

# WFS™

FILE-BASED WORKFLOW ENGINE



**The WFS™ file-based workflow engine from Harmonic delivers powerful, intuitive control of carrier-grade transcoding farms for broadcast and over-the-top video production and delivery.**

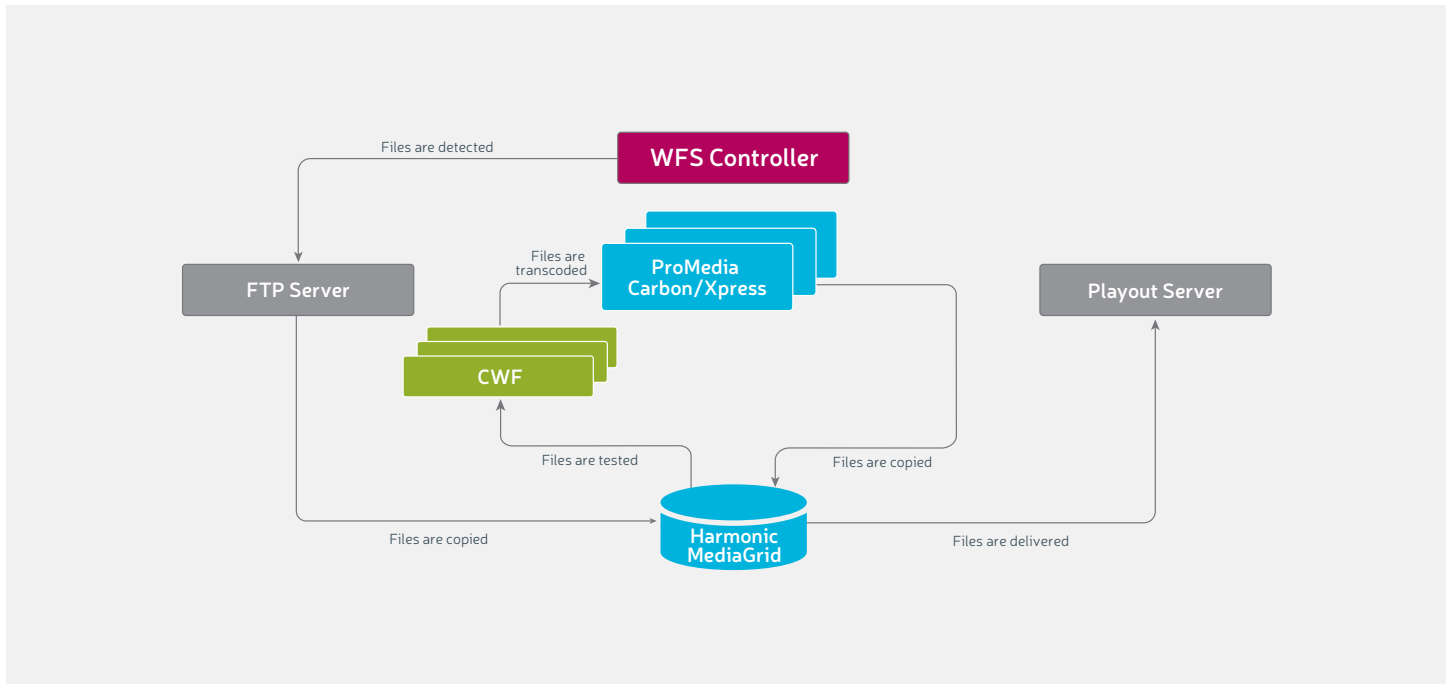
The software-based WFS system is used to control multiple ProMedia™ Carbon and ProMedia Xpress transcoding nodes. Open and extensible, WFS possesses a distributed nature that grants reliability and scalability while allowing the automated processing of transcoding tasks, failover support, job distribution management, job prioritization, load balancing, file transfer, status monitoring, and job notification. With the addition of the Conditional Workflows (CWF) service module, users can add an automated and scalable condition-check process to their transcoding farm.

## Features

- **Advanced Architecture** – WFS separates the workflow and automation processes from the transcoder, allowing a much more robust and scalable architecture than previously available. An open API allows traditional outside integration, as well as the ability for third-party applications to integrate into WFS.
  - **Integration & Management** – WFS is a true enterprise-class workflow engine. It allows a set of tasks to be executed in any order with full visibility into the entire process. WFS can be used for the simplest tasks, such as retrieving files from varied locations, to complicated workflows that include multiple transcodes and condition checks, file transfers, and the triggering of external scripts and notifications.
  - **Simplified File-Based Workflows** – WFS simplifies the acquisition, transformation and delivery of video files. It can manage the movement of files over FTP, HTTP and CIFS, and via the Amazon S3 cloud file-storage service.
- WFS includes a broad range of built-in functionality to optimize workflows. The system includes the ability to monitor FTP, CIFS and Amazon S3 storage locations, trigger new workflow events, and provide notifications at any step in the workflow process via email, web scripts or command-line calls. A SOAP API allows for easy integration with existing video production and delivery systems.
- WFS can also be used to manage a cloud transcoding workflow via Encoding.com.

## HIGHLIGHTS

- Enterprise-class workflow engine with full visibility into the entire transcoding process
- Controls ProMedia Carbon and ProMedia Xpress transcoding farms
- Enables cloud transcoding via Encoding.com
- Supports failover to a backup system in case of a system outage or physical server failure
- Transfer files over FTP, HTTP, CIFS and Amazon S3
- Monitors FTP, CIFS and Amazon S3 storage locations to trigger new workflow event
- SOAP- based API for easy integration with existing systems
- Integration with Microsoft SQL Server Standard for reporting and statistic gathering beyond the interface and API



### Workflow Manager

Workflow Manager (WFM) is built on the WFS API and allows for remote management and monitoring of rendering farms controlled by WFS. It provides complete control over creation, manipulation and execution of transcoding workflows via a common interface for WFS and third-party applications. WFM is backward compatible with the Carbon 3.0 API.

### Workflow Engine

WFS manages workflows and database communication in a task-based format through Harmonic’s enterprise-class database. The engine also provides failover support to a backup system in case of a system outage or physical server failure. Microsoft SQL Server Standard is used for task management and leverages best-of-breed database reliability, scalability and open interfaces for third-party reporting and statistic gathering.

### Workflow Node

Workflow nodes control the various services in the WFS software suite, including ProMedia Carbon, ProMedia Xpress and CWF. The nodes utilize an open API to programmatically control the workflow and connect to third-party systems. Workflow nodes also take work from the Workflow Engine for load balancing and scaling.