



Informatica® Data Integration Hub  
10.2.2

# Release Guide

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# Preface

The *Data Integration Hub Release Guide* is written for administrators who are responsible for installing and configuring Data Integration Hub and developers and software engineers who implement Data Integration Hub. This guide assumes that you have knowledge of the features for which you are responsible. It lists new features and enhancements, behavior changes between versions, and tasks you might need to perform after you upgrade from a previous version.

## Informatica Resources

### Informatica Network

Informatica Network hosts Informatica Global Customer Support, the Informatica Knowledge Base, and other product resources. To access Informatica Network, visit <https://network.informatica.com>.

As a member, you can:

- Access all of your Informatica resources in one place.
- Search the Knowledge Base for product resources, including documentation, FAQs, and best practices.
- View product availability information.
- Review your support cases.
- Find your local Informatica User Group Network and collaborate with your peers.

### Informatica Knowledge Base

Use the Informatica Knowledge Base to search Informatica Network for product resources such as documentation, how-to articles, best practices, and PAMs.

To access the Knowledge Base, visit <https://kb.informatica.com>. If you have questions, comments, or ideas about the Knowledge Base, contact the Informatica Knowledge Base team at [KB\\_Feedback@informatica.com](mailto:KB_Feedback@informatica.com).

### Informatica Documentation

To get the latest documentation for your product, browse the Informatica Knowledge Base at [https://kb.informatica.com/\\_layouts/ProductDocumentation/Page/ProductDocumentSearch.aspx](https://kb.informatica.com/_layouts/ProductDocumentation/Page/ProductDocumentSearch.aspx).

If you have questions, comments, or ideas about this documentation, contact the Informatica Documentation team through email at [infa\\_documentation@informatica.com](mailto:infa_documentation@informatica.com).

## Informatica Product Availability Matrixes

Product Availability Matrixes (PAMs) indicate the versions of operating systems, databases, and other types of data sources and targets that a product release supports. If you are an Informatica Network member, you can access PAMs at

<https://network.informatica.com/community/informatica-network/product-availability-matrices>.

## Informatica Velocity

Informatica Velocity is a collection of tips and best practices developed by Informatica Professional Services. Developed from the real-world experience of hundreds of data management projects, Informatica Velocity represents the collective knowledge of our consultants who have worked with organizations from around the world to plan, develop, deploy, and maintain successful data management solutions.

If you are an Informatica Network member, you can access Informatica Velocity resources at <http://velocity.informatica.com>.

If you have questions, comments, or ideas about Informatica Velocity, contact Informatica Professional Services at [ips@informatica.com](mailto:ips@informatica.com).

## Informatica Marketplace

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## Informatica Global Customer Support

You can contact a Global Support Center by telephone or through Online Support on Informatica Network.

To find your local Informatica Global Customer Support telephone number, visit the Informatica website at the following link:

<http://www.informatica.com/us/services-and-training/support-services/global-support-centers>.

If you are an Informatica Network member, you can use Online Support at <http://network.informatica.com>.

# CHAPTER 1

## Version 10.2.2

This chapter includes the following topics:

- [New Features and Enhancements, 8](#)
- [Behavior Changes, 9](#)

## New Features and Enhancements

This section lists the new features and enhancements in Data Integration Hub 10.2.2.

### Big Data

#### **Integration with Informatica Enterprise Catalog**

Data Integration Hub leverages Informatica Enterprise Catalog to classify and organize data assets such as topics, publications, and subscriptions.

### Topic Management

#### **Real-time topic**

Use a topic with a real-time publication repository to monitor real-time Apache Kafka data streams.

#### **Column- and row-level masking**

Apply security policies to topic table fields by creating permission-based masking rules.

### Publications and Subscriptions

#### **Publish data and subscribe to data over REST APIs with data-driven publications and subscriptions**

Data Integration Hub runs automatic, data-driven publications as data arrives, without a predefined schedule. Data Integration Hub published the data as-is, without processing it.

Data Integration Hub runs automatic, data-driven subscriptions as data is published to the publication repository, without a predefined schedule.

#### **Publish data streams with Big Data Streaming mappings**

Publish data at a low frequency with a Big Data Streaming real-time mapping.



**Publish and subscribe to data streams via Apache Kafka**

Publish data streams from Apache Kafka with custom pass-through Kafka publications. Consume data streams into Apache Kafka with custom pass-through Kafka subscriptions.

**Publication and subscription retry policy**

For automatic file publications and for automatic subscriptions that are triggered by Data Integration Hub, you can define a retry policy. A retry policy defines the number of times Data Integration Hub retries to run the publication or subscription in case of failure, and the retry interval. The policy does not apply to publications and subscriptions that you run manually.

## Connectivity to Informatica Intelligent Cloud Services

Data Integration Hub uses Informatica Intelligent Cloud Services mappings and tasks in cloud publications and subscriptions.

## Behavior Changes

This section lists functionality and behavior changes in Data Integration Hub 10.2.2.

### Creating Topics, Publications, and Subscriptions

Access to the topic, publication, and subscription wizards and pages is from a page where you select the type of asset you want to create.

### Modular Cloud Publications and Subscriptions

Custom cloud publications and subscriptions are renamed to modular publications and subscriptions, respectively.

### Multi-latency Publications

Custom real-time publications are renamed to multi-latency publications.

# CHAPTER 2

## Version 10.2.1

This chapter includes the following topics:

- [New Features and Enhancements, 10](#)
- [Behavior Changes, 11](#)

## New Features and Enhancements

This section lists the new features and enhancements in Data Integration Hub 10.2.1.

### Repositories

On Linux, you can use SQL repositories installed on Windows as the Data Integration Hub and publication repositories. This option is applicable to systems running PowerCenter® version 10 or higher.

### Topic Management

#### **User Defined Topic Table Names**

When you create a topic table, Data Integration Hub assigns the table a physical name based on the logical name that you enter. You can edit the automatically generated name before you save the table to the database.

#### **User Defined Topic Table Column Names**

When you create a topic table, Data Integration Hub assigns each column in the table a logical name and a physical name. For topics that use a relational database or a Hadoop publication repository, you can edit the automatically generated names before you save the table to the database.

#### **Topic Table Relations**

You can define relations between topic tables, to filter the data that automatic database and flat file subscriptions consume from the topic.

#### **Add Topic Table and Column Descriptions**

When you create a topic table, you can add a description of the table. For topics that use a relational database or a Hadoop publication repository, you can add a description to each table column.

### Topic Delta Detection

When you apply delta detection to a topic table for which a primary key is defined, each time a publication publishes to the topic, Data Integration Hub detects the delta between the current publication event and the previous publication event. Data Integration Hub applies the detected delta to automatic database subscriptions that are configured with the delivery option **Insert new rows and update changed rows**.

## Publications and Subscriptions

### Delete data on target in automatic database subscriptions

You can select to delete rows that don't exist in the topic from the target for automatic database subscriptions when one of the following conditions exist:

- The type of topic to which the subscription subscribes is Full, and the subscription delivery option is **Insert new rows and update changed rows**.
- The subscription is an unbound subscription with the delivery option **Insert new rows and update changed rows**.

### Add expressions to fields in automatic database and flat file publications and subscriptions

Access the **Expression Editor** to select fields and functions to add to topic table fields.

### Publish from and subscribe to cloud-based applications with Informatica Cloud mappings

Use Data Integration Hub automatic cloud mappings to publish and subscribe to data from cloud-based applications with Informatica Cloud mappings.

## Connectivity to Informatica Cloud®

Use Data Integration Hub cloud connectivity system properties to configure an HTTP/HTTPS proxy server to connect to the Informatica Cloud server.

## Behavior Changes

This section lists functionality and behavior changes in Data Integration Hub 10.2.1.

### Topic Filter Accelerators

Defining a topic table column as a filter accelerator has been moved from the table structure definition to the table relations definition.

### Publication and Subscription Wizards

In the publication and subscription wizards, the **Mapping** tab is renamed to **Processing**.

# CHAPTER 3

## Version 10.2

This chapter includes the following topics:

- [New Features and Enhancements, 12](#)
- [Behavior Changes, 13](#)

## New Features and Enhancements

This section lists the new features and enhancements in Data Integration Hub 10.2.

### Publications and Subscriptions

#### **Join source files in automatic flat file publications**

Pull data from multiple source files into a single topic table by creating a join. You can create multiple joins, and you can combine data from joins into new joins.

#### **Join topic tables in automatic database and flat file subscriptions**

Pull data from multiple topic tables into a single target table by creating a join. You can create multiple joins, and you can combine data from joins into new joins.

#### **Filter the data to publish in automatic database and flat file publications**

When you create an automatic database or flat file publication, you can define the conditions to filter rows. Data Integration Hub uses the definitions when creating the automatic mapping for the publication.

#### **Enhanced file transfer support**

Extend file transfer support to include the FTP and FTPS protocols.

#### **Subscription post-processing for on-premises subscriptions**

When a process has to run on data after the subscription, you can run both the subscription process and the subscription post-process from Data Integration Hub.

Data Integration Hub triggers the post-process after the subscription process runs. You can select whether or not to run the post-process if the subscription process fails. You can trace the end-to-end subscription process, including both the subscription and the post-process.

#### **Schedule a publication or a subscription to run after a selected publication or subscription runs**

A scheduling option for all publication and subscription types, with the exception of publications with real-time workflows, that runs the publication or the subscription immediately after the run of a specific publication or subscription is complete.

## Behavior Changes

This section lists functionality and behavior changes in Data Integration Hub 10.2.

#### **"Update Else Insert" Delivery Option in Automatic Relational Database Subscriptions**

The option **Apply "Update else insert" to the PowerCenter workflow** is renamed to **Insert new rows and update remaining rows**. A new option is added, **Insert new rows and update changed rows**. When you select the new option, Data Integration Hub ignores unchanged rows. It inserts new rows and then updates changed rows that exist in the target. Updating only changed rows slows down system performance.

# CHAPTER 4

## Version 10.1.1

This chapter includes the following topic:

- [New Features and Enhancements, 14](#)

## New Features and Enhancements

This section lists the new features and enhancements in Data Integration Hub 10.1.1.

### Publications and Subscriptions

#### **Publish from and subscribe to Teradata databases with automatic mappings**

Use publications and subscriptions with automatic mappings to publish and subscribe to data from Teradata database sources and targets.

#### **Support the use of Data Quality mappings in Data Integration Hub custom publications and subscriptions**

Publish and deliver data and files with publications and subscriptions that use Data Integration Hub workflows that are based on Data Quality mappings.

#### **Join source tables in publications**

You can combine data from multiple source tables into a single topic table by creating a join or multiple joins. A join combines columns from two or more tables in the database. You can create multiple joins, and you can combine data from joins into new joins. Joins are virtual entities, and are not created in the source database or in the topic.

### Hub Overview Diagram

The Data Integration Hub Operation Console Home page displays a Hub Overview diagram when Data Integration Hub contains entities such as applications, topics, publications, or subscriptions.

The Hub Overview diagram provides a visual overview of the existing entities, grouped into categories.

# CHAPTER 5

## Version 10.1

This chapter includes the following topics:

- [New Features and Enhancements, 15](#)
- [Behavior Changes, 16](#)

## New Features and Enhancements

This section lists the new features and enhancements in Data Integration Hub 10.1.

### Big Data

#### **Support the use of Big Data Management® mappings in Data Integration Hub custom publications and subscriptions**

Publish and deliver big data with publications and subscriptions that use Data Integration Hub workflows that are based on Big Data Management mappings.

### Publications and Subscriptions

#### **Use custom publications and subscriptions to share files between applications that reside outside the Data Integration Hub network**

Use publications and subscriptions with custom mappings to publish files and to subscribe to files from remote applications, that reside outside the Data Integration Hub network, through the secure SSH File Transfer Protocol (SFTP).

#### **Publish from and subscribe to cloud-based applications with Mapping Configuration tasks**

Use Informatica Cloud Mapping Configuration tasks to publish and subscribe to data from cloud-based applications.

#### **Publish from and subscribe to PostgreSQL databases with automatic mappings**

Use publications and subscriptions with automatic mappings to publish and subscribe to data from PostgreSQL database sources and targets.

### Publication subscription REST APIs

Use the following Data Integration Hub publication and subscription REST APIs to run publications and subscriptions, to enable and disable publications and subscriptions, and to reprocess publication and subscription events:

- Run Publication Subscription REST API. Starts a publication or a subscription, including disabled publications and subscriptions, and returns the event ID of the publication or the subscription event that Data Integration Hub generates.

**Note:** You can use the Run Publication Subscription REST API to publish data and subscribe to data with publications and subscriptions that trigger a Data Integration task. You cannot use the API to publish data and subscribe to data with data-driven publications and subscriptions.

- Change Publication Subscription Mode REST API. Changes the mode of a publication or a subscription, that is, enables a disabled publication or subscription and disables an enabled publication or subscription.
- Reprocess Event REST API. Reprocesses a publication or subscription event, including events of disabled publications and subscriptions.

## Monitoring and Tracking

Data Integration Hub operators can configure monitoring rules to invoke workflows that instigate actions when an event is in a defined status.

For example, when a publication fails, invoke a workflow that deletes the data from the publishing source.

## Security

### Secure storage of SFTP keys

Manage SSH File Transfer Protocol (SFTP) passwords and keys using a passphrase-protected keystore. Data Integration Hub uses Advanced Encryption Standard (AES) to encrypt the SSH private passwords and keys.

## Behavior Changes

This section lists functionality and behavior changes in Data Integration Hub 10.1.

### Select Informatica Cloud Tasks Directly in a Publication or a Subscription

You do not need to create Data Integration Hub workflows for custom cloud publications and subscriptions. When you create the publication or the subscription in the Operation Console, you select the Informatica Cloud task in the publication or subscription wizard.



# CHAPTER 6

## Version 10.0

This chapter includes the following topics:

- [New Features and Enhancements, 17](#)
- [Behavior Changes, 17](#)

### New Features and Enhancements

This section lists the new features and enhancements in Data Integration Hub 10.0.

#### Publications and Subscriptions

##### **Share files between applications that reside outside the Data Integration Hub network**

Publish files to and subscribe to files from remote applications, that reside outside the Data Integration Hub network, through the secure SSH File Transfer Protocol (SFTP).

##### **Publish from and subscribe to cloud-based applications**

You can publish from and subscribe to any cloud-based application that Informatica Cloud supports using Informatica Cloud Services tasks.

#### Monitoring and Tracking

Data Integration Hub operators can create event monitors that track publications and subscriptions based on their event status. The operators create rules that instigate actions when an event is in a defined status.

For example, a rule that sends an email notification to the administrator when a specific subscription is in Error status, or a rule that disables publications and subscriptions that are in Error status.

### Behavior Changes

This section lists functionality and behavior changes in Data Integration Hub 10.0.

#### [Events Menu Renamed to Monitoring and Tracking](#)

In the Data Integration Hub console, the **Events** menu is renamed to **Monitoring and Tracking**. The **Monitoring and Tracking** menu opens the **Monitors** page and multiple **Event** pages.

# CHAPTER 7

## Version 9.6.2

This chapter includes the following topics:

- [New Features and Enhancements, 18](#)
- [Behavior Changes, 20](#)

## New Features and Enhancements

This section lists the new features and enhancements in Data Integration Hub 9.6.2.

### Topic Management

#### **Publication Repository Types**

When you create a topic, you choose the type of publication repository on which Data Integration Hub manages and stores published data for the topic.

Data Integration Hub can store topic data on the following types of publication repository:

- Relational database. Choose this type of repository to store published data in a relational database structure that represents the structure in which you want to keep the data.
- Hadoop. Choose this type of repository if you publish high volumes of data that you want to store for a long period of time and you do not want Data Integration Hub to delete published data after the data is consumed. The availability of the Hadoop repository depends on whether or not the Hadoop component is installed on your system.
- File repository. Choose this type of repository to publish files that you want to keep as-is without loading the data into a relational database. For example, if you publish PDF or .zip files into a file repository, Data Integration Hub delivers the files without processing them.

#### **Topic Structure Updates**

Updates to topic structure that do not require Data Integration Hub to delete tables or columns do not cause the associated publications and subscriptions to become not valid, and Data Integration Hub does not delete the topic data from the publication repository. For example, when you add a table to the topic or add a column to a topic table.

#### **PowerCenter Workflows**

When you create a Data Integration Hub workflow, or when you define a topic structure based on a PowerCenter workflow, you can select a PowerCenter workflow from the PowerCenter repository.

Developers no longer need to export the PowerCenter workflow to an XML workflow definition file to make the workflow available for selection.

## Publications and Subscriptions

### Wizard simplification

The publication and subscription wizards are customized according to the type of publication or subscription that you select to create. Each type of wizard contains steps that are relevant to the type of publication or subscription that you create, and each step within the wizard contains only properties that are relevant to the publication or subscription type.

### Automatic pass-through publications and subscriptions

Use automatic pass-through publications and subscriptions in conjunction with topics that use a file repository that stores files as-is:

- Use an automatic pass-through publication to publish data from a file source that you want to publish to a topic that uses a file publication repository and that stores the file as-is, without loading the data into a relational database.
- Use an automatic pass-through subscription to consume files that were published to topics that use a file publication repository and that provide files as-is.

### Disable and enable publications and subscriptions

Operators can disable and enable publications and subscriptions from within the Operation Console. You can disable or enable a specific publication or a specific subscription, or disable or enable all publications or all subscriptions of a specific application.

A disabled publication or subscription does not run according to schedule or by an external API. You can only run a disabled publication or subscription from within the Operation Console.

### Field mapping for file based publications

Extends the use of auto generated mappings to cases where the structure of a flat file source is not identical to the structure of the topic. You can manually map fields between the source file and the topic.

### Patterns in source file names

When you configure a file publication, you can use asterisk wildcards and variables to define the name of the file that Data Integration Hub picks up and publishes to the publication repository. For example:

```
Input_($PublicationName)_($sequence).in.
```

### Automatic publications and subscriptions with tables from a non default schema

You can use tables from a non default schema when you publish from a relational database with an automatic mapping or when you subscribe to a relational database with an automatic mapping.

**Note:** You cannot use two tables with the same name from different schemas within the same publication or within the same subscription.

### Improve Feedback from Run Publication and Subscription APIs

When you use a Data Integration Hub Run Publication Subscription API to start the running of a publication or of a subscription by an external trigger, the API returns the status of the action.

- For publications: success, failure, or inability to run a relational database publication because the publication is running.
- For subscriptions: success, failure, or no publications to consume.

If the action succeeds, the action status includes the event ID of the publication or the subscription event that Data Integration Hub generates.

You can use the Data Integration Hub Event Status API to query the status of the publication or subscription event according to the event ID. You can learn whether the publication or subscription process is still running, and when the process is complete, whether the publication or subscription process completed successfully or failed. If the process fails, the response to the query includes the cause of the failure.

#### **Block concurrent runs of relational database publications**

While a relational database publication is running, Data Integration Hub blocks tries to run the publication again. The publication will run again at the next scheduled run time.

## Big Data

#### **Hadoop-based publication repository**

Define a Hadoop-based publication repository and manage some of your topics on Hadoop. The availability of the Hadoop repository depends on whether or not the Hadoop component is installed on your system.

#### **Support HDFS sources and targets with automatic mapping**

Publish and deliver flat files from and to a Hadoop Distributed File System (HDFS) with publications and subscriptions that use automatic mapping.

## Security

#### **Control data access at the connection level**

Assign categories to connections to control user access to the connection. When you assign categories to a connection, only user groups with permissions to the connection can access the connection.

## Behavior Changes

This section lists functionality and behavior changes in Data Integration Hub 9.6.2.

#### **Run Publication Subscription Web Service API**

When you use the Run Publication Subscription Web Service API to start the running of a publication or of a subscription by an external trigger, the API returns the publication or the subscription event ID.

**Important:** You must upgrade the API and update the calls when you upgrade your system to version 9.6.2. For details, see the *Data Integration Hub Installation and Configuration Guide*.

#### **Editing Publications and Subscriptions**

You cannot change the type of a publication or of a subscription after you create it. For example, you cannot change the source type of an automatic publication from a relational database source to a flat file source.

If you need to change the type of a publication or of a subscription, you must delete the publication or the subscription and then create a new publication or subscription and select the required publication or subscription type.

## Prevent Concurrent Runs of a Relational Database Publication

Data Integration Hub prevents concurrent runs of relational database publications. You can re-run the publication after the publication reaches its final state.

## File Publications

For file publications that are published manually, by an external trigger, or at defined intervals, Data Integration Hub picks up the files and moves them to the documents store, as it does for file publications that are published when the file is ready to be published.

**Important:** If you have custom file publications and you want Data Integration Hub to pick up the files, you must update your custom Data Integration Hub workflows in PowerCenter when you upgrade your system to version 9.6.2. For details, see the *Data Integration Hub Installation and Configuration Guide*.

## Direct Access to the PowerCenter Repository Not Required

The step **PowerCenter Repository Access** is removed from the installation and upgrade flows because, due to product performance improvements, it is redundant and not required.

## Block Concurrent Runs of Relational Database Publications

While a relational database publication is running, Data Integration Hub blocks tries to run the publication again. The publication will run again at the next scheduled run time.

## CHAPTER 8

# Version 9.6.1 HotFix 1

This chapter includes the following topics:

- [New Features and Enhancements, 22](#)
- [Behavior Changes, 23](#)

## New Features and Enhancements

This section lists the new features and enhancements in Data Integration Hub 9.6.1 HotFix1.

### Security

Data Integration Hub 9.6.1 HotFix1 introduces enhancements that tighten client and server security. Most of the enhancements are implemented on the server and have no impact on users. This section describes the enhancements that might affect system usage.

#### **User Name and Password Environment Variables in Command Line Utilities**

You can use the following options when running the Import and Export and the Run Publication Subscription command line utilities:

- `-U`  
Environment variable that contains the user name.
- `-P`  
Environment variable that contains an encrypted password.

#### **Restrict Remote Data Integration Hub Server Shutdown and Startup**

Administrators can define a list of clients from which users can remotely shut down and start up the Data Integration Hub server.

#### **Protect Calls from PowerCenter Workflows to the Data Integration Hub Server with a Secret Token**

A secret token authorizes calls from PowerCenter workflows to the Data Integration Hub server through Data Integration Hub transformations. Administrators can define a custom token to replace the default system token.

#### **Secure Communications with PowerCenter Services**

Support secure communications with PowerCenter services in Secure Sockets Layer (SSL) mode.

# Behavior Changes

This section lists functionality and behavior changes in Data Integration Hub 9.6.1 HotFix1.

## Repository Utility

The following changes were made to the syntax of the repository utility:

- The parameter `-l` is optional.
- Added the option `--configFile`. This option points to the location of the Data Integration Hub configuration property file. If no value not specified, Data Integration Hub loads the file from the following location:

`<DIHInstallationDir>/conf/dx-configuration.properties`

- The option `--file` is no longer applicable to the `upgradeSchema` and `enablePartitioning` commands.

# CHAPTER 9

## Version 9.6.1

This chapter includes the following topics:

- [New Features and Enhancements, 24](#)
- [Behavior Changes, 26](#)

## New Features and Enhancements

This section lists the new features and enhancements in Data Integration Hub 9.6.1.

### File-based Use Cases

#### **Publish files when they are ready to be published**

A scheduling option for file-based publications that runs the publication immediately after the published files are ready and places the files in the folder that you define.

This option is applicable to the following publication types:

- Publications with an automatic mapping and a flat file source.
- Publications with a custom mapping and a parameterized flat file source.

If you publish multiple files, you can define the maximal period of time that Data Integration Hub waits for the files to be available in the source directory. When the maximal period of time ends, Data Integration Hub discards the file events of the publication and changes the status of the publication event to Error.

#### **Add topic tables from a sample file**

Define topic structure by extracting a table structure from a sample file. Use this method when the structure of the data domain that the topic represents exists in a file. You can only use delimited files.

#### **Customizable delimiters and date formats**

Support custom delimiters and custom date formats in file sources and targets. You can only use custom delimiters and custom date formats that are supported by the PowerCenter Integration Service.



# Publications and Subscriptions

## Field mapping

Extends the use of auto generated mappings to cases where the structure of the source is not identical to the structure of the target. You can manually map tables and fields between the source and the topic and between the topic and the target.

## Unbound subscription

A subscription that is not restricted to specific publication instances. An unbound subscription subscribes to all the data that a publication publishes and consumes the data based on the subscription filter.

## Subscribe starting from existing publication instance

Get data that was published before the subscriber subscribed to the topic and was therefore not sent to the subscriber. Data Integration Hub delivers undelivered data that was published during the date range that you define and which is still available in the publication repository.

## Apply PowerCenter "update else insert" mechanism to automatic subscriptions with a relational database target

For subscriptions with an automatic mapping and a relational database target, you can select to turn on the PowerCenter target property "update else insert" in the generated workflow.

## Session parameters in custom Data Integration Hub mappings

When using user-defined session parameters in custom Data Integration Hub mappings, Data Integration Hub presents the session parameters together with the workflow parameters in the **Workflow Parameters** tab of the **Workflows** page. You can customize the layout and behavior of the parameters with the Forms Designer. You can only use user-defined session parameters that the PowerCenter Integration Service supports.

## Run a publication or a subscription from a web service API

Use the Data Integration Hub Run Publication Subscription web service API to run a specific publication and a specific subscription from a web service client application. You can run the web service API from the Data Integration Hub server or from a remote server.

## Subscriber performance advanced tuning

Fine tune the performance of data retrieval from the Data Integration Hub publication repository for subscriptions that use an automatic mapping. Performance tuning is particularly important when you use unbound subscriptions. You select one or both of the following options:

- PowerCenter pushdown optimization
- PowerCenter partitions

# Security

## Control data access at the topic level

Assign categories to topics to control user access to the topic data. When you assign categories to a topic, only user groups with permissions to the categories can view or change the topic.

**Note:** User permissions to publications and to subscriptions are determined either by the associated topic or by the associated application, whichever is the most restrictive.

### Publication and subscription privileges

The following privileges control the actions that users can perform on publications and subscriptions:

- View, create, edit, and delete publications
- View, create, edit, and delete subscriptions

By default, Data Integration Hub grants the publication and subscription privileges to the Operator user role.

### Authentication to run publications and subscriptions from the Run Publication Subscription command line API

The Run Publication Subscription command line API requires user name and password parameters. Users can run only publications and subscriptions for which they have permissions and privileges from the command line API.

## High Availability

Support deployment of Data Integration Hub in a clustered environment in an active/active configuration to allow resilience and a highly available environment.

## Behavior Changes

This section lists functionality and behavior changes in Data Integration Hub 9.6.1.

### Run Publication Subscription Command Line API

The following changes were made to the syntax of the Run Publication Subscription command line API:

- Parameter option changed from `-p` to `-v`.
- User and password options `-u` and `-p` are required in each call.

If you use the Run Publication Subscription command line API, update calls in the API to comply with the Data Integration Hub 9.6.1 syntax and add authentication parameters.

### Data Retention Period

Data retention period calculation was updated to handle failed subscriptions and subscriptions that are triggered endlessly. The data retention period starts after data is consumed by all subscriptions, not when the data is published. For each publication instance, the retention period starts after all the subscribers either successfully consumed the published data or have been discarded. That is, after all the events that are associated with the publication instance are either in a Complete or in a Discarded event status.

A new system property, `dih.staging.lifetime.maximum`, defines the maximum number of days to store published data in the publication repository. After the lifetime period for a publication instance expires, the publication repository cleanup process deletes the data from the publication repository, regardless of whether the data was consumed or not. The default lifetime period is 90 days.

### Append or Overwrite Existing Data in Subscriptions

You can select whether to append new data to existing data in the target or to overwrite existing data in the target for all subscriptions that use an automatic mapping.

### Subscription Filter

In the **Subscription** wizard, the option to select the columns that the subscription consumes from the topic was moved from the **Filter** page to the **Field Mapping** page.

### Running a Subscription Manually

On the **Subscriptions** tab of the **Applications** page, the option **Run Delayed Subscriptions** is renamed to **Run Subscription**. Use it to run subscriptions regardless of the subscription scheduling.

### Data Integration Hub Repository View DX\_VIEW\_STAGING\_TABLE

In the DX\_VIEW\_STAGING\_TABLE view the column PUBLICATION\_NAME is renamed to TOPIC\_NAME.

### Test Connection

In the Data Integration Hub Operation Console, the **Test Connection** option was moved from the **Edit Connection** page to the **Connections** page.

### Real-time Publication Workflows

In real-time publication workflows, the property **Enable high precision** must be enabled in the session that writes data to the Data Integration Hub publication repository.

# CHAPTER 10

## Version 9.6.0

This chapter includes the following topics:

- [New Features and Enhancements, 28](#)
- [Behavior Changes, 30](#)

## New Features and Enhancements

This section lists the new features and enhancements in Data Integration Hub 9.6.0.

### Multiple Publishers to a Single Topic

A topic is an entity that represents applications in a data domain that Data Integration Hub publishes and consumes.

A topic defines the data structure and additional data definitions such as the data retention period. Multiple applications can publish to the same topic. Publications publish data with the structure as presented by the topic. Topics can be consumed by multiple applications.

For example, a Sales topic that represents sales data. Applications from all the stores in the organization publish sales data to the Sales topic. The accounting application subscribes to the Sales topic and consumes published sales data from all stores, or, if a filter is applied, from specific stores.

For more information, see the *Data Integration Hub Operator Guide Version 9.6.0*.

### Filter the Data to Consume in Subscribers with Automatic Mapping

When you create a subscription that uses an automatic mapping, you can define the conditions to filter rows. Data Integration Hub uses the definitions when creating the automatic mapping for the subscription.

For more information, see the *Data Integration Hub Operator Guide Version 9.6.0*.

### Publication Real-Time Workflow

Publish data from real-time sources to the Data Integration Hub publication repository using PowerCenter real-time workflows. For example, data that is published through web-service providers, Java Message Service (JMS) queues, or CDC\_RT. Group published data into a single publication according to predefined intervals.

For more information, see the *Data Integration Hub Operator Guide Version 9.6.0*.

## Dashboard and Reports

The Data Integration Hub Dashboard includes a set of charts that present a high level view of publication and subscription activities in Data Integration Hub.

By default, the Dashboard displays the following charts:

- Error events by application
- Number of publications and subscriptions by status
- Publications and subscriptions event distribution over time
- Publications and subscriptions error distribution over time
- Publications and subscriptions processing time

Data Integration Hub operators can personalize the dashboard to present selected charts of interest. The Data Integration Hub developer can create custom reports and display them in the Dashboard.

For more information, see the *Data Integration Hub Operator Guide Version 9.6.0*.

## Test Connections

When you create or edit a connection in the Data Integration Hub Operation Console, you can test the connection. Data Integration Hub tests the connection and displays the status of the test in the Operation Console.

When you import connections into Data Integration Hub, Data Integration Hub tests the connections during the import and updates their status according to the test results.

When you test a connection, Data Integration Hub saves it and creates a connection in PowerCenter.

For more information, see the *Data Integration Hub Administrator Guide Version 9.6.0*.

## Kerberos Authentication

Support authentication to Data Integration Hub with Kerberos through ISP Authentication.

## Automatic Creation of Connections to the Data Integration Hub Repositories

Data Integration Hub creates connections to the Data Integration Hub repositories. The connections are used by publications and subscriptions that use automatic mappings.

Data Integration Hub creates the following connections based on the settings that you define during installation:

- DIH\_\_REPO. The connection to the Data Integration Hub repository.
- DIH\_\_STAGING. The connection to the Data Integration Hub publication repository.

After the installation is complete, the connections show in the Data Integration Hub Operation Console in the **Connections** page. To complete the installation, you must log in to the Operation Console with the administrator user account that you define during installation, configure the **Database Name** if applicable and the **Data Access** properties of the connections, and then save and test the connections. After you test the connections, the Data Integration Hub server creates the connections in the PowerCenter repository.

When users log in to the Operation Console with an operator user account, the DIH\_\_REPO and DIH\_\_STAGING connections show in read-only mode.

**Note:** If the connections to the Data Integration Hub are not valid operators cannot create or update any publications or subscriptions.

For more information, see the *Data Integration Hub Installation and Configuration Guide Version 9.6.0*.

## Lock a Topic

Prevent new publications from publishing to the topic and prevent new subscriptions from subscribing to the topic. Use this option when you plan to stop using a topic and you do not want new applications to use it. The topic is not available for selection when creating publications and subscriptions.

Existing publications can continue publishing data to the topic and existing subscriptions can continue consuming data from the topic.

For more information, see the *Data Integration Hub Operator Guide Version 9.6.0*.

## Purge Events

Manage storage space in the Data Integration Hub run-time repository by deleting events that Data Integration Hub generates when they are no longer needed.

For more information, see the *Data Integration Hub Administrator Guide Version 9.6.0*.

# Behavior Changes

This section lists functionality and behavior changes in Data Integration Hub 9.6.0.

### Changing the Password for the Database User Account

The procedure for changing the password for the database user account after you install Data Integration Hub has changed. For more information, see the *Data Integration Hub Installation and Configuration Guide*.

### You Cannot Run Multiple Publication Instances Concurrently

You cannot run more than one instance of a publication at the same time. If you run more than one instance of a publication at the same time, only the first publication instance runs. All other instances of the publication fail.

For subscriptions, you can run multiple instances of the same subscription at the same time.

### Configuration Changes

The following list describes changes in the configuration of Data Integration Hub options in the Operation Console.

- Configuration of the option "Include the publication ID and publication timestamp with the published data", which was previously performed in the **Delivery** tab of the Subscription wizard, is performed in the **Filter** tab of the Subscription wizard.
- Choosing whether a publication instance contains only the latest data changes or all of the data changes that occurred after the last publication, which was previously performed in the Publication wizard, in the **Publication Type** section of the **General** tab, is performed in the Topic wizard, in the **Topic Type** section of the **General** tab. In the Publication wizard, the type of publication is shown in the **Summary** page.

- Configuration of the publication data retention period and of the location where Data Integration Hub stores the publication, which was previously performed in the **Schedule** tab of the Publication wizard, is performed in the **Data Retention** tab of the Topic wizard.

For more information, see the *Data Integration Hub Operator Guide*.

# CHAPTER 11

## Version 1.0.0 HotFix 1

This chapter includes the following topics:

- [New Features and Enhancements, 32](#)
- [Upgrade Changes, 33](#)

### New Features and Enhancements

This section lists the new features and enhancements in Data Integration Hub 1.0.0 HotFix 1.

#### Automatic Mapping

Data Integration Hub generates automatic mappings for the following data sources and data targets:

- IBM DB2 database
- Flat file

This functionality is in addition to the existing functionality of generating automatic mappings for publications and subscriptions for Microsoft SQL Server and for Oracle.

#### Support ODBC Connection to Microsoft SQL Server

You can use Microsoft SQL Server databases as sources and targets when Data Integration Hub runs on UNIX and LINUX operating systems, with an ODBC driver.

#### Save Publication ID and Timestamp with Publication Data

When you configure a subscription, you can choose to include the publication ID and timestamp with the data that the subscription consumes. Data Integration Hub manages the data and saves the publication ID and timestamp for each publication.

Target applications can:

- Use publication IDs to group the rows in the target table by publication batches.
- Use publication timestamps to sort publications according to the order of delivery.



## Publication Pre-Processing

When a preparation process has to run on data you want to publish before publication, you can run both the publication pre-process and the publication process from Data Integration Hub.

Data Integration Hub triggers the preparation process before it triggers the publication process. The operator can trace the end-to-end publication process, including both the preparation and the publication stages.

## Run Publications and Subscriptions from a Command-Line API

The API instructs the Data Integration Hub PowerCenter server to trigger a workflow that runs a specific publication, or a specific subscription.

You can run the API with an external scheduler or with an external trigger.

You can use the utility to run publications or subscriptions for which no schedule is defined. You can also use the API to run publications and subscriptions for which a schedule is defined, in addition to the regular publication or subscription schedule.

## Import and Export Utility

You can perform the following additional tasks through the Data Integration Hub Import and Export Utility:

- Skip and Overwrite conflict resolutions during import.
- Specify conflict resolution for a single object.

The utility provides improved feedback to the user during import and export.

## Repository Management

You can use the Data Integration Hub Repository Utility to manage the Data Integration Hub publication repository, in addition to managing the Data Integration Hub repository.

On both repositories, you can enable and disable repository partition management through the Data Integration Hub Repository, in addition to the existing functionality of the utility.

# Upgrade Changes

This section lists functionality and behavior changes in Data Integration Hub 1.0.0 HotFix 1.

## Workflows

When you upgrade to version 1.0.0 HotFix 1, you need to manually set the workflow type for workflows that do not have associated publications or subscriptions.

To set the type of the workflow, edit the workflow from the **Workflows** page of the Operation Console.

# CHAPTER 12

## Version 1.0.0

This chapter includes the following topic:

- [Main Features, 34](#)

### Main Features

This section lists the main features in Data Integration Hub 1.0.0.

#### Application, Publication, and Subscription Management

You can add and manage applications in your organization that share data through Data Integration Hub. The applications share data with the publish/subscribe model, where an application can publish a single data set and multiple applications can consume the same data set.

Each application can have associated publications and subscriptions. A publication is a set of instructions to extract data from a source application system and publish the data to the publication repository. A subscription is a set of instructions to write the published data from the publication repository to a target application system. You create, manage, and run publications and subscriptions manually or at scheduled intervals.

#### Automatic Publication and Subscription Mapping

You can create a publication or a subscription with an automatic mapping that Data Integration Hub generates, or with a custom mapping that the Data Integration Hub developer creates in PowerCenter.

If you choose to create a publication or a subscription with an automatic mapping, Data Integration Hub creates the PowerCenter workflow, session, metadata folders, and connections when you create the publication or subscription.

When you create a publication with an automatic mapping, Data Integration Hub creates the mapping based on the tables and columns in the metadata connection that you select when you create the publication. When you create a subscription with an automatic mapping, Data Integration Hub creates the mapping based on the publication definitions.

#### Publication Repository

You can publish data sets from source applications to the publication repository. The publication repository is a database that stores published data sets that applications publish and consume. After all subscribers

consume the data and the data retention period ends, Data Integration Hub deletes the data from the publication repository.

You install the publication repository when you install Data Integration Hub. You can set up database partitions on the publication repository to optimize performance.

## Publications Catalog

You can use the publications catalog to view all available publications in Data Integration Hub and directly subscribe to them.

You can drill to the publication details, view associated subscribers, and search for a publication or a subscription.

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