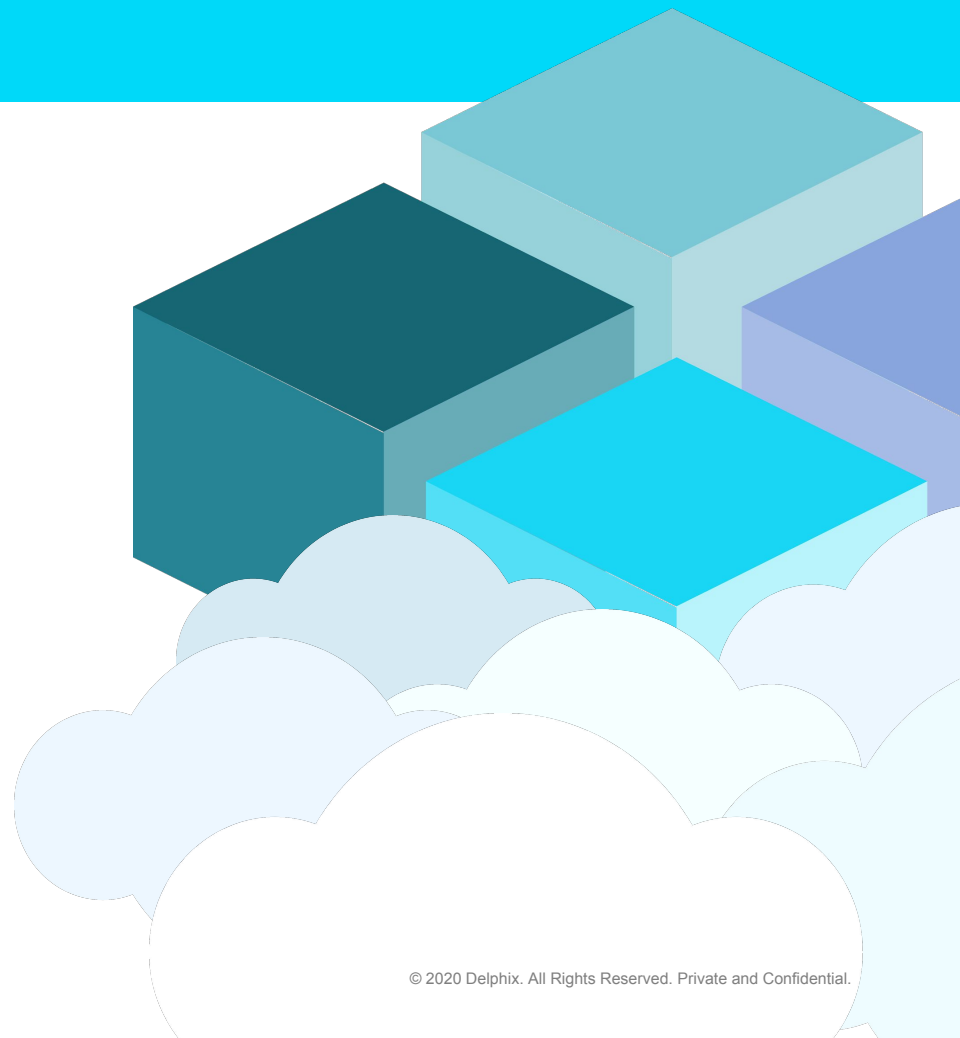# DELPHIX

Delphix 6.0.3

July 2020

Product Marketing

Delphix DataOps Platform 6.0.3: What's New

- High Level Updates

    - Masking Algorithm SDK

    - CyberArk Vault Support for Virtualization

    - Capacity Management

- Technical Updates

    - Powershell Upgrade

    - NFSv4

    - Plugin Upgrades, Phase 2

    - Support for Oracle Read-Only Homes

    - Shared Toolkit Directories over NFS

    - Replication Performance

    - UI-based Environment Sync

    - ASE VDB Upgrade

    - Certifications: Virtualization, Masking

Masking Algorithms SDK

The Algorithm SDK is a new framework that enables Delphix, our partners, and you to create and share new masking algorithms.

The SDK enables you to develop algorithm extensions using industry-standard Java language and tools, without the detailed Delphix masking product internals knowledge previously required to write custom algorithms.

Types of Algorithms

You can create the following types of algorithms to mask your data:

- String
- Date
- Numeric
- Binary (images)

```java
/**
 * Mask String object
 * @param input The String object to be masked.
This method should handle null inputs
 * @return Returns the masked value.
 */
@Override
public String mask (@Nullable String input) {
        // TODO: change the default
implementation
        return "Jason";
}


/**
 * Get the recommended name of this Algorithm.
 * @return The name of this algorithm
 */
@Override
public String getName() {
        // TODO: Change this if you'd like to
name
        // your algorithm differently from the
Java class.
        return "TheJasonAlgorithm";
 }
}
```

Masking Algorithm SDK

Create and share new masking algorithms in a much simpler way
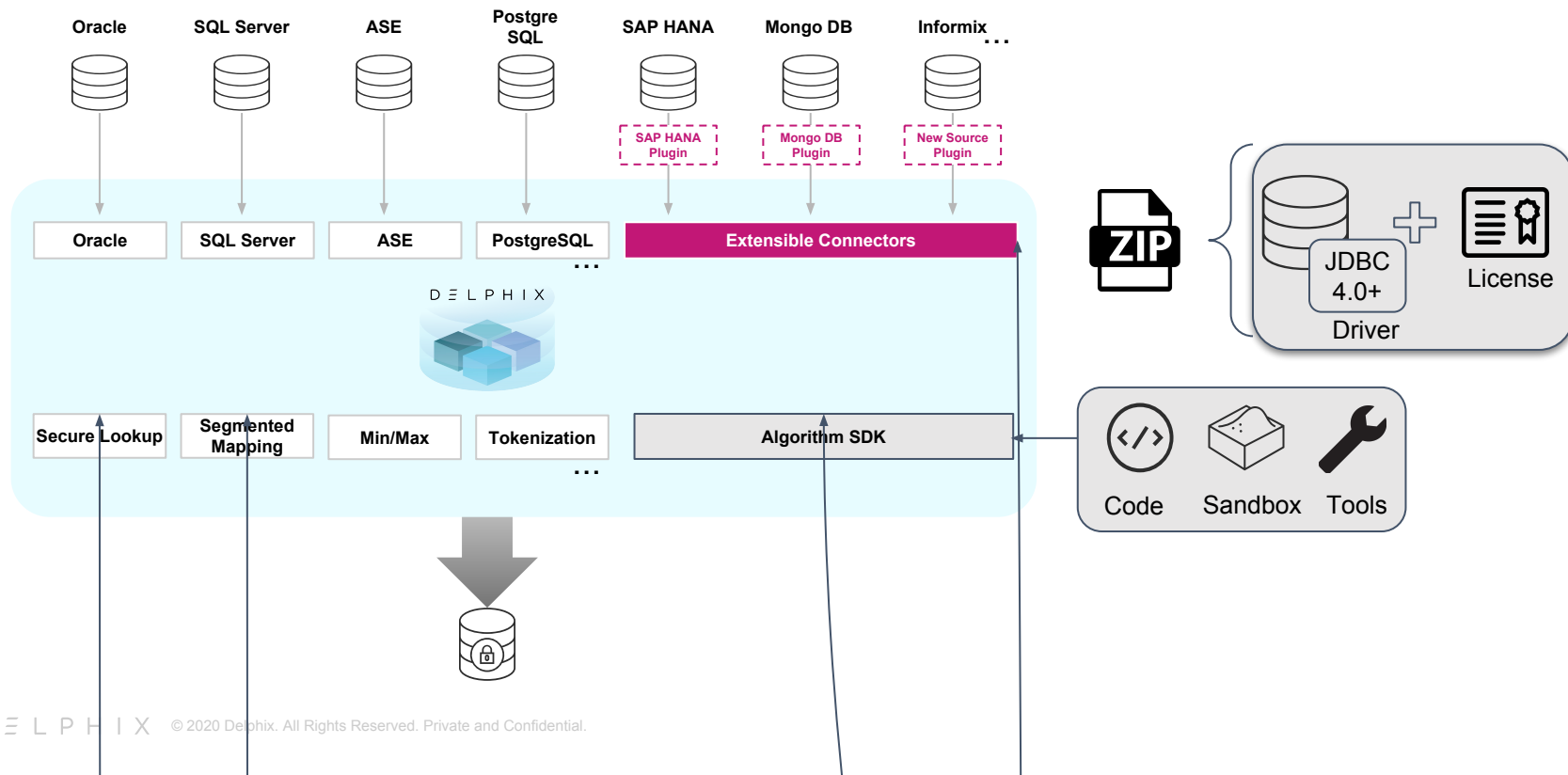
CyberArk Vault Support for Virtualization

Added CyberArk support via UI/CLI/API to the Delphix virtualization engine by offering vaults as a new authentication option for your environments and databases. This minimizes the number of places where credentials need to be stored and therefore the risk of insecure storage.

- System Administrator can manage (add/delete/modify) vault configurations during the setup of the Delphix engine or later.
- Add multiple vault configurations to a single engine.
- Available for engines with version 6.0.3 or later.
- Users are required to provide a client certificate and private key along with CA certificate to set up connection with a CyberArk vault.

CYBERARK®

CyberArk Vault Support for Virtualization

- Engine Administrator can use host users from one of the configured vaults to create environments.
- Engine Administrator can select users from one of the configured vaults to connect to databases and create dsources.
- Upgrades to 6.0.3 or later from 6.0.1 or earlier should not be impacted as CyberArkVaultCredential is provided as a new configuration option at all places not affecting existing configurations. Upgrades from 6.0.2 have been covered with required translators to convert VaultCredential to CyberArkVaultCredential.
- The vaults on the customer site should be up and running for the Delphix engine to successfully retrieve the credentials and make connections.

CyberArk Vault Support UI

CyberArk certificate added

Network Security Settings

KeyStore | TrustStore | Open CSRs | ...

D. Name	Issued ...	Expires
CN=Engine ...	CN=Engine ...	Apr 20, 202...
CN=cyberar...	CN=cybera...	Jan 10, 202...

CN=cyberark.local, OU=BizDev, O=Cyberark, L=Newton, ST=MA, C=US   More info

Issued To	CN=cyberark.local, OU=BizDev, O=Cyberark, L=Newton, ST=MA, C=US
Issued By	CN=cyberark.local, OU=BizDev, O=Cyberark, L=Newton, ST=MA, C=US
Serial Number	6076310049607000360
Valid From	Jan 10, 2019 8:16:00 PM UTC
Expires	Jan 10, 2029 8:16:00 PM UTC

Certificate Information❓

CyberArk Vault Configuration

Add Password Vault   ✕

Vault Type
CyberArk

Vault Name
DemoVault

Vault URL
cyberark02.delphix.com

Port
443

App ID
Delphix

Authentication Certificate
XPZYrkLWP9vsoSnYGL+CD+I1XmXf3x17ShHGzFQYZLUQtRDItALc48TD7JZSJ0/J
IgDwMk6gjEkiI7tOSVfB/XbZfs+qt4degcwfIU7tcrd2XFkYgVXPy31SyHWc7DXt
jq5kl/D4wlzaQBzGkg==
-----END CERTIFICATE-----

Cancel | Save

Add/Modify Host Users on CyberArk

Add Environment

Host and Server
Environment Settings
Summary

rhel-env
Host Address
rhel64-sybase-ase-vault.dlpxdc.co
SSH Port
22
Login Type
○ Username and Password
○ Username and Public Key
● Password Vault
Username
anyname
Select the Enterprise Password Vault system
DemoVault
Enter the Query String
safe=test;folder=root;object=UnixSSH-sybase
Validate
Valid Credentials

Cancel | Back | Next
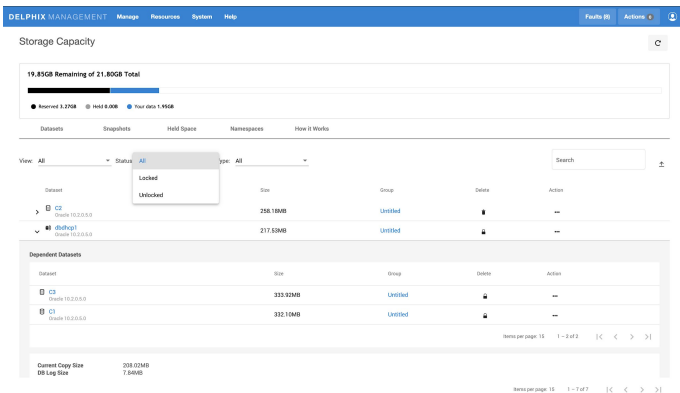
Capacity Management

Numerous enhancements were added to the UI to display storage usage and help you manage capacity.

- Usage Graph

- Dataset tab

- Snapshot tab

- Held Space tab

- Received Replicas tab

- How it works tab

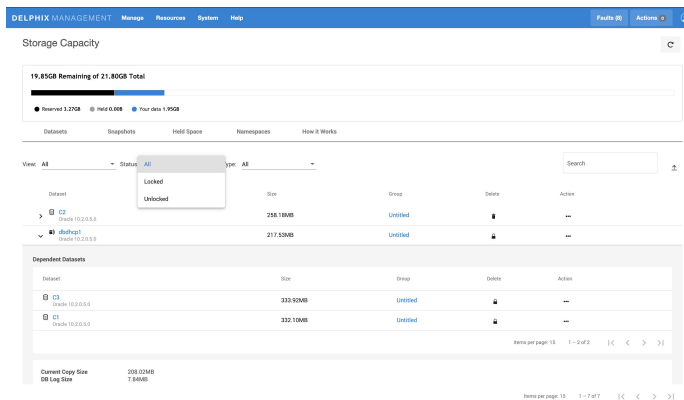# Capacity Management UI

Usage Graph

Shows amount of space occupied:
- Reserved
- Held Space
- Actual data
- How much space remains on the system.

The amount of reserved space is hard-coded to be 15% of the system capacity and cannot be changed

Dataset Tab

Shows a list of datasets (containers) on the engine ordered by size:
- Filter list by whether the dataset is VDB or dSource, whether the dataset is locked/unlocked, and by type
- Drop down for each dataset displays metadata; if the dataset has descendants, the drop down also shows list of **first-level** descendants.
- Delete or refresh (in the action menu) datasets; if a dataset has descendants, the delete column shows a lock icon which opens a dialog explaining why dataset is locked.
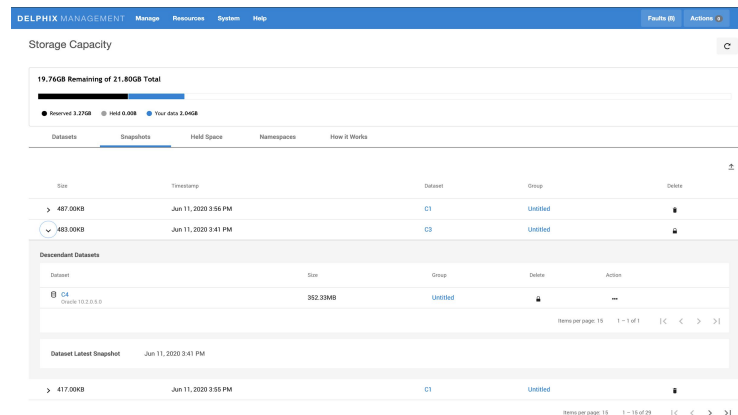
Capacity Management UI

Dataset Why Locked Dialog
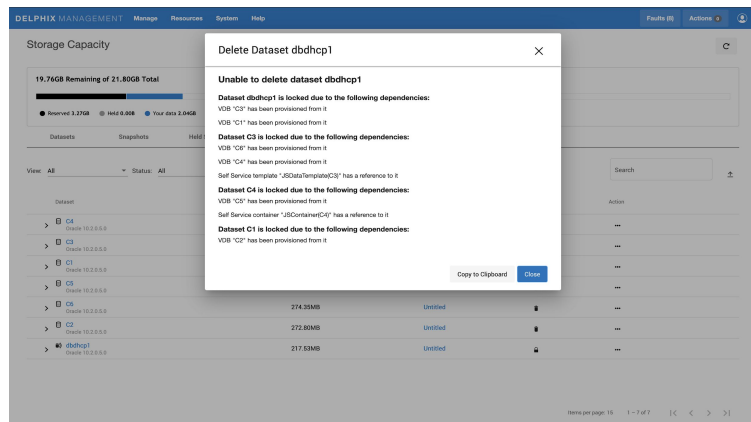
Shows you **all** descendants of a dataset, as well as any self-service containers on any of the descendant datasets:
- You can trace the chain of descendents from the current dataset all the way to leaf datasets.
- Click "Copy to Clipboard" to copy the list of descendants to clipboard.

Snapshot Tab

Shows list of snapshots in the engine ordered by size:
- Drop down shows latest snapshot date of the dataset this snapshot is from; if snapshot has descendants it also shows **first-level** descendants datasets
- You can delete and/or refresh the descendant datasets from the drop down if they are not locked.
- You can delete each snapshot on each row; if snapshot has descendants or bookmarks, delete column shows locked icon indicating this snapshot is locked - clicking on the lock icon will display the snapshot why-locked dialog
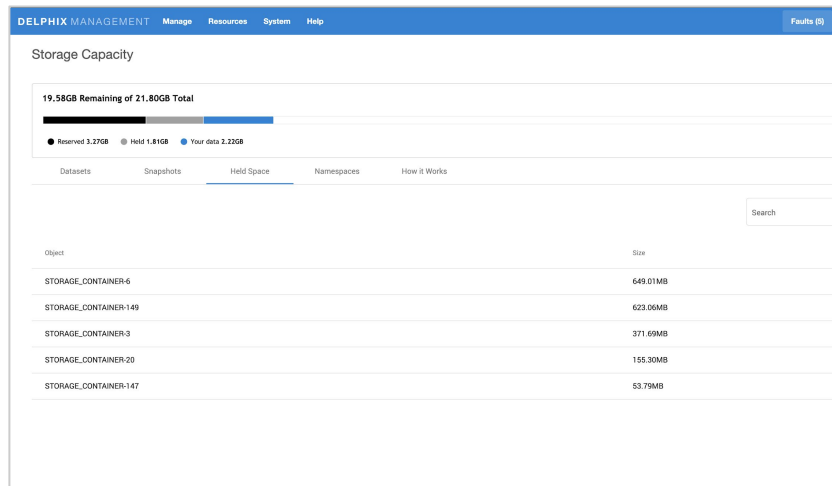
Capacity Management UI

Held Space Tab

Received Replicas Tab
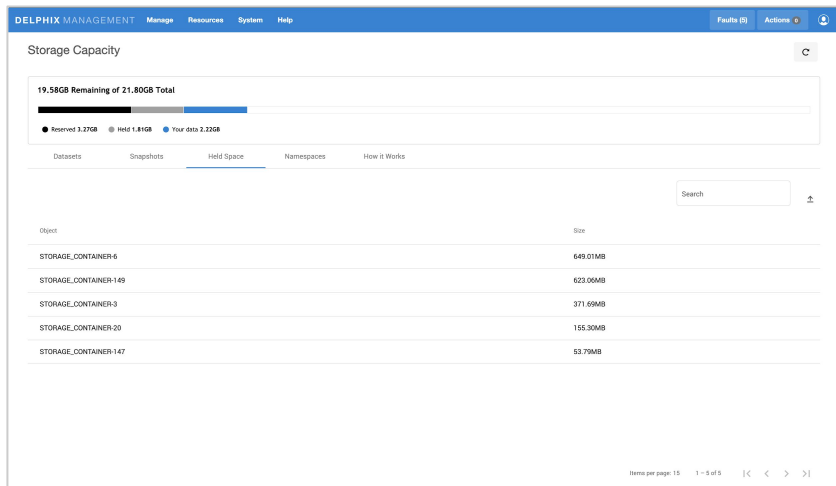
- The held space tab shows the list of held spaces (deadbeat containers) on the system sorted by size.
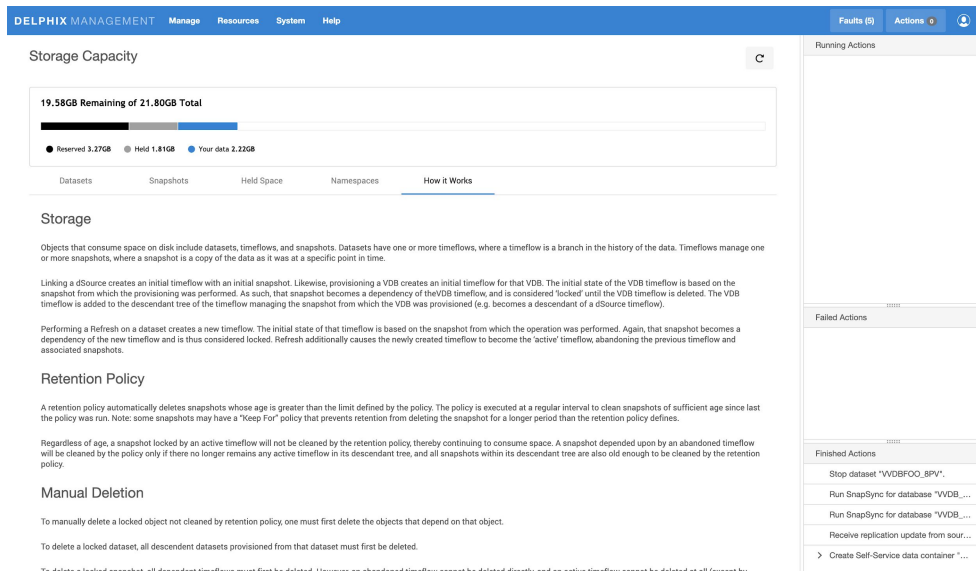- You can search the held spaces by their names (in this case their references)

- The Received Replicas Tab shows the list of replication replicas received by the current engine, sorted by each replica's size.
- The drop down drawer lists groups inside of each replicas sorted by size.

Capacity Management UI

How It Works

Provides some additional information on:
- How storage is consumed
- How Retention Policy works
- How to manually delete a locked object

Powershell Upgrade

- Reduced requirements for Windows hosts running PowerShell by allowing you to use any PowerShell version from 2.0 to 5.1.
- Delphix will now use the default available PowerShell version on each host. When specifying hooks (such as "configureClone"), the users may specify whether to use 2.0 or the PowerShell version installed on the host.

NFSv4

- Expanded the support for NFSv4, with the additions of RedHat 6.3 and newer for all supported database platforms.
- We may add additional configurations in the future, depending on your needs.

Add a new Hook Operation ✕

Hook Point

Pre Sync

Operations performed before a sync with external data.

Enter a Name

Enter a name

Operation Type

✓ Run PowerShell Command (with default version)
Run PowerShell Command (with version 2)

Script

Enter command (or leave blank)

Cancel   Create

Create a hook with a Powershell version

Plugin Upgrades - Phase Two

- Simplifies your plugin upgrades by allowing users to upgrade your plugins (e.g. Db2, EBS, etc.) once they have been migrated to the Python framework from Lua.

Support for Oracle Read-Only Homes

- Added support for Oracle read-only homes, which is a new Oracle home setting available with Oracle 18c.
- Oracle databases with read-only home enabled will write data and log files to a different directory outside of the read-only home.
- Location of files can be identified by new tools provided by Oracle.

Shared Toolkit Directories over NFS

- The Delphix Engine requires that every host includes a local directory to hold the Delphix toolkit. This can be problematic from a maintenance standpoint that can be further exacerbated when cluster architectures come into play.
- Removed the local storage requirement for toolkit directories by offering an alternative - supporting a central directory for toolkits over NFS.

Replication Performance

- Improved multi-object and single-object replication throughput.
- As replication performance can be affected by multiple factors, including customer infrastructure, we are prioritizing changes that cover a number of known use cases tracked by the product and support teams.
- We expect to keep improving replication performance for our future releases as we learn from user experiences with 6.0.3 and beyond.

UI-based Environment Sync

- Over the past several releases we've added and refined the ability to synchronize objects between Masking engines via the API
- We now support importing and exporting environments via the UI.
- Note that this will replace the previously available XML import/export that has been deprecated
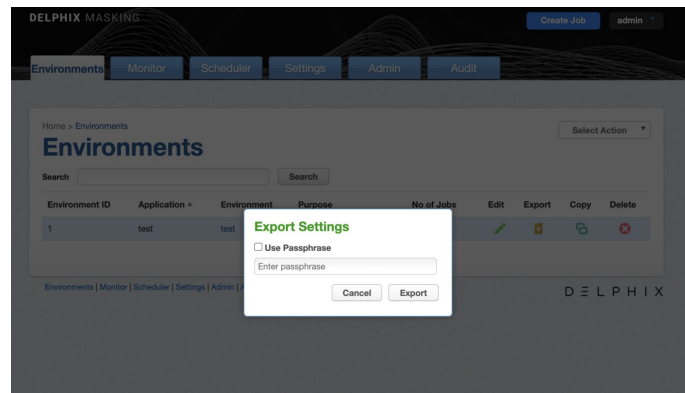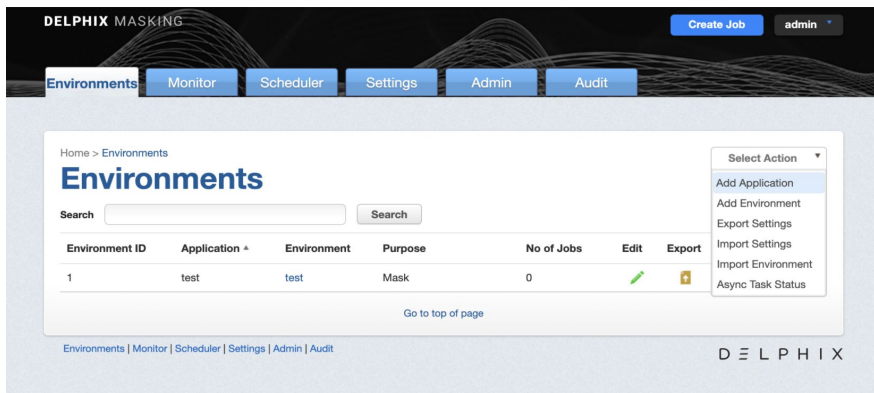
ASE VDB Upgrade

- SAP ASE customers will now be able to validate DBMS upgrades with this feature that enables provisioning VDBs to a higher version than the source DB (for example, ASE 15.7 -> ASE 16).

Certifications

Virtualization:

- EBS 12.2 with RHEL 7.6
- PostgreSQL 9.6 with RHEL 7.7 and 7.8, PostgreSQL 12.1 and 12.2 with RHEL 7.8
- DB2 11.1 with RHEL 7.8, DB2 11.5 with AIX 7.1
- Oracle 11g R2, 12c R1, 12c R2, 18c, 19c with RHEL 7.8 (certified for 5.3.9.0 & 6.0.3.0+)
- Litespeed 8.9 (encrypted and unencrypted) for MSSQL 2016 on Windows 2016 (certified for 5.3.9.0 & 6.0.3.0+)

Masking:

- AzureSQL
- Azure Database for PostgreSQL service
- Azure Database for MySQL service
- Azure Database for MariaDB service