

D E L P H I X

# Delphix 6.0

<Presenter> | January 22, 2020

# Delphix Dynamic Data Platform: 6.0 New Features - High Level

Google Cloud Support

# Delphix Dynamic Data Platform: 6.0 New Features - Technical

Masking NFS/CIFS Mount

Enhanced Elastic Networking Adapter (ENA) Support

Masking API Updates

Improved Upgrade Experience

# Google Cloud Support

- With Delphix 6.0, we support Delphix running in GCP for existing supported masking and virtualization databases.
- Supported instances: n1-standard-32, n1-standard-64, n1-standard-96, n1-highmem-32, n1-highmem-64, and n1-highmem-96

D E L P H I X

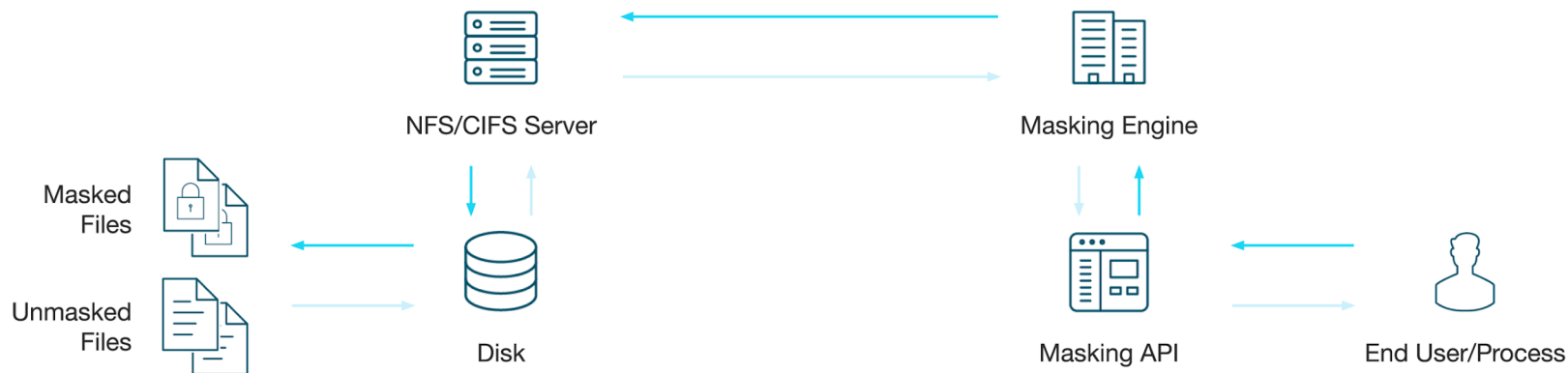


Google Cloud

# Masking NFS/CIFS Mount

- Enable direct mount and mask a file system over NFS and CIFS
- Simplifies the process of file masking versus old way via FTP/SFTP

## NFS/CIFS File Masking



# Enhanced Elastic Networking Adapter (ENA) Support

- Support networking on AWS instances with the Elastic Network Adapter (ENA)
- Key benefits of enhanced networking include:
  - Higher bandwidth
  - Higher packet per second (PPS) performance
  - Lower inter-instance latencies

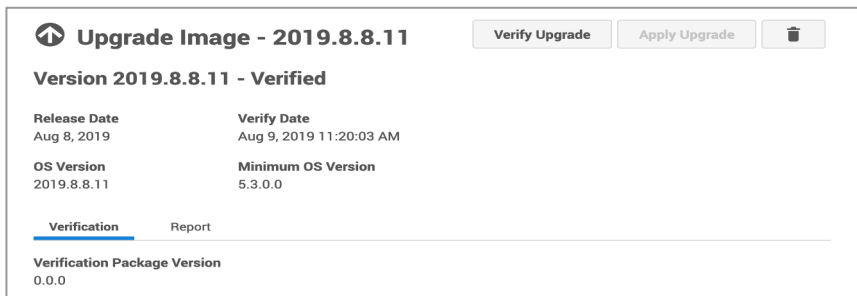
# Masking API Updates

- 6.0 introduces a variety of updates for existing endpoints:
  - Delete an application by ID
  - Endpoints moved from incubating to stable state
  - Use masking API client to retrieve endpoint list
  - Adds versioning for the masking API: Specify a version of the API to access historical functionality

# Improved Upgrade Experience: User Experience

## Small changes to version details

- “OS Version” will always be the same as version
- “Minimum OS Version” is the lowest running version that supports deferred upgrade.
- Verification package version is the version of verification checks bundled with this upgrade image



The screenshot shows a web interface for upgrading an image. At the top, it says "Upgrade Image - 2019.8.8.11" with a circular arrow icon. Below this, it says "Version 2019.8.8.11 - Verified". There are three buttons: "Verify Upgrade", "Apply Upgrade", and a trash icon. Below the buttons, there are two columns of information: "Release Date" (Aug 8, 2019) and "Verify Date" (Aug 9, 2019 11:20:03 AM), "OS Version" (2019.8.8.11) and "Minimum OS Version" (5.3.0.0). At the bottom, there are two tabs: "Verification" (selected) and "Report". Under the "Verification" tab, it says "Verification Package Version 0.0.0".

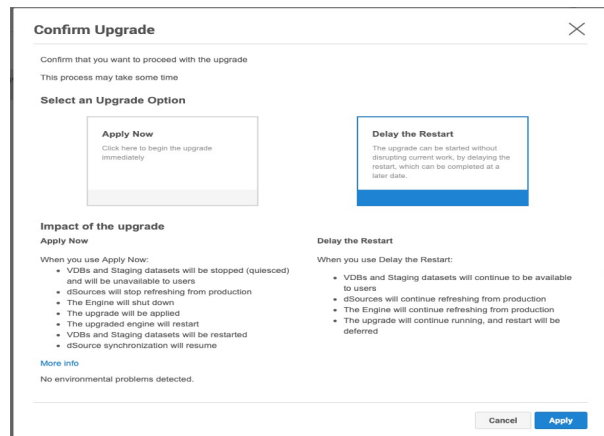
Release Date	Verify Date
Aug 8, 2019	Aug 9, 2019 11:20:03 AM

OS Version	Minimum OS Version
2019.8.8.11	5.3.0.0

Verification Package Version 0.0.0

## Deferred upgrade a UI option

- Default to deferred upgrade
- The other option is FULL upgrade
- Deferred upgrade will have zero VDB downtime.



The screenshot shows a "Confirm Upgrade" dialog box. It has a title bar with a close button. The main text says "Confirm that you want to proceed with the upgrade. This process may take some time." Below this, it says "Select an Upgrade Option". There are two options: "Apply Now" (with a subtext "Click here to begin the upgrade immediately") and "Delay the Restart" (with a subtext "The upgrade can be started without disrupting current work, by delaying the restart, which can be completed at a later date."). Below the options, there are two sections: "Impact of the upgrade" and "Delay the Restart". The "Impact of the upgrade" section has a subtext "Apply Now" and lists the following: "VDBs and Staging datasets will be stopped (quiesced) and will be unavailable to users", "dSources will stop refreshing from production", "The Engine will shut down", "The upgrade will be applied", "The upgraded engine will restart", "VDBs and Staging datasets will be restarted", and "dSource synchronization will resume". The "Delay the Restart" section has a subtext "When you use Delay the Restart:" and lists the following: "VDBs and Staging datasets will continue to be available to users", "dSources will continue refreshing from production", "The Engine will continue refreshing from production", and "The upgrade will continue running, and restart will be deferred". At the bottom, there are two buttons: "Cancel" and "Apply".

Confirm Upgrade

Confirm that you want to proceed with the upgrade  
This process may take some time

Select an Upgrade Option

**Apply Now**  
Click here to begin the upgrade immediately

**Delay the Restart**  
The upgrade can be started without disrupting current work, by delaying the restart, which can be completed at a later date.

**Impact of the upgrade**  
Apply Now

When you use Apply Now:

- VDBs and Staging datasets will be stopped (quiesced) and will be unavailable to users
- dSources will stop refreshing from production
- The Engine will shut down
- The upgrade will be applied
- The upgraded engine will restart
- VDBs and Staging datasets will be restarted
- dSource synchronization will resume

[More info](#)  
No environmental problems detected.

**Delay the Restart**  
When you use Delay the Restart:

- VDBs and Staging datasets will continue to be available to users
- dSources will continue refreshing from production
- The Engine will continue refreshing from production
- The upgrade will continue running, and restart will be deferred

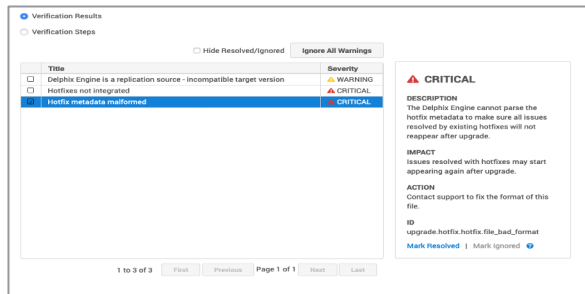
Cancel Apply



# Improved Upgrade Experience: User Experience

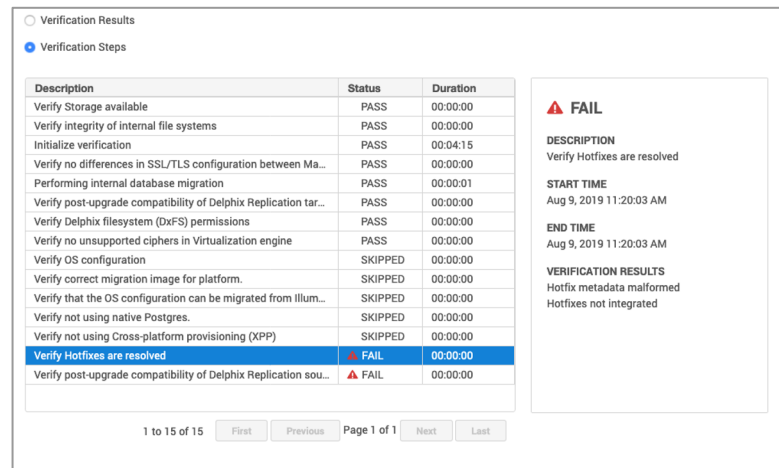
## Refactor upgrade verification to conform to UX standards

- List Upgrade Checks in table structure similar to Faults and Alerts
- Reset of status is no longer supported from Web but is available from CLI
- Informational checks no longer have to be acknowledged



## Display new information about verification processing

- List the full set of actions performed, and their duration



# Improved Upgrade Experience: Multiple Upgrade Types

- **Deferred Upgrade**
  - If version is greater than “Minimum OS Version” then it is possible to do a Deferred upgrade
  - Requires no VDB downtime
- **Full**
  - If version is less than “Minimum OS Version” then a Full upgrade is the only option available
  - Requires VDB downtime
- **Finish Deferred**
  - After one or more Deferred upgrades, this upgrade type will appear on the latest running Deferred version

# Improved Upgrade Experience: Verification Checks

- New upgrade checks have been implemented
  - MDS/ZFS consistency check
  - Domain0 > 90% storage check
- Stack startup verification
  - Runs after MDS migration and upgrade checks
  - Brings up MGMGMT service in a read-only mode, to verify that all stack initialization completes successfully
- Masking flyway migrations
  - Masking migrations are now performed alongside virtualization migrations, so masking flyway migration issues will be detected

# Improved Upgrade Experience: Verification Changes

- **Verification in Container**
  - Verification is now run in an “nspawn” container
- **In-Place verification**
  - When the upgrade will NOT require a reboot, then we can upgrade “In-Place”
  - Will upgrade on top of the existing root file system
  - Take a snapshot of the root file system, and do the upgrade verification in a container that uses running root file system.
- **Fresh (not-in-place) verification**
  - When the upgrade will require a reboot, then we create a brand new root file system
  - The verification container will use the new file system as its root