DocuBrain® TechDoc

Release Notes
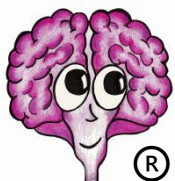
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DocuBrain® TechDoc 10.0.1 Release Notes

These release notes document the changes from TechDoc 9.2 to TechDoc 10.0.1. If you are upgrading from TechDoc 9 or 9.1, you should also consult the release notes for TechDoc 9.1 and/or 9.2 to see what changes were introduced as part of those releases as well.

Important notes: TechDoc 10 drops support for Windows Server 2008/2008 R2 and SQL Server 2008/2008 R2 since Microsoft extended support has ended for these products. While TechDoc 10 may still work on them, TechDoc 10 has not been tested and will not be supported on either product. In TechDoc 10.1, the Microsoft JDBC driver will be updated and due to Microsoft restrictions, TechDoc 10.1 will not work with SQL Server 2008/2008 R2 at all.

If you are currently using either Microsoft 2008/2008 R2 product, please update to a newer version before installing or upgrading to TechDoc 10. TechDoc 10 supports Windows Server 2012 - 2019 and SQL Server 2012 - 2019.

Changes from TechDoc 10 to TechDoc 10.0.1 will be marked with the superscripted version number surrounded with square brackets; like this [10.0.1].

Security-Related Issues

DM-750: **Doc Admin Guide Security Section Needs Additional Content**

Section 1.3 of the Doc Admin guide has been updated to address SAML and other authentication methods. It also mentions SharePoint/BCS security is covered in the separate BCS guide.

DM-762: **Add Support to Render to Allow Manual Control of Virtual Machines**

The render process has been updated to allow the Render VM to run in a manual mode. In this mode, TechDoc will expect that the Render VM is already running and will not attempt to shut it down after a render request is done. This mode allows the customer to more easily apply security patches to the Render VM. It will also allow a customer to run Render on a physical machine too.

However, we feel that it introduces more risk to the customer and their documents. In Normal mode (the only mode available prior to this update), with each render request, the Render VM is restored from a previously saved state (checkpoint), the document is rendered, and then the Render

VM is turned off without saving any changes to the VM. Normal mode provides several important characteristics that are lost with Manual mode.

Differences include: 1) Because Normal mode starts each and every render begins from a fresh known state, the previous document render cannot affect the next document render. Office applications, for example, have had many memory leak problems. In Manual mode, over repeated runs of the application, system memory could become exhausted and one or more of the Office applications wouldn't function without rebooting the Render VM to clear out the problem. 2) If an application used for rendering hangs for any reason, the render will timeout causing that single request to fail. In Manual mode, if that happens, no other documents that are rendered by that application may be able to render until after the Render VM is rebooted. 3) If a document contains a virus and the security installed on the Render VM's does not detect and stop the virus, the effects of that virus will at most affect the single PDF that is produced by that specific render request. Also, if the virus is trying to spread itself on the network, the Render VM is halted as soon as the render is completed; thus, killing the virus. With Manual mode, if the virus affects PDF files, each PDF file produced after that initial infection occurs may also contain the virus. In addition, if the virus is trying to spread itself on the network, it will continue to do so. This will continue until an Admin detects the issue and disinfects the virus on the Render VM. 4) If Manual mode is used and updating is enabled, at any time the Render VM could be updated at the OS or Application level, and rendering by one or more applications may suddenly be broken. If there is no saved state (checkpoint), there may not be an easy way to return rendering to a functioning state.

For these reasons, we strongly recommend that Normal mode continue to be the preferred mode used by our customers. However, we realize there are times when a customer feels these trade-offs are worth the cost so this is why Manual mode was added.

DM-779:   Update the DM to Use Amazon Corretto's JRE

The Java Runtime Environment (JRE) needed to be upgraded on the DM to the latest Java security baseline. In 2019, Oracle changed Java licensing such that in order to get to the newer security baselines, our customers would be required to purchase Java license subscriptions from Oracle.

In our quest to keep TechDoc prices as low as possible for our customers, we evaluated numerous options and choose to have TechDoc use the Amazon Corretto JRE. In addition to providing the latest Java security baseline, Corretto provides many advantages. Corretto comes with free, long-term support that includes performance enhancements in addition to security

fixes. Amazon runs Corretto internally on thousands of production services. Therefore, they are extremely vested in putting out a very stable, high performance, secure version of the JRE.

DM-789: **All Digitally Signed Assets Need to be Resigned on the DM** [10.0.1]

An intermediate certificate authority for the Prevo Technologies code signing certificate expired. The certificate had to be regenerate and all digitally signed DM assets had to be resigned with this new certificate.

SM-162: **Update the SM to Use Amazon Corretto's JRE**

The Java Runtime Environment (JRE) needed to be upgraded on the SM to the latest Java security baseline. See DM-779 above for more details.

SM-163: **Search Admin Guide Security Section Needs Additional Content**

Section 1.3 of the Search Admin guide has been updated to address SAML and other authentication methods. It also mentions SharePoint/BCS security is covered in the separate BCS guide.

SM-164: **All Digitally Signed Assets Need to be Resigned on the SM** [10.0.1]

An intermediate certificate authority for the Prevo Technologies code signing certificate expired. The certificate had to be regenerate and all digitally signed SM assets had to be resigned with this new certificate.

Problems Resolved

DM-747: **Repeated Characters Can Disappear When PDF Toolbox Generates a Thumbnail**

There was an issue in the PDF Toolbox where repeated characters could disappear when generating a thumbnail if the drawing mode of a text string is set to stroke. The impact should have been minimal as TechDoc mainly generates thumbnails that are only 120x120 pixels so it is usually very hard to read individual characters anyway. In addition, most PDF text is usually filled or filled & stroked. It is much rarer to only stroke text.

DM-752: **Delete of Generation should not be allowed if published as a Form**

Previously, a generation could be deleted even if it's published as a form. This has been corrected in this release.

DM-757: **REST Log Ins Need to Handle When SSO Is Mapped to Multiple TechDoc Users**

A problem was identified for the TechDoc Client application when a user uses SSO and that SSO account is mapped to multiple TechDoc accounts. With the changes made for this issue, a user using the TechDoc 10 client on a TechDoc 10 server can now choose which user to use just like you can from a web browser.

DM-764: **Unable to Create Report for Keyword Aliases**

Reports could not be created on the keyword aliases table because there were no reportable columns defined. The DM schema has been updated to allow proper reporting on Keyword Aliases. Columns now properly show up and can be used for display, sorting, and criteria.

DM-769: **Prevent Enter Key from Performing Unintended Actions on the DM**

There were a few DM servlets where the enter key, when pressed, didn't perform the action one would expect most of the time. The servlets with the problem included the login servlet (the first authenticator was chosen when enter should signal to use the specified username and password), the document keywords servlet (the first removable keyword would be removed), and the modify group members servlet (the first member would be removed).

DM-775: **Process Instance Thumbnails Render Incorrectly After Amazon Corretto Update**

Prior to the January 2020 update of Amazon Corretto, there were issues with Java image handling and construction. This issue was only noticed on the rendered images of workflow process instances as they were running. The January 2020 update fixed all of the image production issues that TechDoc was experiencing in testing. This issue never impacted our customer environments.

DM-776: **"All Workflow Process Instances that I Started" Appears to Be Broken After Last Workflow Engine Update**

After the last update of the workflow engine, the "All Workflow Process Instances that I Started" widget stopped showing the correct owner of a workflow process instance. This has been corrected in this release.

DM-785: **Modify Group Can Remove a Member from Multiple Groups** [10.0.1]

Modify Group could remove a member from all groups that the member is on; not just the group that is being modified. The issue could affect Groups for local users, remote users, and remote emails. This issue does not create a security risk but it causes the inconvenient situation that the Group member will have to be manually added back to other groups they were on before they will receive access or email granted by the association of those other groups to documents and/or folders. This has been corrected in this release. However, members that were accidentally removed by this will have to be manually re-added to the affected groups.

DM-786: **Export Form Failing to Export Submissions** [10.0.1]

Exporting Form Submissions could fail due to an HTTP/HTTPS chunking issue that causes the export to fail. It has been corrected in this release.

SM-158: **Prevent Enter Key from Performing Unintended Actions on the SM**

There was one SM servlet where the enter key, when pressed, didn't perform the action one would expect most of the time. The problem was with the login servlet (the first authenticator was chosen when enter should signal to use the specified username and password).

Changes, Improvements, and New Features

DM-591: **Add Import/Export Members for Groups**

The ability to import/export the members of a group from/to a CSV file has been added. This can be very useful to manage large groups on the same system or even to manage them between DM's. If can also be useful if an external person provides the TechDoc user with a spreadsheet of members that should be in a group. A couple simple requirements and any CSV file can be used to populate a group. Plus, the members from the CSV file can be merged with existing members of the group or used to replace all existing members of the group.

DM-639: **Allow Computed Date Fields in Report Criteria**

Computed date fields based on ranges can now be used in report criteria. A user wanted a report they could run each month for the previous month without having to modify the report and change the start and end date every time. Other ranges have been added as well. For example, the new ranges include: Last Day, Last 7 Days, Last 30 Days, Last 90 Days, Last 365 Days, Last Week, Last Month, Last Quarter, and Last Year. The input control is an editable combo box so the user could manually type something like Last 11 Days, much like Outlook supports.

Also, when the report is run, a summary is shown at the bottom of the HTML report. One of the summary items is Report Criteria. When one of these ranges is used, the actual range is shown too. For example, if you choose the criteria of Owner = Steve and Create Date is Last Month, the report criteria line would look something like this:

Report Criteria: Owner = Steve AND Create Date = Last Month (01/01/2020-01/31/2020).

DM-718: **Document SAML certificate import/reset functionality for Config TechDoc Utility**

A section has been added to the Doc Admin guide that describes the process of import/resetting the certificate used for SAML by the Document Manager.

DM-724: **Refresh the Look for the TechDoc DM**

The look for the TechDoc DM has been refreshed to keep the product up-to-date with the current marketplace. It was important that the overall navigation layout did not change (the main menu bar remains on top, the side menu remains on the left, and the main content remains on the right). We try not to change the overall layout to prevent users from having to be retrained on how to use the application. The color scheme, icons, border styles, etc., have all been refreshed.

DM-736: **Add Word Break to the DM Show System Info**

CSS word break styling has been added to the DM Show System Info so that the table doesn't expand way off the right side of the browser window. This helps with viewing and printing.

DM-737:   **Add Workflow Engine Info to Show System Info**

Workflow engine info has been added to Show System Info so that it can be verified as a part of support requests.

DM-739:   **Add More Information When Insufficient File Area Space is Available on the DM**

File Areas on the DM have been improved to provide more information for alerts and logging when a request for the most available file area cannot satisfy the amount of space needed.

DM-740:   **Update DM to Tomcat 9 For Better Performance**

The DM has been updated to support Tomcat 9 for improved performance and support of the latest servlet API's.

DM-741:   **Update TechDoc to Use Latest Apache POI Libraries**

The Apache POI libraries are used for email processing, text, and thumbnail processing of various Microsoft Office file formats. These libraries have been updated to support improvements that have been made in the last few years.

DM-742:   **Improve MSG Email Header Extraction to Support UNICODE**

While working on DM-741, it was noticed that the newest versions of Office can now encode Email headers in UNICODE even though RFC 822 specifies that Email headers must be in ASCII. Support for this encoding has been added.

DM-743:   **Improve Alerts When Update to an SM Fails**

We received a request to improve some alerts that are generated by the SM Updater task. Certain alerts only contain the ID of the item that was being processed. The reason for this originally was that at that point in the code, we only had an ID and not the item itself. The SM Updater task has been updated to include names or numbers of items in alerts where possible.

DM-744: **Mass Modify Document Access Should Alphabetize Groups**

Mass Modify Document Access has been modified to alphabetize groups in drop downs. On a system with many groups, this could previously make finding a specific group very difficult.

DM-745: **Update SQL Server JDBC Driver to 7.2**

The Microsoft SQL Server JDBC driver has been updated to 7.2 in order to gain performance and reliability due to improvements that Microsoft has made in their driver since 6.4.

DM-748: **Update DM Show History to Allow Limiting by Specific Command**

Show History on the DM has been updated to allow a command to be chosen in addition to the date range that is already there. This allows a user to see things like who fetched a document during the last month. Since Show Activity is built on top of Show History, it received this ability too.

DM-749: **Base64 Decoding Writer Slow**

While working on another issue, it was noticed that when a large amount of Base64-encoded data (276 MB) was processed using TechDoc's Base64 decoding writer, the performance was pretty slow. After adding some internal buffering and making a couple minor changes, the decoding writer is now significantly faster (more than 60% faster in some cases). It was determined that the XSafe8 writer suffered from the same issue and was improved by mirroring the improvements to it as well.

DM-751: **Add a Background Job Subsystem to the DM**

A background job subsystem has been added to the DM. The subsystem allows long running jobs to be scheduled and executed. Jobs will be designed to be resilient and able to continue after shutdowns; both planned or unplanned. One purpose of the subsystem is to easily allow TechDoc upgrades to schedule things to be done in a consistent manner rather than implementing various workarounds to make one off "upgrade operations" happen. A second purpose is to allow long running commands to be scheduled for background execution. In the future, problematic commands will be identified and modified to support running as a job when it makes sense.

DM-758:   Update Review Report Look and Feel

While working on another issue, it was also noticed that the Look and Feel needed to be addressed on the Review report. During the big CSS styling changes that were made in TechDoc 9, it appears that the Review Report was overlooked and did not match the rest of the system. This has been corrected.

DM-759:   Add Organization to Remote User

Organization has been added as an optional field to remote users. This allows review leaders to more easily track, which organization have been represented as part of a document review. The input for a remote user's organization is an editable combo box that lets the TechDoc user choose from the existing organizations or allows them to enter a new organization that is not a current organization defined in TechDoc. Besides adding the organization on all the outputs for remote users, Review Report has also been updated to show the organization for remote users that have one.

Since the organization is a text field instead of an ID, modify organization now updates the field if the abbreviation on an organization is modified and it matches the organization of any remote users.

The organization text field has also been added to the People Directory to keep the organization around after a person is deleted. Modify organization also updates this field too if the abbreviation on an organization is modified.

DM-760:   Update workflow engine to latest version

We evaluated moving to the latest version of Flowable and realized that they have headed in a different direction then where TechDoc wants to go. TechDoc currently has no open bugs with them but has numerous improvements that still have not been made. As such, TechDoc will fork the workflow engine and maintain it ourselves.

One of the outstanding improvement requests was for dealing with excessive history generation. On a very active system, history details can get completely out of hand with no way to prune them. We have now implemented history cleanup that keeps history to a reasonable level on an active system.

DM-763: **Improve Fetch History to Doc Manager**

The ability to view fetches for a document from the DM and any caching search managers has been added. Previously, fetch history was only visible from fetches that occur on the DM itself. Caching search engines store a copy of the latest document on their own system so that when a user fetches that document, the copy on the SM is returned to the user instead of the copy on the DM so the DM has no knowledge that the copy was even downloaded. SM-153 added the ability to save fetch history to the SM database and improve the SM protocol to allow the DM to request a specific document's fetch statistics for a given time frame. A Fetch Statistics servlet has been created and added to the document side menu that allows the user to specify a start and end date to view the number of fetches from the DM and each caching SM. This was implemented in such a way to permit the DM to get fetch history statistics from the SM in a firewall-safe way.

DM-765: **Address Reported 508 Compliance Issues in the DM**

508 compliance issues were reported with TechDoc that needed to be addressed. All of the major issues were addressed. A few minor issues remain that require extensive effort to address them. They will be addressed in TechDoc 10.1 as part of DM-770.

DM-766: **Update DM FAQ page file**

The DM FAQ page file needed to be updated. Also, all specific references have been changed to generic references. All customer specific information and customer specific situational help has been genericized or removed. Also, out-of-date items were updated to be current.

DM-767: **Add Local CSS Styling to the DM**

Local CSS styling has been added to allow the CSS for a DM to be overridden by the customer in a way that it will not be lost between upgrades.

DM-768: **Add a Banner Home System Property to the DM**

An improvement has been made to allow the text of the Home link on the upper left corner of the banner on each DM servlet page to be configurable with system-specific text. The default value is "Home" to comply with 508 recommendations.

DM-771: **Add Import/Export Keyword Dropdown Values**

The ability to import/export the values of a dropdown keyword from/to a CSV file has been added. This can be very useful as some of the dropdown value-based keywords currently in use by clients are huge; containing thousands of entries. With this functionality, the values of like keywords can be easily synchronized between TechDoc DM instances. It may be a lot easier for users to simply manage a large CSV file and then import it as needed. Plus, the dropdown values from the CSV file can be merged with existing values or used to replace all existing values.

DM-772: **Add Input Type and Data Type to Show Keywords Servlet**

The input type and data type has been added to the show keywords servlet to make it easier to identify the different kinds of keywords without having to click into each keyword.

DM-777: **Remove Old Deprecated Workflow Process Instance Variable Name for The Current User**

During development, the internal process instance variable name for the current user was changed to simplify recognizing internal variable names. The old name was deprecated. As of TechDoc 10, we are removing the deprecated name to avoid confusion between the 2 variable names referring to the current user of the process.

DM-778: **Create Process Variable Modification Servlet**

A servlet has been created that will allow a workflow admin to create, modify and delete variables of a workflow process instance. In certain situations that might have been unforeseen at design time, it may be necessary to alter the data within a process instance to help it move towards completion. This capability helps prevent the need to abort and restart a process instance when adjusting one or more variables could allow an existing process instance to carry one.

DM-780: **Add DWG Thumbnail Generator**

Thumbnail generation for AutoCAD DWG files has been added. The generator currently supports files saved in DWG R14 through DWG 2020 formats (internal versions AC1014-AC1032). The DWG 2018-2020 format (internal version AC1032) is limited and will be improved as the DWG library provides better AC1032 support.

SM-139: **Refresh the Look for the TechDoc SM**

The look for the TechDoc SM has been refreshed to keep the product up-to-date with the current marketplace. It was important that the overall navigation layout did not change (the main menu bar remains on top, the side menu remains on the left, and the main content remains on the right). We try not to change the overall layout to prevent users from having to be retrained on how to use the application. The color scheme, icons, border styles, etc., have all been refreshed.

SM-145: **Add Word Break to the SM Show System Info**

CSS word break styling has been added to the SM Show System Info so that the table doesn't expand way off the right side of the browser window. This helps with viewing and printing.

SM-147: **Add More Information When Insufficient File Area Space is Available on the SM**

File Areas on the SM have been improved to provide more information for alerts and logging when a request for the most available file area cannot satisfy the amount of space needed.

SM-148: **Update SM to Tomcat 9 For Better Performance**

The SM has been updated to support Tomcat 9 for improved performance and support of the latest servlet API's.

SM-149: **Update Lucene Search Engine to Latest Version**

Many significant improvements have been made to Lucene since it was last updated in TechDoc. Since the new version of Java includes a newer UNICODE version, which will require reindexing anyway, it is a good time to upgrade Lucene too. Lucene has been upgraded to 7.7.2, which is the latest in the Lucene 7 branch. We tested against the current versions in the Lucene 8 branch, but found that the indexes grew significantly and that TechDoc indexing and searching were much slower. For this reason, TechDoc will stay with the Lucene 7 family until these issues are addressed in newer branches of Lucene.

SM-150:   **Improve SM Tokenizer for Better Matching**

Users suggested improvements for how the Search Manager tokenizes text for matching have been implemented in this release. The first suggestion was to remove periods from acronyms so that tokens like USA and U.S.A. will be considered the same. The second suggestion was to strip apostrophes and possessives so that tokens like NASA and NASA's or O'Connor and OConnor will be considered the same. In addition, for the second suggestion the apostrophe (U+0027) and the right single quotation mark (U+2019) are considered the same.

SM-151:   **Update SM Show History to Allow Limiting by Specific Command**

Show History on the SM has been updated to allow a command to be chosen in addition to the date range that is already there. This allows a user to see things like who fetched a document during the last month. Since Show Activity is built on top of Show History, it received this ability too.

SM-152:   **Add a Background Job Subsystem to the SM**

A background job subsystem has been added to the SM. The subsystem allows long running jobs to be scheduled and executed. Jobs will be designed to be resilient and able to continue after shutdowns; both planned or unplanned. One purpose of the subsystem is to easily allow TechDoc upgrades to schedule things to be done in a consistent manner rather than implementing various workarounds to make one off "upgrade operations" happen. A second purpose is to allow long running commands to be scheduled for background execution. In the future, problematic commands will be identified and modified to support running as a job when it makes sense.

SM-153:   **Improve Fetch History to Doc Manager**

The ability to view fetches for a document from the DM and any caching search managers has been added. Previously, fetch history was only visible from fetches that occur on the DM itself. Caching search engines store a copy of the latest document on their own system so that when a user fetches that document, the copy on the SM is returned to the user instead of the copy on the DM so the DM has no knowledge that the copy was even downloaded. The ability to save fetch history to the SM database and improve the SM protocol to allow the DM to request a specific document's fetch statistics for a given time frame has been added to the SM. DM-763 added the other capabilities on the DM so that users can query the SM. This

was implemented in such a way to permit the DM to get fetch history statistics from the SM in a firewall-safe way.

SM-154:   **Address Reported 508 Compliance Issues in the SM**

508 compliance issues were reported with TechDoc that needed to be addressed. All of the major issues were addressed. A few minor issues remain that require extensive effort to address them. They will be addressed in TechDoc 10.1 as part of SM-159.

SM-155:   **Update SM FAQ page file**

The SM FAQ page file needed to be updated. Also, all specific references have been changed to generic references. All customer specific information and customer specific situational help has been genericized or removed. Also, out-of-date items were updated to be current.

SM-156:   **Add Local CSS Styling to the SM**

Local CSS styling has been added to allow the CSS for a SM to be overridden by the customer in a way that it will not be lost between upgrades.

SM-157:   **Add a Banner Home System Property to the SM**

An improvement has been made to allow the text of the Home link on the upper left corner of the banner on each SM servlet page to be configurable with system-specific text. The default value is "Home" to comply with 508 recommendations.

SM-160:   **Add HTTP/XML Transaction Description to the SM Admin Guide**

As requested, a description of the SM protocol has been added to the SM Admin Guide. Previously, it was available in a separate file. The protocol allows DMs and non-TechDoc repositories to maintain information in an SM. The protocol can be used to add/delete documents, keywords, organizations, etc., so that end-users can search for that information in the SM's search engine.