

Fusion XI

Release Notes



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Overview

Fusion is a comprehensive geological database management system tailored for mining and exploration projects with a focus on drilling and sample data. It integrates multiple data sources, ensuring accurate and efficient data handling with features like centralized data management, QA/QC checks, robust security and governance, advanced analytics, and automated processing. Fusion, through its unique mobile, local and central architecture, supports remote work and collaboration, enforcing business rules with real-time data validation. Its scalable and customizable platform offers a simple, intuitive interface for capturing, managing, and reporting geological data. Fusion addresses the complexity of reliably and securely managing large volumes of diverse raw geological data, ensuring data quality and regulatory compliance.

Further Information

This document includes cumulative release notes for Fusion XI.

Release notes for other versions of Fusion are available via the Support Portal <https://www.dataminesoftware.com/support/>.

Documentation

HTML documentation for Fusion Administrator is available online at <https://docs.dataminesoftware.com/Fusion/index.htm>.



Fusion XI Service Pack 1.0 (June 2025)

The **Fusion XI** SP1.0 update introduces a range of enhancements across the platform, with a strong emphasis on usability, stability, and intelligent data validation. Users will notice improvements in key areas such as the **App Portal**, **DHLogger**, **Fusion API**, and **Fusion Administrator**.

Key highlights include:

- A new visual progress bar that tracks drilling and logging stages.
- Expanded validation rules that now run during check-in and apply to standalone tables, modular samples, and dispatch modules.
- The ability to update records via the API without requiring check-out.
- Enhanced support for adding reference codes directly within **DHLogger**.

DHLogger now includes a dedicated **Email Management** module, making it easier to configure and manage notifications. The **Report Manager** has been upgraded with dynamic filtering options for queries, giving users greater control over data retrieval.

In **Fusion Administrator**, new auditing fields and advanced table configuration tools offer improved flexibility. The Fusion API now supports updating records without the need for a formal check-out, streamlining integrations and saving time.

This release also resolves a significant number of bugs affecting data entry, data transfer, UI behavior, and reporting. Fixes address issues such as leftover temporary tables, delays in user login availability, and inconsistencies in validation reports.

Ongoing development efforts are focused on further improving performance and reliability in future service packs.

Email Management in DHLogger

DHLogger now includes a new **Email Management** module that allows users to configure and manage email notifications directly within the application.

Validation Rule Enhancements

Validation rules now support trigger conditions during check-in and extend to **Standalone Tables**, **Modular Samples**, and **Sample Dispatch**, enhancing data integrity across all modules.

Query Module Enhancements

The **Query** module in **Report Manager** now supports dynamic filtering, enabling more flexible and efficient data querying.

Hole Progress Bar Implementation

DHLogger now features a visual progress bar that displays the drilling and logging status of each drill hole.

Fusion Administrator Enhancements

Fusion Administrator now includes new auditing fields and custom storage column configuration, providing enhanced traceability and greater flexibility.

Fusion API Improvements

The Fusion API now supports updating records without requiring check-out, simplifying workflows for integrated systems.

Language Translations

All language translations have been updated to ensure consistency and improved localization support.

Audit and Rule Enforcement

Check-in validation rules are now enforced even when records are automatically unlocked, while logging-level validation prevents the insertion of invalid records.

Performance Optimizations

Batch Authorization performance improvements from earlier versions have been migrated to Fusion XI SP1.0.

Defect Fixes

- Issues with QC sample generation, inheritance of sample values, and sample display in the user interface have been resolved. These fixes ensure consistent data handling and improve the reliability of sample entry and review processes.
- Batch authorization now correctly displays all samples in the imported results tab, resolving previous inconsistencies in sample visibility. External data transfer issues have also been fixed, ensuring smooth and reliable data exchange between systems.
- Improvements to tab navigation, visual layout, and picklist functionality in the **Fusion Portal** and Administrator interfaces have eliminated several usability roadblocks. These enhancements make navigating and configuring the system more intuitive and efficient for users.
- Temporary **QuickLogger** tables are now correctly cleared, preventing unnecessary data buildup and improving system performance. Login refresh issues have been resolved, and calculated fields now trigger reliably after saving in standalone tables, ensuring data accuracy and integrity.
- Depth reference validation messages now display accurately, helping users identify and resolve data issues more effectively. Report filters function as expected, and chart data errors in Report Manager have been fixed to ensure reliable and accurate reporting.

Fusion XI (September 2024)

Revamped the User Interface for the Drill Hole Module in DHLogger

The user interface within the DHLogger has undergone a comprehensive redesign to enhance usability and interaction. The new UI is modern, intuitive and significantly improves navigation and productivity for users working with drill hole data.

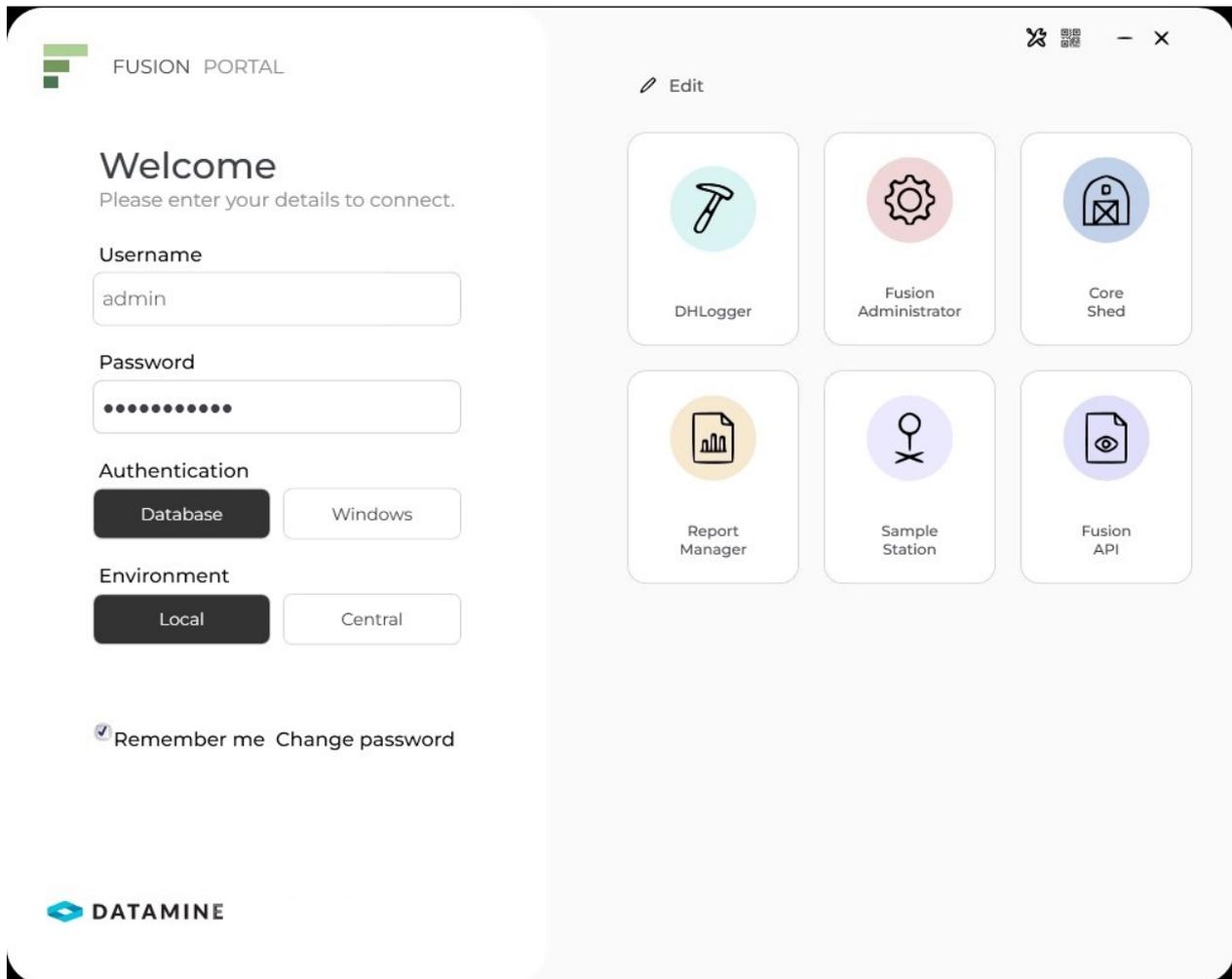
The screenshot shows the DHLogger interface with the following details:

- Project:** DM-CA-2020 (Canada Explor. Prod 2020)
- Hole ID:** CA-MTL-20-002
- Status:** CHECKEDOUT
- Active Table:** Interval
- Table Columns:** From (m), To (m), Rock Type
- Interval Data (from table):**

From (m)	To (m)	Rock Type
0.00	8.40	CAS
8.40	10.00	CLSS
10.00	11.40	LC
11.40	19.00	SS
19.00	23.10	CLSS
23.10	24.00	LC
24.00	25.15	CLSS
25.15	27.00	LC
27.00	27.80	CLSS
27.80	28.95	CSI
28.95	31.05	SI
31.05	33.00	LC
33.00	34.40	CLSS
34.40	35.50	LC
35.50	43.70	CLSS
43.70	44.25	LC
44.25	46.00	CLSS
46.00	47.10	GOU
47.10	48.00	LC
48.00	50.00	GOU

User Interface Redesign for the GDMS Portal

Redesigned the Fusion portal with a strong focus on improving usability, aesthetics and functionality.



New Users Management Strategy

Fusion XI introduces a new application-level access control strategy, reducing dependency on SQL Server roles. This change increases security and simplifies user management by centralizing access control within the application itself. When enabled, a single SQL login within the SQL instance manages security.

General Performance Improvements

Performance improvements have been made, including to the Central Database interactions by optimizing database queries, infrastructure, and configurations. We have increased the system's responsiveness and scalability, ensuring a smoother user experience.

Removed the ODBC Connection Strings from the Fusion Suite

ODBC connection strings have been removed to address performance, compatibility, and security concerns. This change results in faster data retrieval, better software compatibility, and enhanced security.

The screenshot displays the Fusion Portal interface. On the left, the 'Welcome' section prompts the user to enter details to connect. The 'Username' field contains 'admin', and the 'Password' field is masked with dots. Under 'Authentication', the 'Database' button is selected, and under 'Environment', the 'Local' button is selected. There are checkboxes for 'Remember me' and a link for 'Change password'. At the bottom left, the DATAMINE logo and version information 'Fusion11(Runtime: 22.2.0.3356)' are shown.

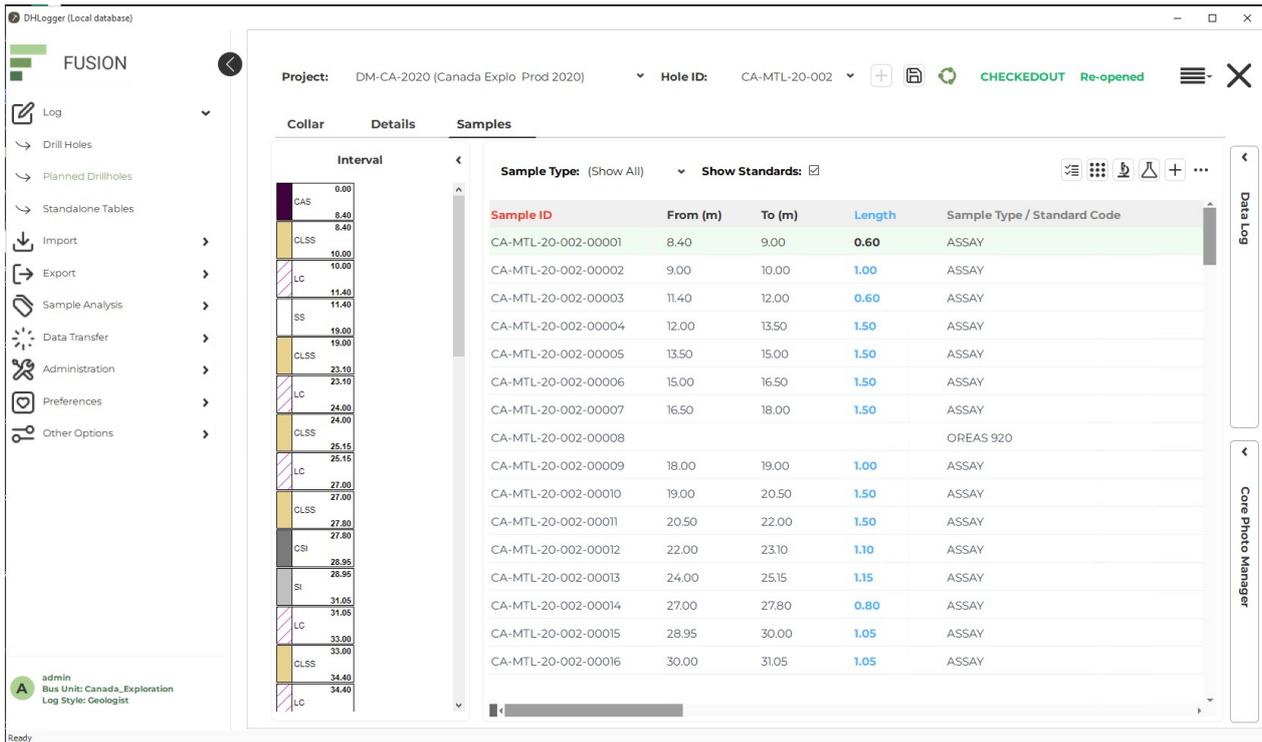
On the right, a modal window titled 'Select Connection' is open. It features a 'Go Back' button and a 'Select Connection' dropdown menu currently set to 'Central'. Below this, the 'Connection Name' field contains 'Central', the 'Server' field contains 'ML-RefVm-881805', and the 'Database' field contains 'FusionX_Demo_Central'. The 'Authentication' section has 'Database' selected over 'Windows'. The 'API URL' field contains '10.0.0.11', and the 'API Port' field contains '4589'. The 'SSL Enabled' section has 'Off' selected over 'On'. At the bottom of the modal, there are three buttons: 'Test Connection', 'Save Connection', and 'Delete Connection'.

Encryption for Connection Strings

For added security we have implemented encryption for connection strings, including user IDs and passwords.

DHLogger Users Can Modify Sample Fields in "Show All" View

Geologists can modify sample details directly when the **Show All** option is selected in the **Samples Tab**. This enhancement streamlines work-flow by enabling direct modifications without requiring additional steps, which improves overall efficiency.

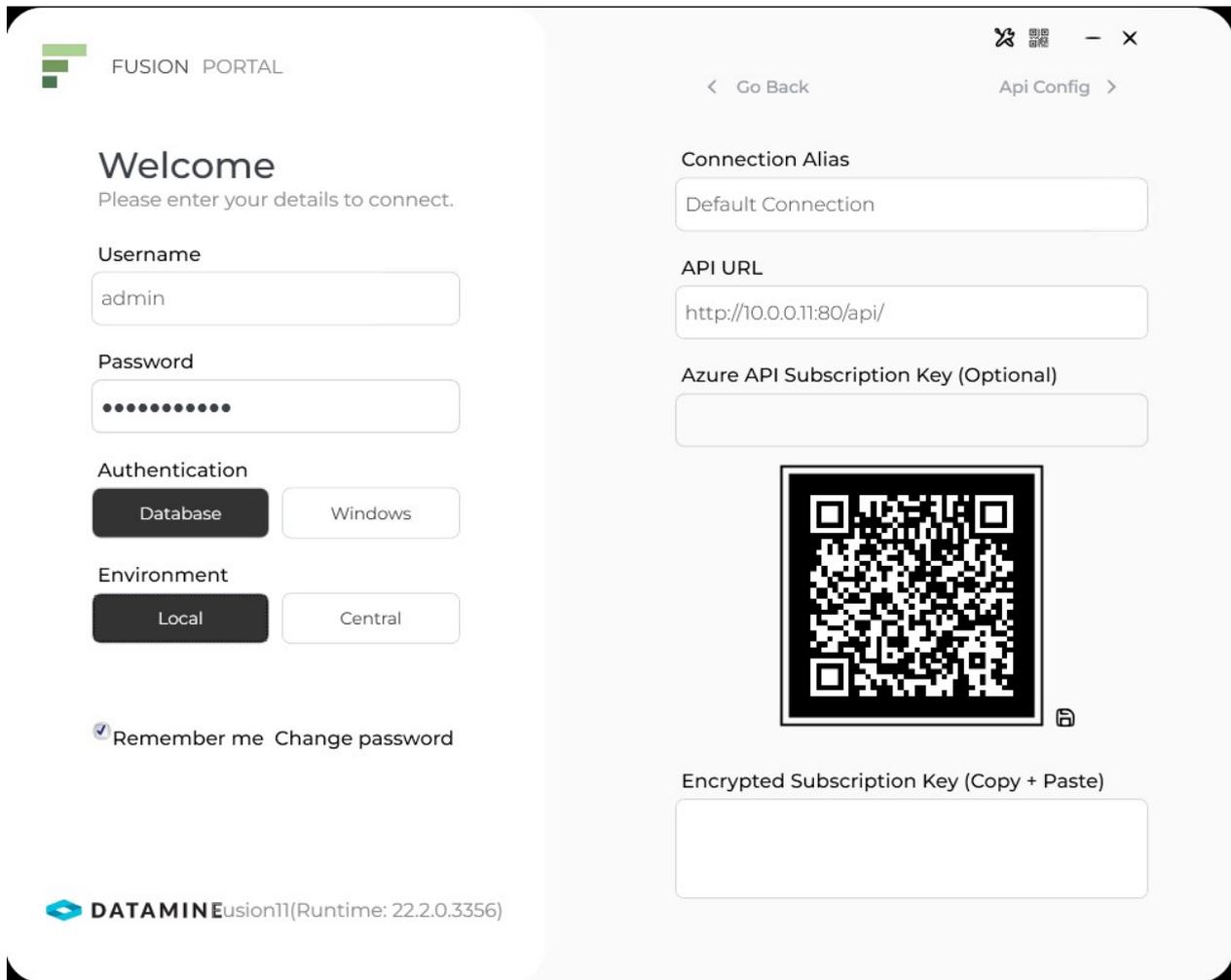


New Intro Page for DHLogger

Rebuilt the Fusion HTML intro page to create a more visually appealing and interactive landing experience. Utilizing modern HTML, CSS, and JavaScript. The new intro pages allows clients to stay informed on our latest features and releases.

QR Code for QL API Configuration

A new feature introduces a QR code for configuring the URL required to establish a connection with the API has been added. This enhancement simplifies the API configuration process, making setup quicker and more convenient.

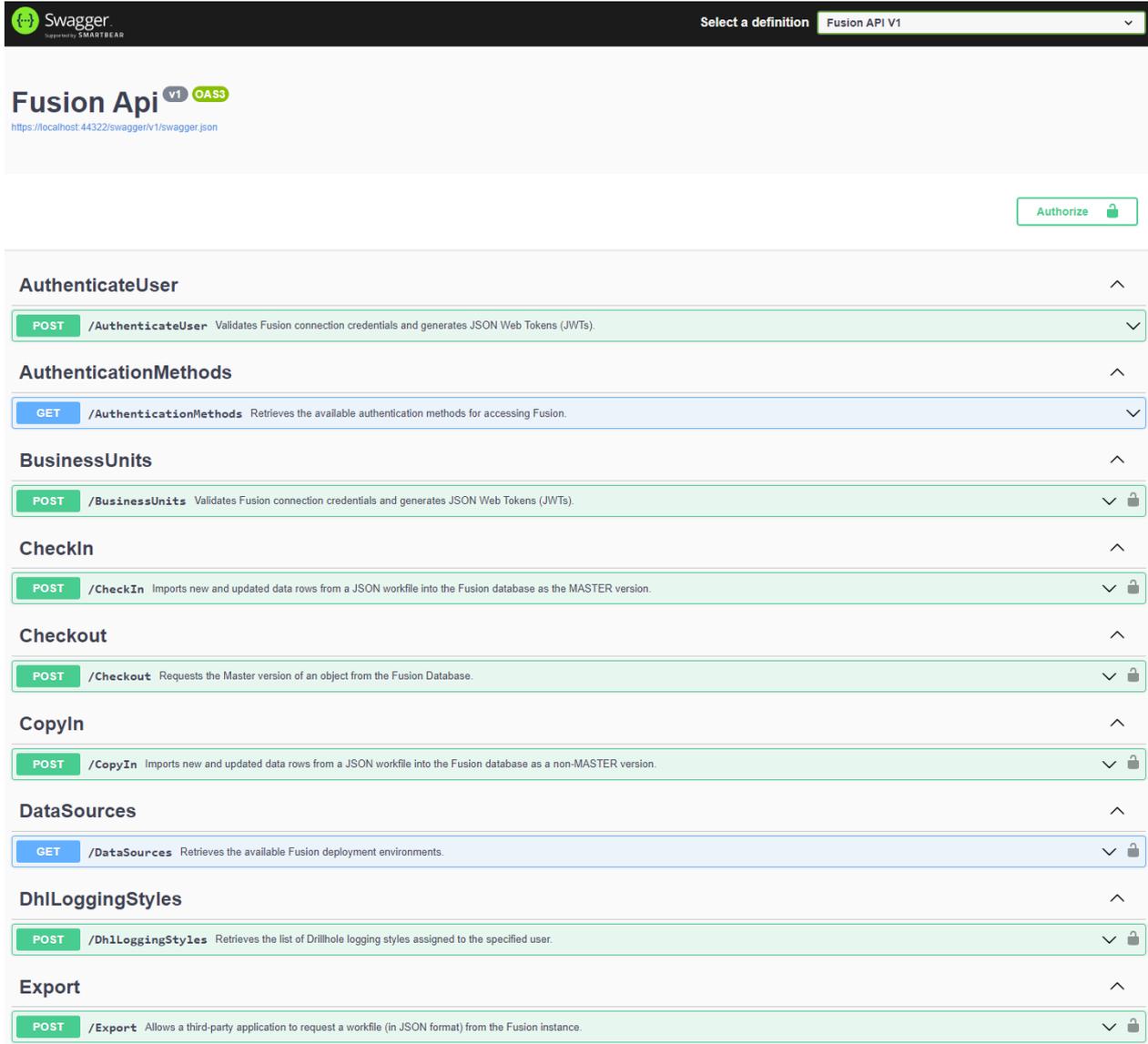


Upgraded to .NET 4.8

The majority of the dependencies has been upgraded from .NET 3.5 to .NET 4.8, introducing new features and performance optimizations. This upgrade enhances overall application performance, providing users with a faster and more reliable platform.

API Integration

A new RESTful API is available for extracting and importing data, including assay results, from the Fusion database. The integration improves examples and descriptions for each endpoint within our Swagger API page.



The image shows the Swagger UI for the Fusion API V1. The interface includes a Swagger logo, a 'Select a definition' dropdown menu set to 'Fusion API V1', and an 'Authorize' button. Below the header, the API title 'Fusion Api' is displayed with version 'v1' and 'OAS3' tags, along with the URL 'https://localhost:44322/swagger/v1/swagger.json'. The main content area lists several API endpoints, each with its method (POST or GET), path, and description. The endpoints are: AuthenticateUser (POST /AuthenticateUser), AuthenticationMethods (GET /AuthenticationMethods), BusinessUnits (POST /BusinessUnits), CheckIn (POST /CheckIn), Checkout (POST /Checkout), CopyIn (POST /CopyIn), DataSources (GET /DataSources), DhLoggingStyles (POST /DhLoggingStyles), and Export (POST /Export). Each endpoint entry includes a dropdown arrow and a lock icon.

Method	Path	Description
POST	/AuthenticateUser	Validates Fusion connection credentials and generates JSON Web Tokens (JWTs).
GET	/AuthenticationMethods	Retrieves the available authentication methods for accessing Fusion.
POST	/BusinessUnits	Validates Fusion connection credentials and generates JSON Web Tokens (JWTs).
POST	/CheckIn	Imports new and updated data rows from a JSON workfile into the Fusion database as the MASTER version.
POST	/Checkout	Requests the Master version of an object from the Fusion Database.
POST	/CopyIn	Imports new and updated data rows from a JSON workfile into the Fusion database as a non-MASTER version.
GET	/DataSources	Retrieves the available Fusion deployment environments.
POST	/DhLoggingStyles	Retrieves the list of Drillhole logging styles assigned to the specified user.
POST	/Export	Allows a third-party application to request a workfile (in JSON format) from the Fusion instance.

Defect Fixes

- **GDMS-10518** Resolved an issue with the API hanging when running as a console app.
- **GDMS-10509** Resolved the issue with writing rock code bitmap files to a user's system with the new DLL component.
- **GDMS-10339** Resolved the "Validation in progress. Please try again" error message when trying to save a new Standalone record in QuickLogger.
- **GDMS-10306** Resolved the issue with "Batch PDF" save functionality when trying to save reports using Windows Authentication.

- **GDMS-9864** Resolved a Fusion upgrade issue that may be encountered when clients have added custom columns to the Projects table.
- **GDMS-9326** Resolved the issue with drawing the Geology Log component for holes that happen to contain a very large number of major and/or minor intervals.
- **GDMS-5482** Resolved deleting or modifying an interval on the major table in DHLogger.
- **GDMS-8733** Resolved the error creating data window in LAS module.
- **GDMS-8768** Resolved the error when Right Dilution exceeds the length in the Destination Compositor.
- **GDMS-9582** Resolved the "Sample In Use by another user" error when doing Lab Import in DHLogger.
- **GDMS-9631** DHLogger - Logging - Performance Issue when switching between tables
- **GDMS-9850** FusionX - Upgrade Issue - Error adding DSCD_ID column to DHL_SAMPLE_COLUMN_DETAILS table in Central DB
- **GDMS-9864** Resolved the custom "PROJECT" columns not being added to the Local database during the upgrade.
- **GDMS-10092** Resolved the External Transfer Error in Quicklogger, where the device ID missing in varbinary field / JSON string.
- **GDMS-10228** Resolved the device ID Not Exported to Workfile in Quicklogger.
- **GDMS-10339** Resolved the "Validation in progress. Please try again" validation message when trying to log a new record in standalone tables in Quicklogger.
- **GDMS-10529** Resolved the calculations not being performed in Sample Station.
- **GDMS-10534** Resolved the performance issue when generating holes against the Fusion Remote database in DHLogger.

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