reachENGINE
by Levels Beyond

Version 2.14.0

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▶ **Reach Engine Core**
▶ **Adobe Panel Extension** (OnePanel)

The platform developed for the world's largest media creators, is now available to all the world's media creators.

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REACH ENGINE Core

Duplicate an Existing Workflow

What's New?

From the Workflows Admin Page, Administrators are now able to duplicate an existing Workflow to reuse that workflow's capabilities in conjunction with Editing Workflow DataDefs to solve another use case without editing XML.

- Select any workflow in the system and duplicate it in just a few clicks
- Reach Engine will ensure the workflow is versioned properly and won't overwrite any existing workflows
- Immediately start editing the workflows properties, including its default data definitions to customize it to the new use case
- Export the workflow's XML as needed for more advanced modifications or changes in business logic.

Why is it Valuable?

A large part of the new workflows created in the system are based on existing workflows, where just a few parameters must be adapted. Typically an ingest workflow from a watch folder with hi-res transcode, lo-res proxy creation and metadata ingest might be duplicated 10 times because the watch folder will change and the metadata that need to be ingested will be different. By duplicating the workflow and allowing to modify some parameters (here : the watch folder and the metadata group assigned by default to the workflow), Reach Engine provides an easy way to add workflows without digging into one single line of XML code.

Client Story

Recently one of my vendors changed the spec on the video we need to be delivering to them. Now it's up to me to update my transcoding profiles and make sure my export workflows are utilizing this new preset. Now it's easier than ever to make those changes in Reach Engine. First I need to determine if that preset is needed for any other workflow and if so I can easily duplicate the workflow by using the new **Duplicate an Existing Workflow** feature and then using the **Edit Workflow DataDefs** feature I can go in and add the new transcoding profile to the workflow.

Edit Workflow DataDefs in the UI

Context DataDefs provide you with workflow variables that can be used to accept external input to your workflow, maintain and communicate data between steps and sub-flows, store the result of a workflow, and have a default value based on the fields of Assets or other Reach Engine DataObjects. When in Workflow Edit Mode in the UI I want to be able to view, add or edit the parameters of my workflows (DataDefs) without editing XML or exporting / importing the workflow manually.

What's New?

- When editing a workflow a new tab is displayed in the right curtain enabling an Administrator to view and edit the Context Data of a Workflow
- DataDef display order in a user input modal can be modified by dragging and dropping a DataDef up or down in the curtain
- Any of the existing DataDef attributes and their values can be edited
- Any changes to the DataDefs will be validated upon save to verify the workflow will be usable
- UI changes to DataDefs will be reflected in the Workflow XML the next time it is exported for advanced modification

Why is it Valuable?

- Providing a new UI to Edit the workflow parameters, does not require any coding skills and will allow your Administrators become more autonomous in the way they manage their workflows.
- Primary workflows, especially those that are exposed to end users, can be rapidly modified as business needs evolve
- Use of Dynamic Properties can be reduced and instead variables can be modified directly in the workflow
- In conjunction with the Duplicating an Existing Workflow feature, workflows can be templatized, modified and exposed to end-users in a matter of minutes.
- Some example use cases
  - Modify the metadata form presented to a user
  - Change the default metadata stored on assets that are run through a particular ingest workflow
  - Change the Transcoder preset used by an ingest or delivery workflow
  - Make an input field in a workflow form required with one click
  - Add and modify custom picklist values presented in a Workflow modal
  - Hide optional fields that are no longer relevant to a workflow

Client Story

- As a media manager in an evolving organization there are times when a department might update or change its name. If I am tracking the organization that is adding content to my Reach Engine it would be extremely helpful if I could update that metadata field without needing a brand new workflow. For example, I have a broadcast team uploading international source content this group was name International Broadcast but have grown and now I have EMEA Broadcast

- As a media manager I see an opportunity to help my users find content quicker by narrowing down content with the use of an additional metadata field. In order to do this I would like to update the ingest form to require that additional field or to change that field name, such as "season", "long form or short form", "promo", etc.

- As a Media Manager I've been asked by our licensing team to ingest and tag a large library of new content to meet a contractual obligation. I need to do so in the easiest, most efficient way possible because I do not have the time to train new people to become media managers. I'd like to provide an end user a Reach Engine watch folder on a managed network location to drop content into. That content would be automatically tagged with the relevant metadata that would make it easy to identify for modification and or distribution from the RE
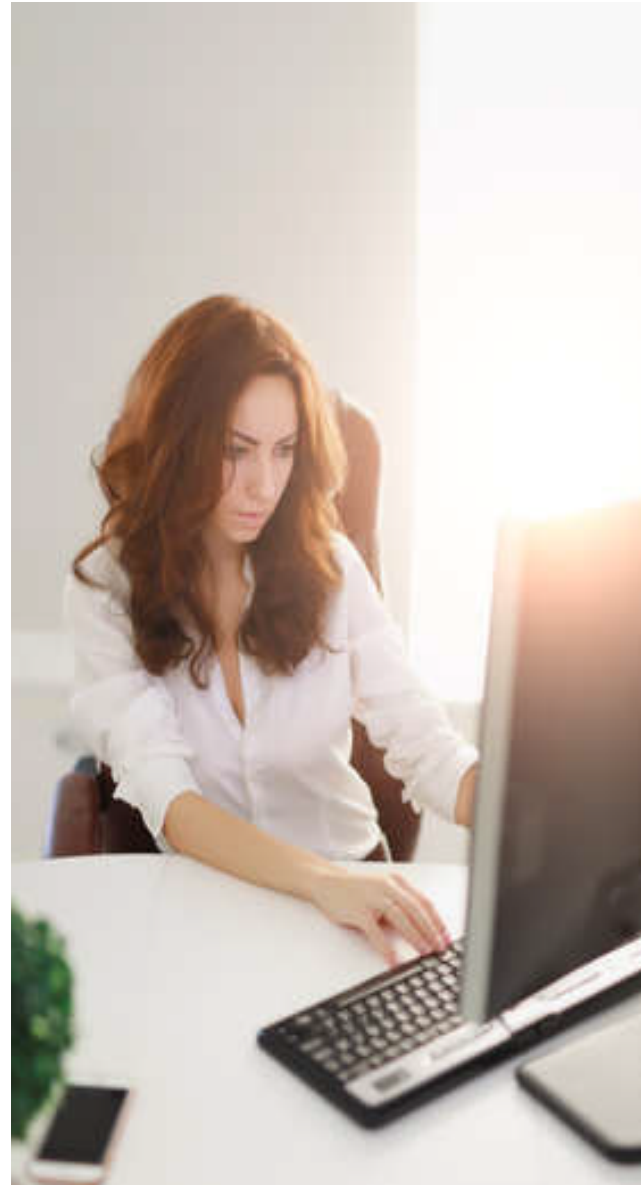
Workflow Level Prioritization

Entire Workflows now support a prioritization level allowing their priority to be evaluated when executing so the most important work is done first. No workflow updates are required to start using prioritization and any workflow can have a static priority value or dynamic prioritization expression applied directly in the UI. Workflow authors can do the same when authoring workflow XMLs. The higher the priority number the higher the priority.

What's New?

- In the Edit Workflow sidebar, an Administrator can quickly set one of five predefined priorities for any workflow. The five default priorities are:
  - No Priority - 1
  - Low - 2
  - Medium - 3
  - High - 4
  - Critical - 5
- All existing workflows will have a default lowest value of 1.
- A Workflow's priority can be set with a Custom value via an expression that evaluates to a number. The higher the number the higher the priority.
- Workflow Authors can set default prioritizations in their Workflow XML files via the priority header.
- Workflow admin page has a sortable column showing the prioritization setting of workflows.
- The Workflow Status Page includes a column showing the priority of any scheduled or executing workflows, including their evaluated custom priority values.

Why is it Valuable?

- Clients have a need to define and control their most important work and enforce that it is completed first by defining a priority for the work. This will allow them to guarantee service level commitments, prioritize the most important or profitable work, deprioritize non-critical work.

- Under high load situations or for clients that have cost and resource constraints they can make the most effective use of their available resources.

- An Administrator can set static priority rules for their workflows visually and at anytime. An Administrator can set dynamic priority rules (i.e. expressions) for their workflows visually and at anytime. A workflow author can set a static or dynamic priority value on a workflow XML.

- For executing Workflows, a user can understand when their scheduled workflow might start executing by viewing the other scheduled workflows and their priority. Additionally, workflows can be sorted by their priority to understand which work is most important.

Important Notes:

The expressions and data object(s) that are available to evaluate in a custom priority are limited to those which can be evaluated before they are processed by a runtime (as priority is handled at the scheduler). A basic rule of thumb is to only attempt to evaluate an expression that includes data that is available in the user space and not the "backend" of reach engine. For example, the date / time, username or role would be evaluated for priority. The amount of executing workflows or the results of an asset query would not be evaluated for priority.

Edit Workflow ✕

Details   Context Data

ID
244

Name*   ✕
Create Proxies Any Asset

Group   ▼

Roles   ▼

⬤ Enable Workflow

| 🔍

No priority
Low
Medium
High
Critical
Custom

Priority   ✕
No priority

Priority   ✕
Custom

Custom Priority - expression or number ✕
startedByUsername.equals("vip")? 10

S3 Transfer Acceleration Support

What's New?

- Use it on any AWS S3 bucket
- Enable it in the AWS Console and then on the Reach Engine Filesystem
- Can be applied to any existing buckets in use
- Multiple RE filesystems can be created and applied to the same bucket to apply acceleration to different use cases. For example enable acceleration for proxies but not for source files.

Why is it Important?

- Save valuable time by accelerating user file uploads and user download especially over long distances
- Test baseline improvements with the AWS tool here:

  http://s3-accelerate-speedtest.s3-accelerate.amazonaws.com/en/accelerate-speed-comparsion.html

Important Notes:

If acceleration is enabled in RE but not the bucket then interactions will fail. Reach Engine will NOT fall back to non-accelerated interaction if not enabled on the bucket. Reach Engine will likely receive and log "404 Not Found" errors in this situation. Additionally, some geographic situations may see transfers slow with transfer acceleration enabled.

Real-World Test Results

Performed by Levels Beyond's Global Team utilizing S3 Transfer Acceleration.

Denver Colorado
- CenturyLink Consumer Fiber
  - DOWNLOAD 857.01 Mbps
  - UPLOAD 746.51 Mbps
  - Ping 2ms
- Upload speed comparison in the selected region

Virginia

(US-EAST-1)   346% faster

S3 Direct Upload Speed

Upload complete

S3 Accelerated Transfer Upload Speed

Upload complete

Oregon

(US-WEST-2)   144% faster

S3 Direct Upload Speed

Upload complete

S3 Accelerated Transfer Upload Speed

Upload complete

Frankfurt

(EU-CENTRAL-1)   1161% faster

S3 Direct Upload Speed

Upload complete

S3 Accelerated Transfer Upload Speed

Upload complete

São Paulo

(SA-EAST-1)   841% faster

S3 Direct Upload Speed

Upload complete

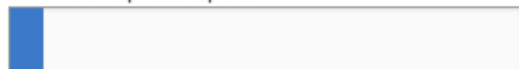S3 Accelerated Transfer Upload Speed

Upload complete

Mumbai

(AP-SOUTH-1)   1127% faster

S3 Direct Upload Speed

Upload complete

S3 Accelerated Transfer Upload Speed

Upload complete
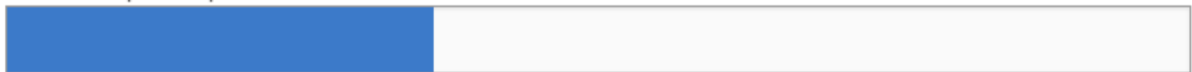
Buenos Aries, Argentina

- Telecentro Internet Connection
  - DOWNLOAD 68.40Mbps
  - UPLOAD 4.64 Mbps
  - Ping 9 ms
- Upload speed comparison in the selected region

Virginia

(US-EAST-1)

125% faster

S3 Direct Upload Speed

Upload complete

S3 Accelerated Transfer Upload Speed

Upload complete

Oregon

(US-WEST-2)

351% faster

S3 Direct Upload Speed

Upload complete

S3 Accelerated Transfer Upload Speed

Upload complete

Frankfurt

(EU-CENTRAL-1)

135% faster

S3 Direct Upload Speed

Upload complete

S3 Accelerated Transfer Upload Speed

Upload complete

São Paulo

(SA-EAST-1)

27% faster

S3 Direct Upload Speed

Upload complete

S3 Accelerated Transfer Upload Speed

Upload complete

Mumbai

(AP-SOUTH-1)

234% faster

S3 Direct Upload Speed

Upload complete

S3 Accelerated Transfer Upload Speed

Upload complete

Corrected Bugs

ID	Issue Reported	Issue Resolution
82147	Can't start workflow with some expressions (subject qualifier) 2 times	Resolved an issue where workflows with certain subjects qualifier expressions would properly display in the UI but would be rejected and not run on workflow runtime nodes.
88119	groovyFilename no longer works for specifying scripts for a Groovy-Step	groovyFilename is no longer relative to any classPath. Existing steps that use groovyFilename need to be changed to use absolute paths.

For Example:
```
 <groovyStep
     name="groovy 3"
     pctComplete="50"
     groovyFile-
name="/home/reachengine/groovy/groove.groovy"
     resultDataDef="success"/>
```

ID	Issue Reported	Issue Resolution
88321	Function #getHour() is not working	Resolved an issue where the workflow engine #getHour() function would not return the date's hour.
88451	Lost workflow context data on Stalls and Failures	Resolved an issue where a Workflow Execution's context data was removed from both the database and the status UI when a workflow stalled or failed.
88467	'is_runtime_configured' flag not getting set upon watchfolder creation and resets	Resolved an issue with UI configured watch folders that were not updating and activating properly.
88217	Workflow Abandon - System not abandoning subflows or workflow steps	Resolved an issue where abandoning a parent workflow does not abandon the subflows / workflow steps within the parent workflow.
88323	Spartan UI: Workflow won't run without toggling default checkbox input options at least once	Resolved an issue where workflows with required boolean input fields could not be executed without first modifying the boolean value.
88365	Log4j property breaks clip creation in UI	Resolved an issue where clips could not be created when Asset logs were set to DEBUG as a missing parameter was not sent to the log upon clip creation.

Adobe Panel Extension (OnePanel)

GENERAL AVAILABILITY

Through close collaboration with early adopters the Reach Engine Panels are better than ever and we are excited to announce the 2.14.0 release of Panel Extension officially promotes it out of Beta and into General Availability. The legacy Premiere Craft panel and Prelude Acquire panel are still supported at this time for critical bug fixes but will not be receiving further feature updates.

What's New?

- Adobe applications! With one installer you'll be able to natively interact with Reach Engine in Adobe Premiere, AfterEffects, Photoshop, Illustrator, InDesign with more coming soon!
- Significantly improved User Interface and User Experience
  ○ Overhauled layout with a consistent experience with Reach Engine's latest UI
  ○ Powerful advanced search and Faceted search
  ○ Overhauled status activity screen with far greater detail and context for end users
- Hundreds of stability, performance and quality of life improvements compared to older panels
  ○ More secure interaction with S3
  ○ Less configuration for Administrators
  ○ Significant improvements to asset import and project tracking performance and stability
- Primary workflow menu-bar shown in panel with workflows organized by their configured group
- Use the workflow menu tool bar to select and run Reach Engine workflows. From within the panel you can execute workflows on existing assets, workflows that runs against no assets and most importantly pass content from your Adobe Application to any Reach Engine Workflow File Input.
- All the progress of your custom workflow executions can be monitored in the Panel Status tab and of course in the Reach Engine UI

Why is it Valuable?

- Significantly improved flexibility between creative users and the value of custom workflow. Now that Adobe media can be contributed directly to various workflows it becomes much easier to complete creative tasks across the content supply chain
- Save time and stay in your creative tool by running workflows against existing assets and not switching context into another UI
- For example, select a placeholder asset in Reach Engine and ingest a sequence straight to the placeholder via workflow and exporting via Media Encoder on the way. The Panel will automatically display all the required workflow form information and allow you to select your Project file or any Sequences as the input file. If a Sequence is selected a preset can then be selected for use by the Panel to automatically render and upload your sequence to Reach Engine and run the workflow.

Automatically Restore Content

What's New?

- When a panel user is interacting with Reach Engine assets that have Content that is archived the panel will automatically prompt the user to restore the content if desired.
  - Restore on Import
  - Restore on Check-Out

Why is it Valuable?

- Saves time and complexity for creatives by automating the restoration process through automated workflows
- Existing Restore workflows can be mapped to the panel configuration to immediately start importing archived content in one step
- Panel restore workflows can be customized for any specific custom behavior required

Execute Custom Workflows

What's New?

- Primary workflow menu-bar shown in panel with workflows organized by their configured group
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