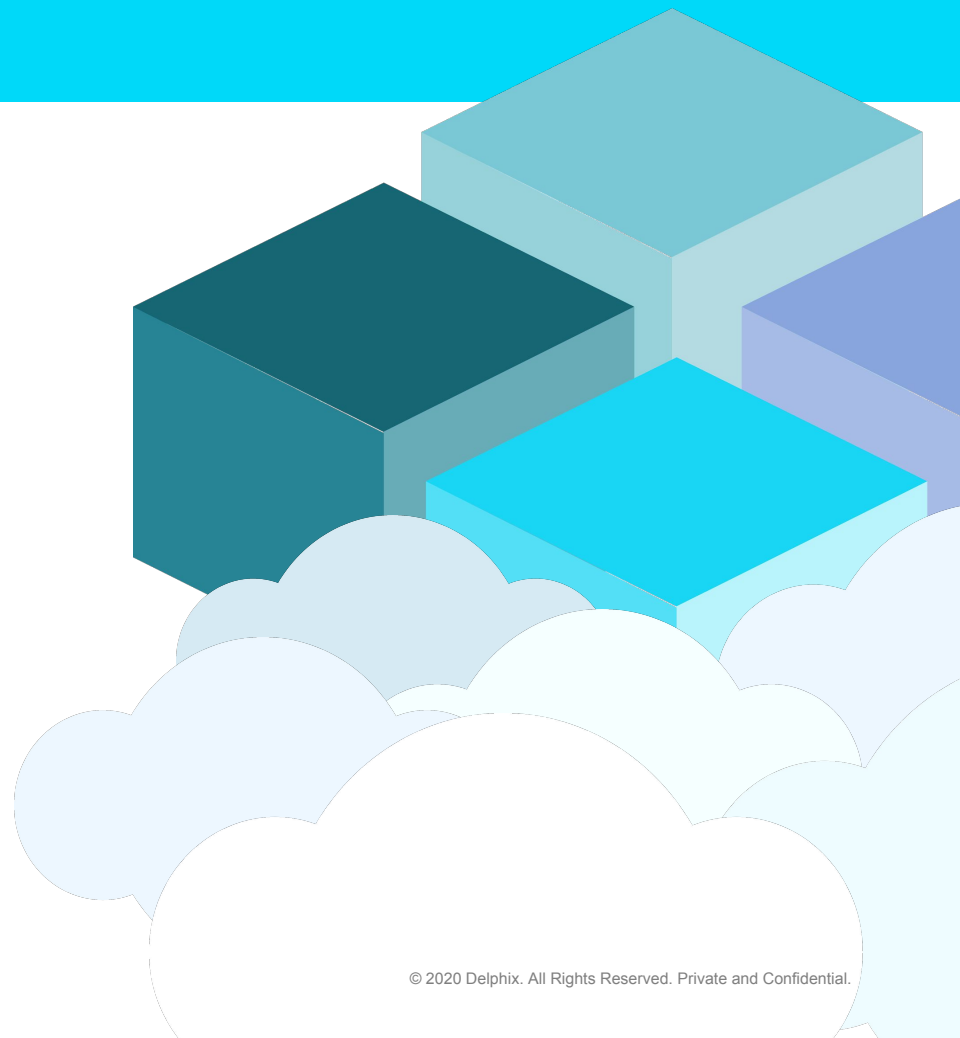


Delphix 6.0.6 and More

January 2021

Product Marketing



Delphix Data Platform 6.0.6: What's New

- **High Level Updates**

- TDE for Oracle Multi-Tenant
- Single to Multi-Tenant VDBs
- Multi-Column Masking Input and Output

- **Data Control Tower Updates**

- Global Masking Users and Groups

- **Technical Updates**

- Virtualization Users and Groups Changes
- Plugin Snapshot Parameter
- SNMPv3
- Virtualization SDK Support for Empty VDBs, Scratch Paths
- SSL Support for Masking SQL Server and Oracle
- EBS 12.2 Plugin with Sudo Privileges
- Solaris x86 to Linux x86 Oracle DB Provisioning
- HashiCorp Namespaces Support
- Storage Capacity Management Improvements

- **Certifications: Virtualization, Masking**

TDE for Oracle Multi-Tenant

- Delphix now supports Oracle Advanced Security Transparent Data Encryption (**TDE**) for Oracle 12cR2, 18c and 19c multitenant.
- Only password-based keystores are currently supported. TDE re-key is not supported.
- Support is provided for LinkedCDBs. vCDBs are not supported at the moment.

Provision vPDB

○ Target Environment

● Target Configuration

○ Advanced

○ Policies

○ Masking

○ Hooks

○ Summary

Target Configuration
Configure the target environment.

Target Group

Add Dataset Group

Untitled

▼

Mount Base

/mnt/provision

VPDB CONFIGURATION

Oracle Pluggable Database Name

VCD0_V2E

vPDB Name

VCD0_V2E

Transparent Data Encryption (TDE)

☒ Enabled

Parent Database TDE Keystore Location

/u01/app/oracle/product/18.12.0.0/dbhome_1/admin/CDOMSHSRB9B5/wallet

Parent Database TDE Keystore Password

TDE Secret for exported keys

Updating Parent TDE keystore path and password

Timeflow

Status

Configuration

Source

Policies

Masking

Hooks

DATABASE

Container Database

CDOMSHSRB9B5

Name

VCD0_V2E

Version

Oracle 18.12.0.0.0

Size

823.75MB

Parent Database TDE Keystore Location

/u01/app/oracle/product/18.12.0.0/dbhome_1/admin/CDOMSHSRB9B5/wallet

Parent Database TDE Keystore Password

User

dipxdora

Password

ENVIRONMI

Name

rhel-src.dlpx

OS

Linux (CentO

Timezone

America/New

User

oracle

Repository

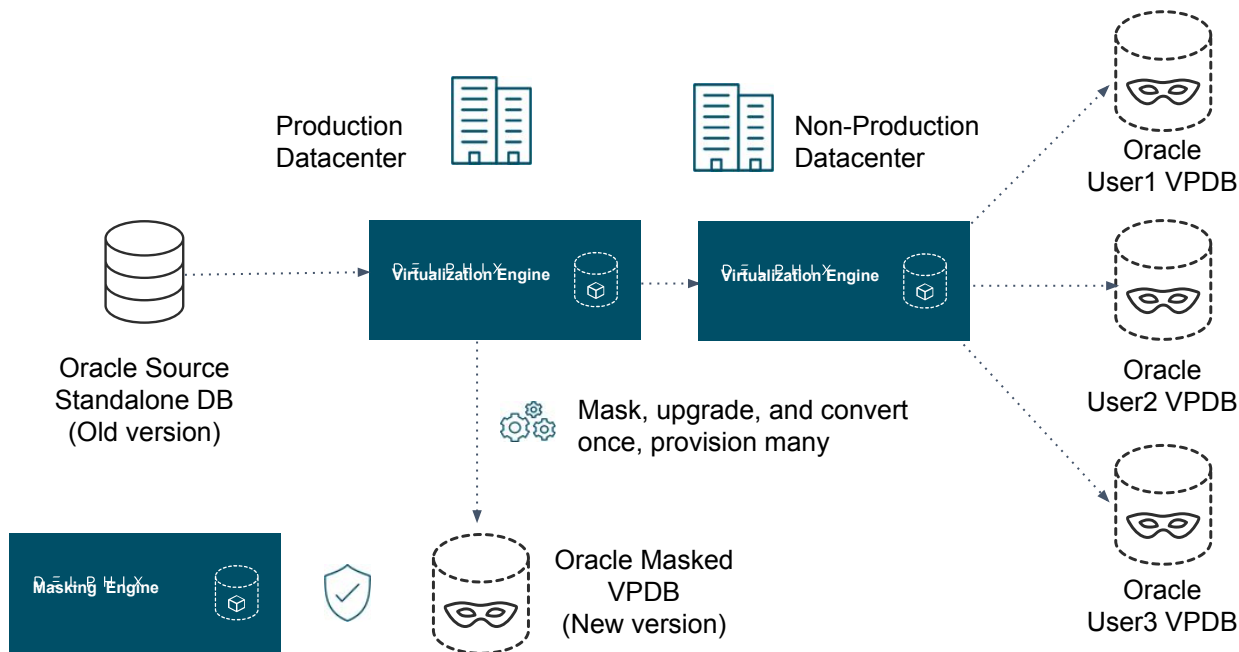
/u01/app/ora

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✓

Single to Multi-Tenant VDBs

- Oracle announced the end of support for single tenant databases in their 20c release, causing Oracle DB customers to plan their upgrade and migration programs.
- Delphix now supports provisioning a virtual pluggable database from a single tenant virtual database.



Multi-Column Masking Input and Output

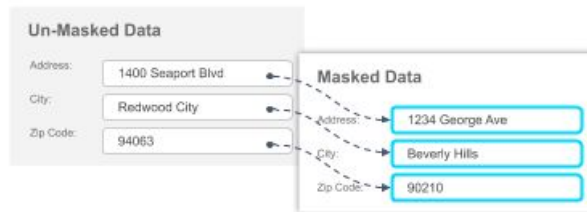
- You can now mask a group of columns together in the masking product instead of only individual columns.
- As an example, this could allow valid address masking.
- Further, this allows you to mask an individual column with logic that is based on inspecting the values of multiple columns on the record.

Single Column I/O



Data is changed one column at a time

Multi-Column I/O



Data from multiple columns is changed simultaneously

Multi-Column Algorithm Example

Multi-Column algorithm example payload

```
{
  "algorithmName": "multiColumnTest:MultiColumnDateAlgorithm",
  "algorithmType": "COMPONENT",
  "pluginId": 8,
  "fields": [
    {
      "fieldId": 1,
      "name": "startDate",
      "type": "LOCAL_DATE_TIME"
    },
    {
      "fieldId": 2,
      "name": "endDate",
      "type": "LOCAL_DATE_TIME"
    }
  ],
  "algorithmExtension": {}
}
```

Masking GUI

Edit Properties

Column Name

dob

ID Method

Auto

Domain

DOB

Select Logical Field

endDate

endDate

startDate

yyyy-MM-dd



Notes

Algorithm

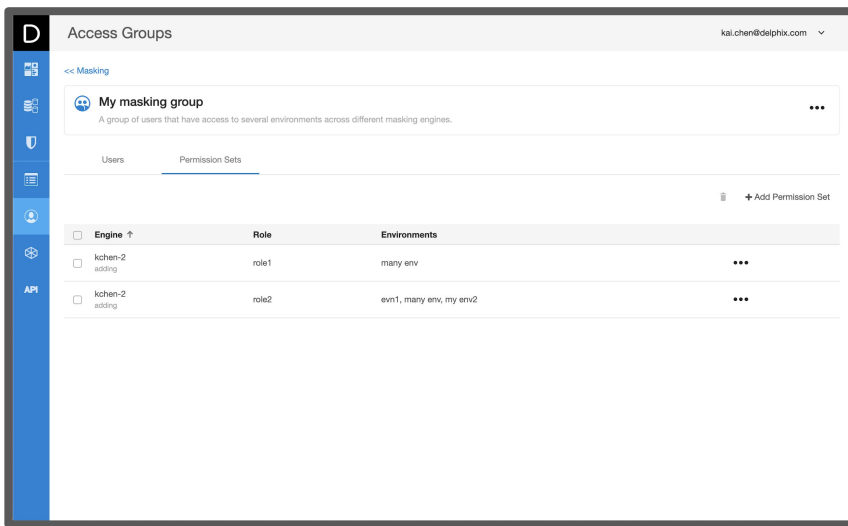
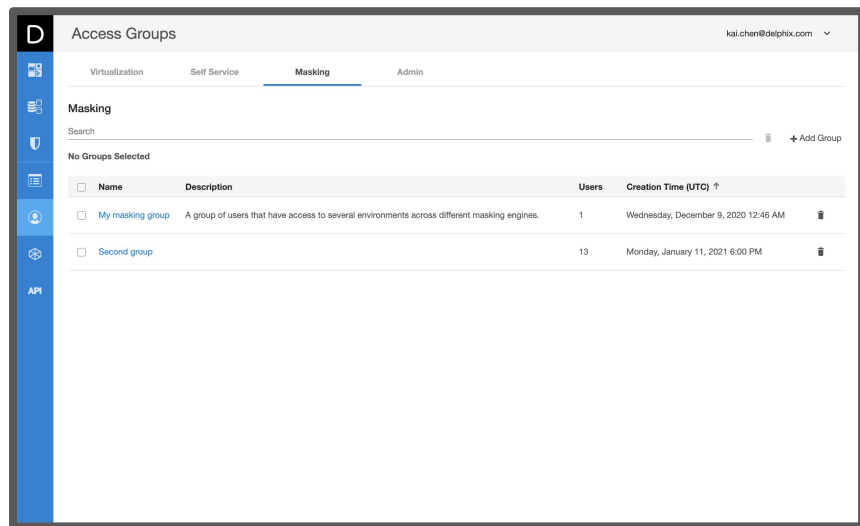
multiColumnTest:MultiColu...

Algorithm Group

1

Global Masking Users and Groups

- Data Control Tower now supports the central administration of masking users and permissions.
- Virtualization, self-service, masking and Data Control Tower admins are now all managed centrally.



Virtualization Users and Groups Changes

- The permissions for users and groups in Data Control tower could be changed by admins on the engine in the past.
- Now, once the engine has opted into Data Control Tower users and groups, the on-engine ability to set permissions are disabled.

Plugin Snapshot Parameter

- Virtualization plugin authors will now be able to define desired parameters to sync an AppData linked source.
- These parameters can be displayed in a dynamically generated form in the UI.

SNMPv3

- We have added support for the latest version of SNMP.
- Delphix Virtualization will now allow for encryption (CBC-DES) and hashing (MD5 or SHA) of SNMP messages.
- With SNMPv3, you can assign profiles in order to manage different encryption and hashing keys.

SNMP Configuration

Simple Network Management Protocol

☒ Enable

SNMP Version

☒ SNMP Version 3 (recommended) ☐ SNMP Version 2

System Status

Warnings and Alerts

Settings for SNMP GET request to query system status.

USM Users

Username	Authentication	Encryption	Actions
No Rows To Show			

System Location ⓘ

Unknown

Cancel

Save

New SNMP USM User Information

Username

Manager 1

Authentication Method

MD5

Authentication Passphrase

Encryption Method

DES

Encryption Passphrase

Cancel

Save

Virtualization SDK Support for Empty VDBs, Scratch Paths

Empty VDBs Support

- The virtualization SDK will now enable plugins to create empty virtual datasets without depending on a parent dSource.
- Teams starting a new project, where no production data is available, can now create empty virtual datasets using a plugin, populate it with test data and share it with the other members.
- All the data will be stored in Delphix, providing users with more flexibility from the first day of the project.

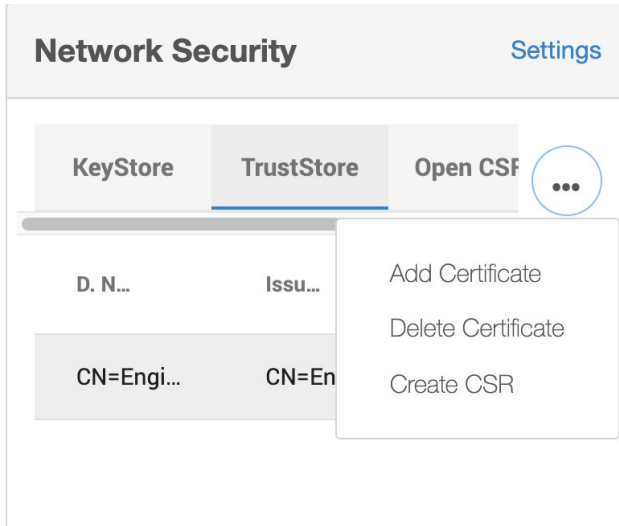
Scratch Paths Support

- Support for a scratch path will provide plugin developers access to a "scratch" directory on all source, staging or target hosts.
- The SDK will create a directory on each host and provide plugin authors a location to locally store information like debug logs, temporary scripts, etc.
- Plugin authors will no longer have to manage the creation of such directories for hosts.

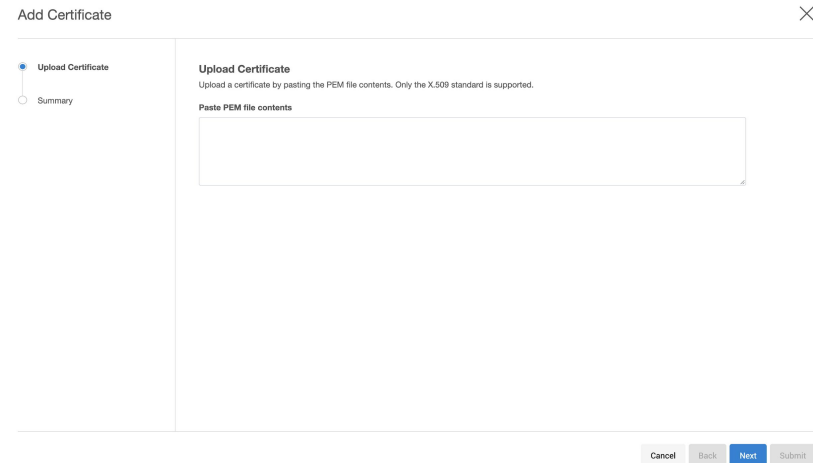
SSL Support for Masking SQL Server and Oracle

- Masking now supports SSL connectivity for masking jobs for both SQL Server and Oracle.
- Navigate to the setup application
- Upload trusted certificate
- All Delphix appliances share the same truststore, so uploading a certificate through the setup app will make the certificate available to the masking engine

1.



2.



Enabling SSL Connection

Create Connection

Type

Database - Oracle ▼

☐ Basic ☒ Advanced

Connection Name

☐ Use Kerberos Authentication

Login ID

ENTER ONLY CAPITAL LETTERS

Schema Name

ENTER ONLY CAPITAL LETTERS

Password

JDBC URL

DESCRIPTION=(ADDRESS=(PROTOCOL=tcps)

Custom Properties File ?

Select...

Test Connection

Cancel

Save

- Specific syntax to enable SSL will vary across databases. However, most JDBC drivers require modification to the connection URL.
- Example JDBC URL for Oracle
 - `jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS=(PROTOCOL=tcps)(HOST=servername)(PORT=2484))(CONNECT_DATA=(SERVICE_NAME=servicename)))`

EBS 12.2 Plugin with Sudo Privileges

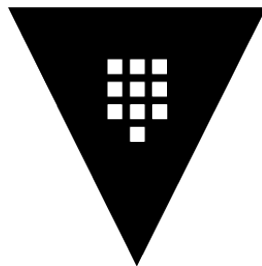
- We have added the Sudo privileges capabilities to the EBS 12.2 plugin.
- This capability allows users to elevate privileges from a low-privileged to high-privileged OS account using DLPX_DB_EXEC privilege elevation profile.

Solaris x86 to Linux x86 Oracle DB Provisioning

- You can now provision virtual databases from Solaris x86 dSources to Linux x86 target environments.

HashiCorp Namespaces Support

- We added support for the HashiCorp Vault Enterprise feature Namespaces.
- When setting up a HashiCorp Vault in Delphix, you can now set and pass a Namespace value that allows Vault administrators to support tenant isolation.



HashiCorp
Vault

Storage Capacity Management Improvements

Building on changes in the 6.0.3 release, the Storage Capacity Management UI has been updated to add automation for deleting snapshots with dependencies and heldspace.

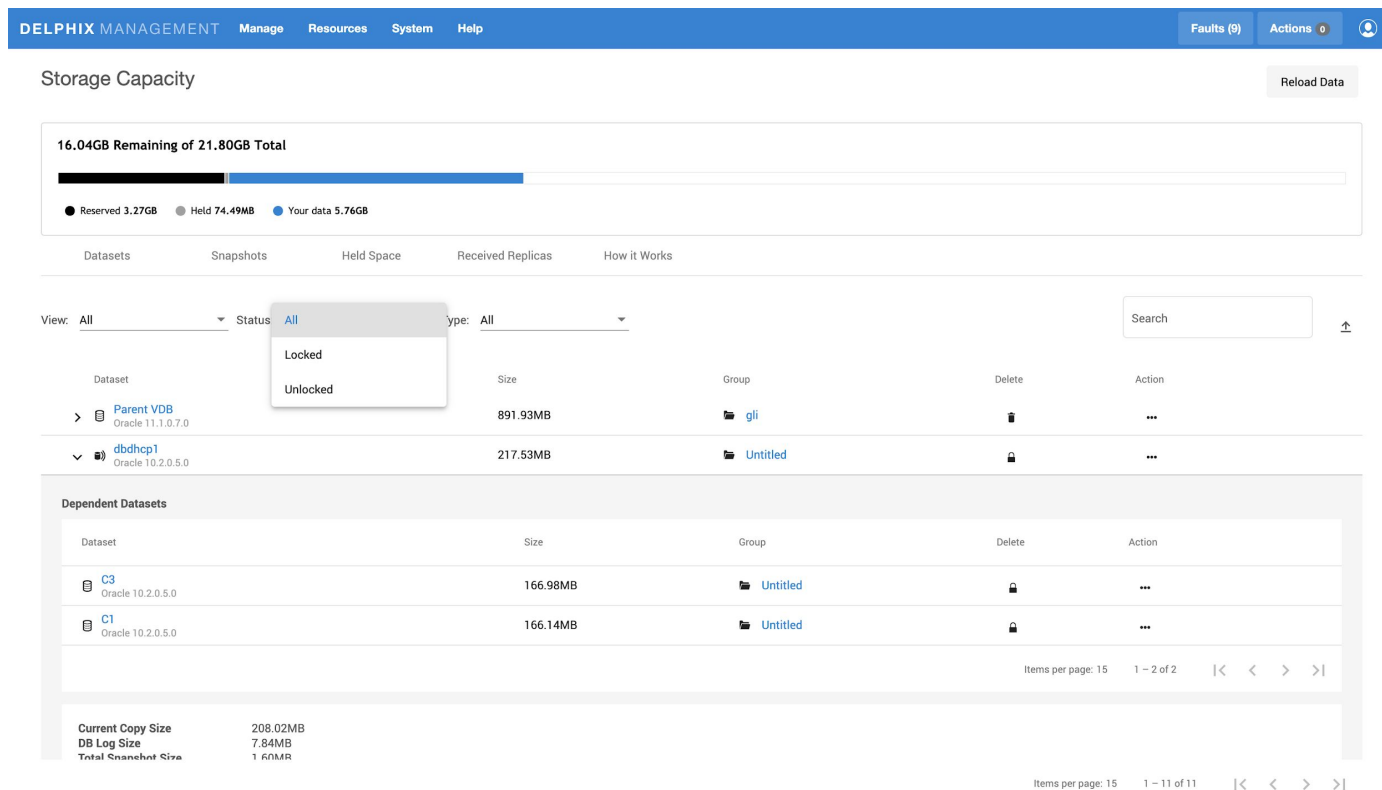
What's New:

- + Now you can refresh each dataset from the Datasets tab.
- + The new Dataset Why-Locked Dialog will display the textual description of a dataset's dependency tree.
- + The new Snapshot Why-Locked Dialog will display the textual description on how to unlock a snapshot that can't be deleted due to dependencies (steps may not be complete due to API limitation)

What's Removed/Changed:

- Retention policy setting on individual snapshots is moved to Dataset page.
- You can no longer view and sort database by log size in the graph. You can still view the log size of a specific dataset in the expanded dataset drawer.
- The table exported csv is missing some information

Storage Capacity Management UI



Dataset tab shows a list of datasets (containers) on the engine. Replicated datasets are excluded.

You can filter the list by whether the dataset is VDB or dSource, whether the dataset is locked or unlocked, and the type of the dataset.

Sorting can be done by clicking on the column name.

The drop down drawer of each dataset shows its detailed capacity information.

If the dataset has descendants, the drop down drawer will also show the list of **first-level** descendants.

You can delete or refresh (in the action menu) a dataset. If a dataset has descendants, the delete column will show a lock icon which opens a dialog explaining why this dataset is locked.

Certifications

The following certifications were completed through January 2021:

- Masking
 - DB2 on iSeries 7.4
 - GCP Cloud SQL Postgres
 - GCP Cloud MySQL
 - GCP Cloud SQL Server
- Virtualization
 - ASE 15.7/16 on RHEL 7.9
 - Oracle 12.1 on RHEL 7.9 and SLES 12 SP5
 - Oracle 12.2 on RHEL 7.9 and SLES 12 SP5
 - Oracle 19c on RHEL 7.9 and SLES 12 SP5
 - ESXi 7.0 U1