]

The TechDoc DM has been updated to Tomcat 9.0.80 for various vulnerabilities contained in Tomcat used by the prior release of TechDoc.

DM-866: Update TechDoc DM to Tomcat 9.0.82 ^[11.0.2]

The TechDoc DM has been updated to Tomcat 9.0.82 for various vulnerabilities contained in Tomcat used by the prior release of TechDoc.

DM-867: Update DM's Java to Security Baseline 11u21 ^[11.0.2]

Due to numerous security weaknesses prior to 11u21, TechDoc's DM bundled Java JRE has been updated to 11u21, which includes the latest 11u21 security fixes.

DM-869: Upgrade Code Signing Certificate on All DM Components ^[11.0.2]

The TechDoc code signing certificate after the 11.0.1 release. In order to make the changes needed for the 11.0.2 release, all components within the DM need to be resigned to prevent distrust between components that would otherwise be signed using different certificates.

SM-173: Update SM's Java to Security Baseline 11u19

Due to numerous security weaknesses prior to 11u19, TechDoc's SM bundled Java JRE has been updated to 11u19, which includes the latest 11u19 security fixes. Note that TechDoc 11 is the first release of TechDoc that uses Java 11 instead of Java 8.

SM-174: Update TechDoc SM to Tomcat 9.0.76

The TechDoc SM has been updated to Tomcat 9.0.76 for various vulnerabilities contained in Tomcat used by the prior release of TechDoc.

SM-181: Fix Security and Quality Issues Identified in SM by SpotBugs

The TechDoc SM was analyzed using SpotBugs, a Java static analysis tool. A security issue was identified where a value placed in a SQL statement was not properly escaped. Multiple quality issues were identified which could

result in unclosed resources. In addition, several minor performance issues were identified as part of the move to Java 11.

SM-182: Update TechDoc SM to Tomcat 9.0.80 ^[11.0.1]

The TechDoc SM has been updated to Tomcat 9.0.80 for various vulnerabilities contained in Tomcat used by the prior release of TechDoc.

SM-183: Update TechDoc SM to Tomcat 9.0.82 ^[11.0.2]

The TechDoc SM has been updated to Tomcat 9.0.82 for various vulnerabilities contained in Tomcat used by the prior release of TechDoc.

SM-184: Update SM's Java to Security Baseline 11u21 ^[11.0.2]

Due to numerous security weaknesses prior to 11u21, TechDoc's SM bundled Java JRE has been updated to 11u21, which includes the latest 11u21 security fixes.

SM-185: Upgrade Code Signing Certificate on All SM Components ^[11.0.2]

The TechDoc code signing certificate after the 11.0.1 release. In order to make the changes needed for the 11.0.2 release, all components within the SM need to be resigned to prevent distrust between components that would otherwise be signed using different certificates.

Problems Resolved

DM-830: The Workflow Scheduler Had a Potential Problem Processing File Beans

An issue was fixed where files may not be properly processed when a workflow handles one or more of them via a file bean.

DM-843: Possible Deadlock When Modifying a Doc Category

A problem was identified and corrected where a SQL deadlock can occur on Modify Doc Category if "Allow Full Text" and one or both of "Highest Read Access"/"Highest Web Search" are modified at the same time. The database logic in the command was rewritten to avoid the deadlock.

DM-849: Export Group Member Has Incorrect Heading Order for Remote Users

Export Group Members outputted the headings and data for emails and orgs flipped when exporting Remote Users. The headings were left in the current order and the data under those headings was changed to the proper column.

DM-864: Render's tdvmctrl for VMWare Can Fail to Connect ^[11.0.1]

An issue was found where tdvmctrl-vmware.exe can have trouble connecting to a VMware server with a class not found exception.

DM-865: Failing to Browse to a File Can Lead to NPE With Recent Update to IE ^[11.0.1]

If a user tries to click OK or Next when the form contains a file upload control and the user hasn't chosen a file (whether on purpose or by accident), a null pointer exception may occur that prevents the command from completing. The issue began after a recent update to IE.

DM-868: Folder Report Can Generate Ambiguous Owner ID Column Error ^[11.0.2]

An issue was found with some virtual columns in reports not having a table alias on them in the generated SQL. The condition that triggers the problem is on a Folder report that has the Notification and the Record Set virtual columns specified.

DM-873: Modify Remote User Group Fails With 2500+ Members ^[11.0.2-1]

Due to a recent update to Tomcat, modifying a Remote User Group with 2500+ members fails. TechDoc set an HTTP post setting in software that used to raise the limit on how many input fields a single screen can have. However, it is no longer honored that way and must be fixed by changing a settings file. Since this change was fixed without making a software change, the TechDoc version is still 11.0.2 and instead the 11.0.2 installer was rereleased with the updated settings file.

Changes, Improvements, and New Features

DM-582: Add Read Access Document Attribute to Workflow Triggers

A document's read access can now be used as a condition for triggering a Workflow to run. An evaluation of adding other Doc attributes was made but it was decided that there were no other compelling candidates to add at this time.

DM-604: Update Verify Integrity to Test Review Leader Against People Table

Verify Integrity has been updated to check the Review table's Review Leader ID Against the People table instead of the User table. Over time, review leaders of old reviews leave the system and their user record may be deleted. However, the People table maintains the ID and their name for the life of the system.

DM-822: Show Review Default Should Be a Customizable Dashboard

Show Review had a fixed set of review combinations that would always show. It has been reviewed to support a customizable dashboard like My Work and others. The default dashboard for Show Review looks very similar to TechDoc 10.1 and below. Users are now free to customize the dashboard to their liking.

DM-825: Add Older PowerPoint Text Extraction Support

The Apache POI library used for Microsoft Office text extraction has been updated. Due to improvements in the library, TechDoc can now extract text from some older PowerPoint files (.pps and .ppt) that it couldn't before.

DM-826: Add Support for Text Extraction from Publisher Files

Text extraction has been added for Publisher files. Files from Publisher 2000 and older cannot not be supported at this time due to a lack of information on the older file formats.

DM-827: Improve DM Show Activity/History When Nothing Found

The Show Activity and Show History output on the DM has been improved when no history items are shown. Previously, they didn't should show the main heading and the reason why there were no results being shown.

Without that, there wasn't even any indication of which item you were looking at that had no results.

DM-835: Improve Speed of Deleting a User

Deleting a user could take a really long time if they were the creator of a huge number of generations. When this happens, the generations are reassigned to the owner of the document. The SQL code has been rewritten to handle reassigning lots of generations in a greatly improved fashion (performance can be 10 times faster or more).

DM-836: Verify Integrity Should Use People Directory on Reviews and RMA Record Sets

Verify Integrity now uses the People Directory instead of the User table when checking Reviews and RMA Record Sets. Both Reviews and RMA Record Sets are allowed to be owned by users that have been deleted because they can both exist long after the user is gone. Therefore, the People Directory should have always been used to determine if an owner is missing.

DM-837: Add Ability for Admin to Upload a File to Replace a Missing Gen File

Occasionally, a Generation file has been lost for one of a couple reasons. First, if the TechDoc server has to be restored from an older backup and the database is on a remote server and that backup is a little newer. Second, virus software running on the server might detect an issue in a generation file and quarantine and/or delete it.

Both ways can be addressed by deleting the document or generation record and then recreating the document or replacing the generation but then that alters potentially important metadata that users usually don't want to lose. For instance, they may not want to lose the original create date or there are newer generations that exist on the document so the only way to put back an older one is to delete all the newer ones and then add them back to the document in order.

Fix Missing File provides an easier fix for this situation. It can only be run by an Admin and only if the specific file is in fact missing for the specific database record. Verify Integrity outputs a hyperlink when a file is missing so that an Admin can easily click on the link to put a replacement file back in its place.

DM-839: Document Manager Needs to Delete Workflow Files When Manually Deleting a Process

It was discovered during testing that the document manager doesn't look for and delete workflow files when a process is manually deleted. The maintenance task runs uses the database to look for straggler files, but it also needed to look in the opposite direction to verify the files against the database.

DM-840: TechDoc Installer's IIS Configuration Script Should Revert ISAPI Filter Settings

A customer TechDoc 10.1 upgrade ran into issues configuring IIS and failed to run after the upgrade finished. Upon further investigate, it was found that the system in question had a pre-existing ISAPI filter that prevented the installation from completing. The TechDoc 11 installer now performs a "Revert to parent" on the site so that the Tomcat ISAPI filter should always be able to be installed.

DM-841: Improve Exports to Avoid Browser Pop Up Issues

Recent browser security updates can cause the Export Group Members and Export Valid Keyword Values servlets to be blocked as a possible pop up and prevent the export from occurring. The export logic has been changed so that the user clicks a link to download the exported data, which completely avoids the pop-up problem.

DM-844: Improve Memory Usage on Large Document Queries

While working on issue DM-843, it was noticed that the command did not make use of a SQL iterator feature that was added to TechDoc in a prior version. Use of iterators can allow large numbers of documents to be processed with greatly reduced memory requirements.

The following commands have been changed to use document iterators: Delete Doc Type, Delete Folder, Delete RMA Record Set, Delete User, Freeze RMA Record Set, Modify Folder, Modify Keyword, Modify SM Host, SOAP Get Child Documents, Unfreeze RMA Record Set, Update Child Organizations, and the Maintenance Task.

DM-845: Add Support for Running the DM in the Cloud

Multiple customers have requested support for a TechDoc Document Manager running in the cloud. Initially, support for Azure has been added as it most closely aligns with the platforms that our customers currently run on. Also, the DM can now use an Azure SQL Database for storage instead of using SQL Server. Other cloud providers will be considered in the future based on customer interest.

Render is also supported by installing the DM on an Azure server that supports nested virtualization. After TechDoc is installed on the DM, a Render VM can be created on the DM Azure server using Hyper-V. This first Render configuration simplifies management and costs of the DM and Render in the cloud. Other cloud-based Render configuration scenarios may be considered in the future based on customer interest.

DM-846: Add Detailed Info Screen for a Document

A detailed document info screen has been added that shows everything that the regular Doc Info screen shows but it also shows things like access, notification, pending/stalled SM updates, pending/stalled renders, will it render, will it be sent to SM's (also if text will be sent, etc.)

This will provide Admins with a quick way to look over everything tied to document processing and it will provide a quick way for them to send DocuBrain support the full picture about a document in one screen to greatly simplify debugging problems.

DM-847: Update DM SQL Server JDBC Driver to 12.2

The Microsoft SQL Server JDBC driver used by the DM has been updated to 12.2 in order to gain performance and reliability as well as better support for Azure and newer SQL Server databases... As part of this update, the DM will require a minimum database version of SQL Server 2014. TechDoc 11 will also support SQL Server 2016, 2017, 2019, 2022, and Azure SQL Database.

DM-848: Update Workflow Engine Regression Testing

As part of the security review and the update to Java 11, the Workflow Engine regression testing needed to be completely reworked. After all the changes, the Workflow Engine regression testing can now complete successfully again.

DM-850: Add Support for DM Sending Mail Over Other Mail Ports

Previously, the DM could only send email via a remote gateway using port 25. However, many environments including Azure cloud block port 25 outbound to try to reduce spamming. As a result, the DM has been improved to support sending email over SMTPS (port 465) and SUBMISSION (port 587). Not only will this allow use of a port other than 25, but SMTPS always uses SSL and SUBMISSION can use TLS to encrypt all email traffic between the DM and the remote gateway.

DM-851: Add the Ability to Purge Old Generations on a Document

The ability to purge old generations from a document has been added. The Purge accepts two inputs: the number of unreleased gens to retain and the number of released gens to retain. Both accept a positive number starting with 1 or the word All.

This feature works very similar to the comparable feature that was added to the TechDoc 11 client.

DM-852: Make Conditions on Workflow Process Triggers More Flexible

Workflow Process Triggers have been made more flexible. Previously, conditions only performed an equals check. The "equals" condition is now specified by the "is" operator. In addition, an "is not", "was", and "was not" operator have been added. "was" and "was not" apply to modification operations to allow things like if Doc Category was NS and now Doc Category is ITAR, then trigger this process.

DM-853: Convert the DM Admin Screen to Dashboard

The Admin screen on the DM has been converted to a dashboard. This allows Admins to reorganize the order of the menus and add other administration related widgets such as the real time memory usage widget, real time file usage widget, etc.

DM-854: Provide More Control When Submitting Documents to an SM

The Resubmit SM Updates command has been improved to add a reduced data mode. This allows the Admin to choose if they want full text, released files, and/or thumbnails processed are part of the resubmit. This mode will send all documents to the specified SM but allow full text, thumbnails, and/or released files processing to be skipped.

This can significantly speed up the time and resources that it takes to update all documents when all you want to do is make sure that all document attributes have been updated. TechDoc 11 adds the ability to view the Release Date of documents in search results. However, prior to TechDoc 11, release dates were not sent to the SM. This new reduced data mode makes it significantly faster to send those release dates to the SM without having to do all the other processing related to performing a full resubmit. In the past, other things have come up where this capability would have been very useful and users had no option other than to perform a full resubmit. Should this happen in the future, they will now have this option for their use too.

SM-171: Improve Doc Number Searching When Users Use Spaces

DocuBrain received input that users were having trouble occasionally finding documents. In reviewing the input, it turned out that the issue was mainly from having a space in a Doc Number when they did a search using the Doc Number search field. The Doc Number field is the “primary key” in the index and with the search engine TechDoc uses, you can’t have spaces in the primary key.

End users thought of a document having the number KNPR 8700.2 not KNPR_8700.2. Of course, there's no guarantee what the original creator of the TechDoc document would do because of the no space rule. For KNPR 8700.2, they might just as likely have used KNPR-8700.2 or KNPR8700.2 instead of KNPR_8700.2.

A change has been made so that when a user performs a Doc Number search with a space in it, each space is replaced with an asterisk and then any consecutive asterisks are replaced with a single asterisk to prevent syntax errors from being introduced. This simple change appears to eliminate all the Doc Number issues mentioned in the previous paragraph.

SM-172: Improve SM Show Activity/History When Nothing Found

The Show Activity and Show History output on the SM has been improved when no history items are shown. Previously, they didn't should show the main heading and the reason why there were no results being shown. Without that, there wasn't even any indication of which item you were looking at that had no results.

SM-175: Add Support for Running the SM in the Cloud

Multiple customers have requested support for a TechDoc Search Manager in the cloud. Initially, support for Azure has been added as it most closely

aligns with the platforms that our customers currently run on. Also, the SM can now use an Azure SQL Database for storage instead of using SQL Server. Other cloud providers will be considered in the future based on customer interest.

SM-176: Update SM SQL Server JDBC Driver to 12.2

The Microsoft SQL Server JDBC driver used by the SM has been updated to 12.2 in order to gain performance and reliability as well as better support for Azure and newer SQL Server databases... As part of this update, the SM will require a minimum database version of SQL Server 2014. TechDoc 11 will also support SQL Server 2016, 2017, 2019, 2022, and Azure SQL Database.

SM-177: Add Support for SM Sending Mail Over Other Mail Ports

Previously, the SM could only send email via a remote gateway using port 25. However, many environments including Azure cloud block port 25 outbound to try to reduce spamming. As a result, the SM has been improved to support sending email over SMTPS (port 465) and SUBMISSION (port 587). Not only will this allow use of a port other than 25, but SMTPS always uses SSL and SUBMISSION can use TLS to encrypt all email traffic between the SM and the remote gateway.

SM-178: Convert the SM Admin Screen to Dashboard

The Admin screen on the SM has been converted to a dashboard. This allows Admins to reorganize the order of the menus and add other administration related widgets such as the real time memory usage widget, real time file usage widget, etc.

SM-179: Add the Document Release Date as a Displayable and Searchable Field

The Document Release Date is now a displayable and searchable field on the Search Manager. Because the Release Date was never sent to the SM prior to TechDoc 11, anyone upgrading from an older version of TechDoc that wants to use this feature will have to resubmit their documents on the DM to each SM they wish to have the data available on. Also, layout files on the SM(s) will have to be adjusted in order to display the Release Date.