DELPHIX
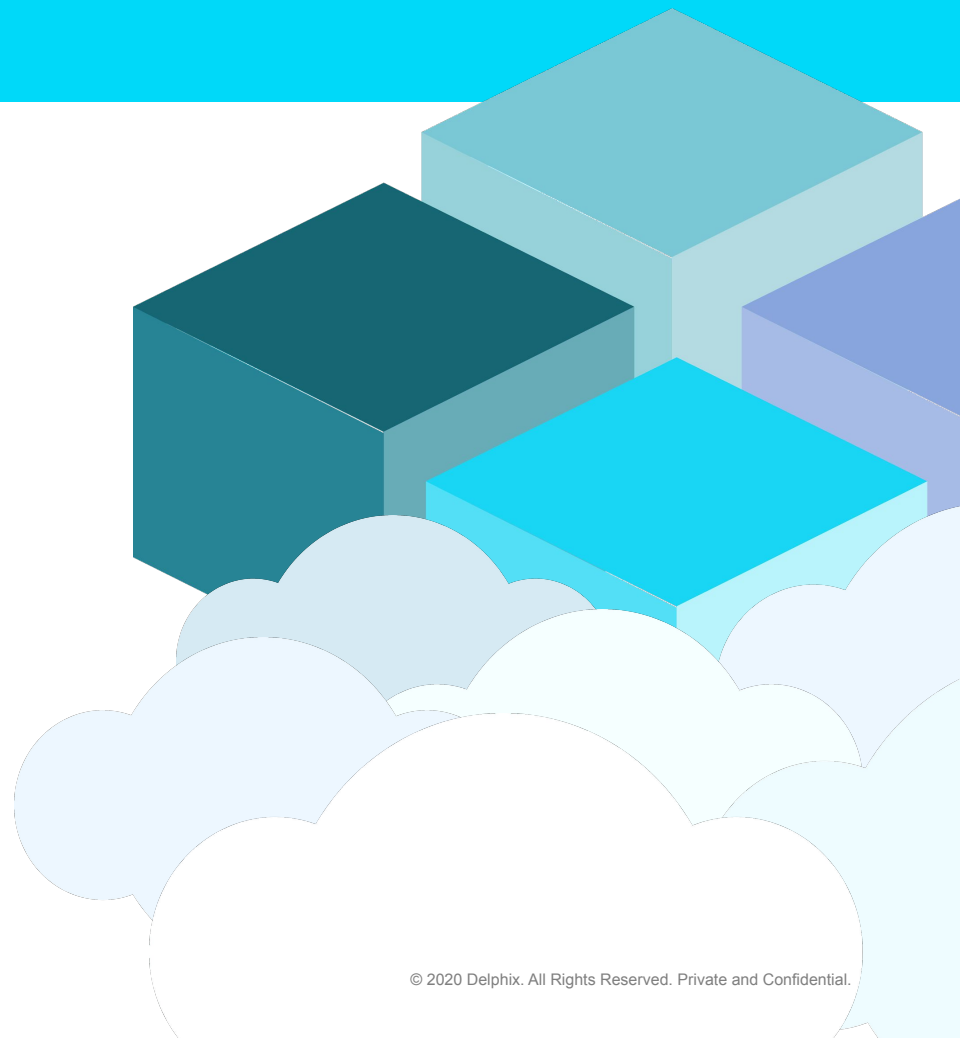
Delphix 6.0.10 and More

Sept 2021

Product Marketing

Delphix Data Platform 6.0.10: What's New

- **High Level Update**
  - Data Version Control API
  - Algorithm Updates
  - Updated DCT Multicloud

- **Data Control Tower Updates**
  - DCT Accessibility Improvements
  - Environment APIs

- **Virtualization Updates**
  - Support for Azure Storage Backups
  - Support for dSource Upgrade from non-MT to MT
  - Oracle Non-provisionable Exception
  - NFSv4
  - UI for Password Vault and Remote Hooks
  - Allow attach and detach of Oracle CDB containers
  - Port control for HANA plugin
  - Flexible ORACLE_HOME permissions configuration

- **Masking Updates**
  - New Mapping Algorithm
  - New Phone Masking Algorithm
  - Algorithm Replacement APIs

Data Version Control API

- We launched a new API on Data Control Tower SaaS and Data Control Tower Multicloud which will allow you to version data across any number of data sets and store this reference alongside your code or other artifacts.

- Interactive [API docs](#) and [usage documentation](#)

Algorithm Updates

- We continued to expand our industry-leading algorithm library, providing more options for you to mask your data according to your needs.

- Read the New Mapping Algorithm, New Phone Masking Algorithm and Algorithm Replacement APIs slides.

Updated DCT Multicloud

- Your need to drive data throughout your enterprise requires API-driven automation. This API-driven automation is facilitated from Data Control Tower in both a SaaS offering and with self-hosted Data Control Tower Multicloud.

- We shipped the next version of Data Control Tower Multicloud, which includes APIs for virtual database creation, control and monitoring, allowing for deeper and simpler enterprise automation.

DCT Accessibility Improvements

- We achieved WCAG 2.1 Level AA accessibility compliance for Data Control Tower.

- This both equalizes the user experience of impaired users with that of nonimpaired users and facilitates easier adoption by heavily regulated and government organizations.

Environment APIs

- We released a new SaaS API endpoint on api.delphix.com to enumerate all virtualization environments.
- Our goal is to drive all orchestration from a single point - either on DCT SaaS or DCT Multicloud.
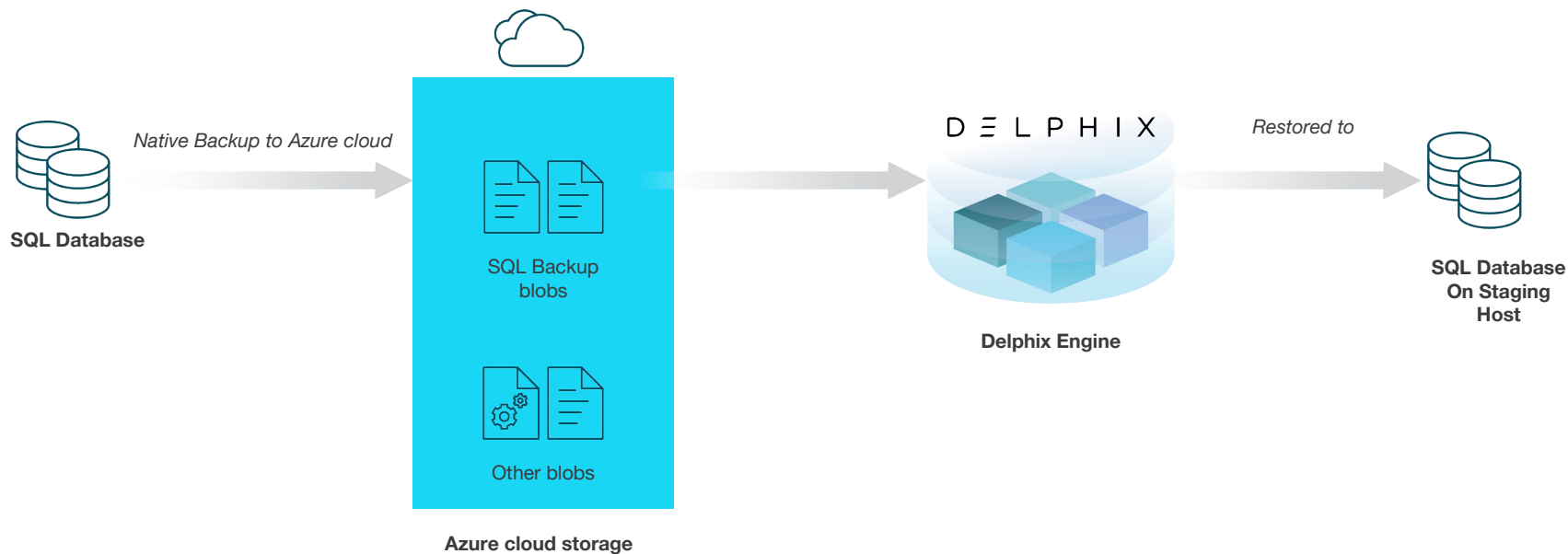
Support for Azure Storage Backups

- As you move to the cloud, we continue to innovate with ways to use that data.
- We are now able to directly ingest SQL Native backups from Azure Storage, allowing you to jointly reap the benefits of Delphix virtualization and Azure cloud storage.

The following features are included:

- All backup modes - Full, Differential and Transactional

- Validated Sync

- SQL Native backup

- SQL Server 2016 and above

- Azure Storage authentication mode - Shared access signature token

- Striped backups - where the backup is entirely present on Azure Cloud, i.e., all backup files for a given backup are present on Azure. No part of backup (i.e. no backup file) should be present outside of Azure (in Disk, Tape, etc.)

Azure Storage Backup Workflow

SQL Database

Native Backup to Azure cloud

SQL Backup blobs

Other blobs

Azure cloud storage

D E L P H I X

Delphix Engine

Restored to

SQL Database
On Staging
Host

Support for dSource Upgrade from Oracle Non-MT to MT

- You are migrating more of your Oracle databases to Oracle Multitenant. After you migrate your production sources, these can be automatically migrated in Delphix, ensuring that test infrastructure is quickly ready for DevOps teams.

- This is a new feature that allows Delphix to work with production databases that are converted from non-multitenant to multitenant using Oracle procedures.

- Once a dSource is converted to a multitenant PDB, the PDB will be able to share storage blocks with its non-multitenant predecessor. Delphix will only store incremental changes to the database.

# Oracle Not-Provisionable Exception

- We addressed one of the longest-standing and most-reported issues with Oracle, an Oracle RAC "not_provisionable exception."
- Large number of Oracle RAC customers have reported a long-standing bug where provision to the latest point in time on RAC fails with exception.oracle.target.point.not_provisionable during the recovery step because of missing archive logs.
- The issue can happen when one RAC instance does not switch logs as often as the other instances.
- The bug is in the logic that determines the latest provisionable point for a timeflow.
- When a redo thread lags behind, we wrongly assume the thread/instance is offline (the thread has been disabled or the instance associated with the thread is down) and there is no forthcoming redo.
- This approach causes us to be too aggressive about advancing the last provisionable point.
- As a result the point we select cannot be recovered with the available archived logs.
- We cannot query directly v$database.archive_change as per solution requirements.
- Instead define racMaxInstanceLag as the maximum number of log switches (i.e. sequences) to allow a RAC instance to lag before considering the instance offline.

# NFSv4

We now default to NFSv4 for most NFS connections.

Engine uses transparent NFS version selection
- ○ dynamically chooses NFSv4 if it is supported by the client and environment
- ○ exceptions for type of OS, OS configuration, older Oracle versions
- ○ choice of which NFS protocol to use is transparent to the administration of an engine and provisioning a VDB
- ○ by design, the administrator does not need to choose an NFS version during their provisioning workflows
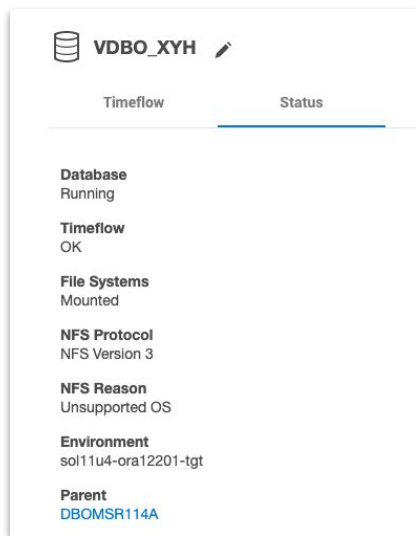
UI for Password Vaults and Remote Hooks

- In the 6.0.9 release, we introduced the ability to use password vaults with hooks. This allows you to ensure a high level of security with all operations with external systems.

- This can now be configured via the user interface.

- A new **Credential Environment Variables** section appears now in the hook create, view and edit UIs
  - The hook UI can be found in the creation wizards, view pages and edit dialogs for datasets and hook templates

- The new element allows, for each hook operation, to view and edit a list of "credential environment variables" for that hook
  - Each item contains a base variable name and the credentials

- When clicking on the hook's edit button, the user can add, modify, delete and reorder the list elements
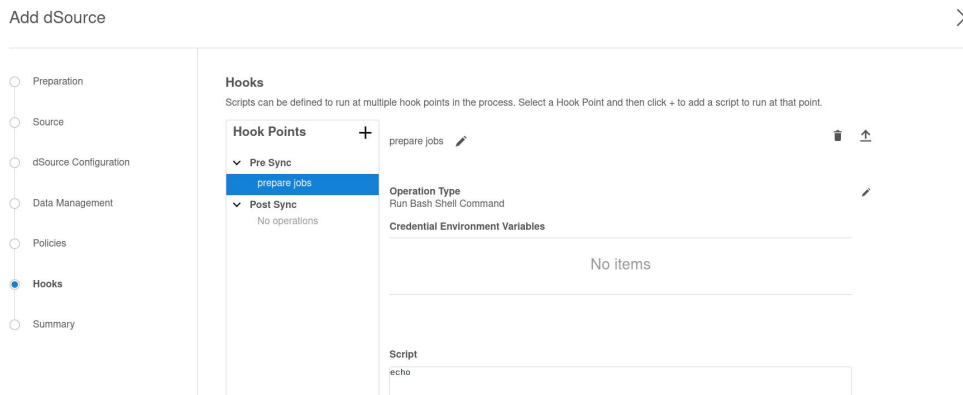
Allow Attach and Detach of Oracle CDB Containers

- This is a feature that will allow you to detach and attach your Oracle CDB containers.

- Prior to this feature, you could detach a PDB similar to detaching non-Multitenant datasets. However, once a PDB was detached, even if it was the only PDB of a CDB, the CDB remained inactive but not detached.

Port Control for HANA Plugin

- We now allow users to specify the port numbers of each HANA VDB, rather than HANA randomly assigning them.
- This will keep the port number consistent through the life of the VDB (provision, refresh, rewind, enable).

Flexible ORACLE_HOME Permissions Configuration

- We removed the need to set permissions of "$ORACLE_HOME/dbs" subdirectory using STARTUP SPFILE syntax to simplify Oracle operations.

- When starting an Oracle instance, an initialisation file in $ORACLE_BASE_CONFIG/dbs is used, by default this directory does not have group write permissions. Previously this forced you to either provision using the instance owner "oracle" or modify the group permissions on this directory. Both options can be seen as a security risk and impose deployment friction.

- Delphix 6.0.10.0 no longer requires write permission to $ORACLE_BASE_CONFIG/dbs directory.

- Delphix will only copy an initialization file (init<ORACLE_SID>.ora) to this directory if write permissions exists.

- All instance startup attempts from Delphix scripts will specify an init file to use from the Delphix filesystem, rather than the default location.

- If you are manually starting the Oracle instance and do not have write permissions to dbs directory, you must now specify the init file to use.

New Mapping Algorithm

- We introduced a new, more powerful and faster mapping algorithm. We now support running the same mapping algorithm across multiple jobs and support running the same mapping algorithm across multiple engines.
- Note the latter requires the use of a compatible external database.
- New APIs will support migrating mappings from existing mapping algorithms to the new mapping algorithms.

Create Mapping Algorithm

Algorithm Name

Description

☑ **Local Mapping Store**

Ignore Characters Separated by comma(,)

☐ **Ignore comma(,)**

[Manage Mappings]   [Cancel] [Save]

Manage Mappings

Total Mappings: 20

Available Mappings: 11

Action
Import Mappings ▼

File Type
CSV ▼

Import Mappings/Outputs - Upload Mapping File

[Select...]

Passphrase
Enter Passphrase for the Mapping file

[Import] [Back]

New Phone Masking Algorithm

- We introduced a new, more powerful phone number framework for US and international numbers.
- You will need to migrate from the old phone masking algorithms.

To create a masking job using one of the Phone masking algorithms, follow these steps:

1. Create a Rule Set and select a table/column to mask
2. In the Inventory tab, select a created Rule Set and click the Edit button to choose the dlpx-core:Phone US algorithm or the dlpx-core:Phone Unique algorithm
3. Create a masking job as usual

Edit Properties

Column Name

PHONE_MASKED

Notes

ID Method

Auto ▼

Domain

TELEPHONE_NO ▼

Algorithm

dlpx-core:Phone Unique ▼

dlpx-core:LastName
dlpx-core:Phone Unique
dlpx-core:Phone US
DR LICENSE SL
DUMMY_HOSPITAL_NAME_SL
EMAIL SL
FIRST NAME SL

Save

Algorithm Replacement APIs

- We have deprecated many of the previous-generation algorithms.

- To facilitate moving to our newer, more powerful algorithms we are introducing APIs to list and replace algorithms.

Deprecations/End of Life

- **Masking Ruleset Edit Option:** The List, Add column, table suffix, Join table features are removed in 6.0.10. These are low-use features with better alternatives. There is more information in this public Delphix community article for those interested https://community.delphix.com/blogs/anil-kumar/2021/06/24/rule-set-edit-feature-end-of-life

- **EBS 12.1 Support:** EBS 12.1 remains deprecated with a planned EOL (and removal from the product) in December 2021. This is in line with Oracle's planned End-of-Life for EBS 12.1 later this year. You are encouraged to upgrade and make use of Delphix's EBS 12.2 support.

- **Internet Explorer 11 Support:** We will be removing primary support for internet explorer 11 ahead of Microsoft's planned EOL (December 2021).

Certifications

- OCI VM.Standard.E4
- AWS r5n.24xlarge