

Managers+Agents™

System-to-System Media Movement, Management, Automation and Control – in a Single Solution.





Turn Your IT Infrastructure into an Automated Media File Workflow Engine

Signiant Managers+Agents integrates seamlessly with existing IT infrastructure, media technology and file-based workflows to enable highly efficient media-aware networks. Unlike custom-scripted FTP jobs that cannot scale with your business, Managers+Agents provides a powerful solution for professionals in broadcast engineering, IT and media infrastructure management seeking more sophisticated enterprise management, automation, security and control of media delivery processes.

Enterprise Scale and Efficiency

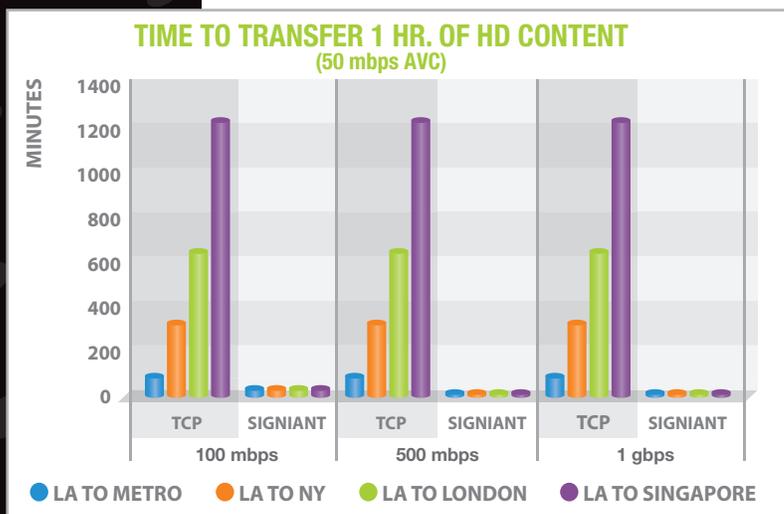
With Signiant's enterprise-class Manager software, users can exchange content and metadata files with other users, systems and applications regardless of geographic location or file size. Agents installed on the sending and receiving ends manage and track content movement and provide file delivery certification.

Optional features for file-based workflow modeling and administration are designed to orchestrate time-consuming tasks related to preparing material for distribution and play-out. These tasks include ingest, automated file quality control, virus scanning, transcoding and MAM archiving. No system is more flexible, powerful or reliable.

Applications

- International distribution of television content to broadcast, media services, OTT, mobile, Electronic Sell-Thru (EST) and Video on Demand (VOD) providers
- Internal distribution of final-form television content to geographically dispersed media operations centers
- File movement related to collaborative creative processes, such as distributed editing, foreign market localization, special effects, game and promo development
- Distribution of Digital Cinema Packages (DCPs) for theatrical releases
- Accelerated movement of large media files to and from public cloud environments (Amazon, Azure) for rendering, transcoding or archive.

Signiant Managers+Agents is a powerful, system-to-system software solution designed to handle the administration, control, management and execution of all file movement activity – including workflow modeling – in a single solution.



Managers+Agents utilizes Signiant's acclaimed UDP-based acceleration technology to move large files at speeds up to 200X faster than TCP without being impeded by network latency or packet loss. Assured delivery is achieved with rich flow and error correction protocols.

Standard Features

Central Management

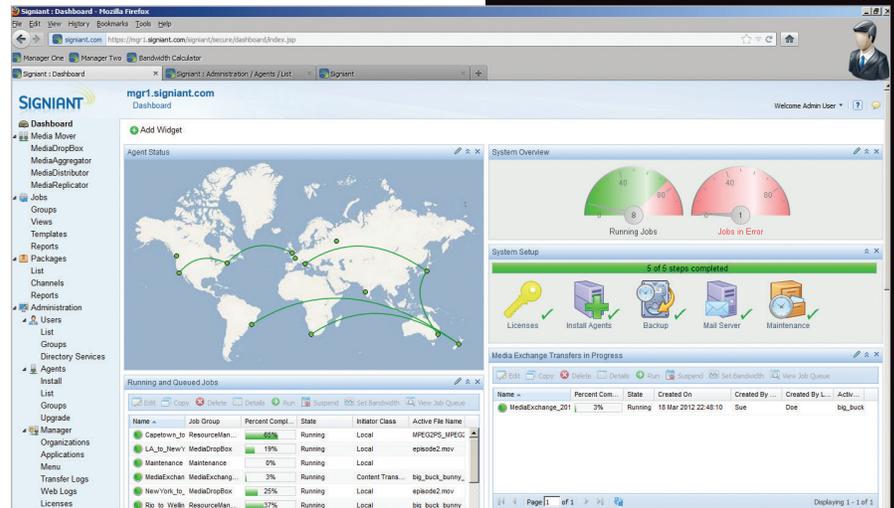
- Web-based administration interface with single-view for system configuration, task automation, managing current system activity and customized reporting
- Customizable email notifications of job completions
- Automated or manual bandwidth limits for running jobs
- Customizable and scheduled reports, jobs and system activity
- Manager peering to view jobs running on other systems
- Programmable Web Services/SOAP API for initiating jobs from higher order media applications
- Multi-level user access: Organization administrator, system administrator, component editor, standard user and guest user
- User groups: Users with identical privileges or logical groupings (organization, location, etc.)

Content Security

- Internal or integrated directory services (LDAP & AD) for authentication and authorization
- Encrypted browser sessions and file transfers – up to 256-bit AES encryption
- Built-in certificate authority used to manage Public Key Infrastructure (PKI) and establish secure communication between Managers and Agents
- Certified delivery provides digitally signed transfer for non-repudiation and proof of the integrity and origin of the data

Accelerated File Transport

- Patented Acceleration Protocol: Delivers fast, reliable and secure movement of files over IP networks
- High Speed, Bandwidth-Efficient File Transfer: Up to 200X faster than FTP and TCP with 95+% network efficiency
- Firewall Friendly: UDP and TCP transport options
- Automatic Retry: Checkpointing and resume of partial or failed transfers
- Bandwidth Management Settings: Adjustable WAN accelerator aggressiveness, bandwidth ceiling and floor ranges based on time of day



Manager Dashboard

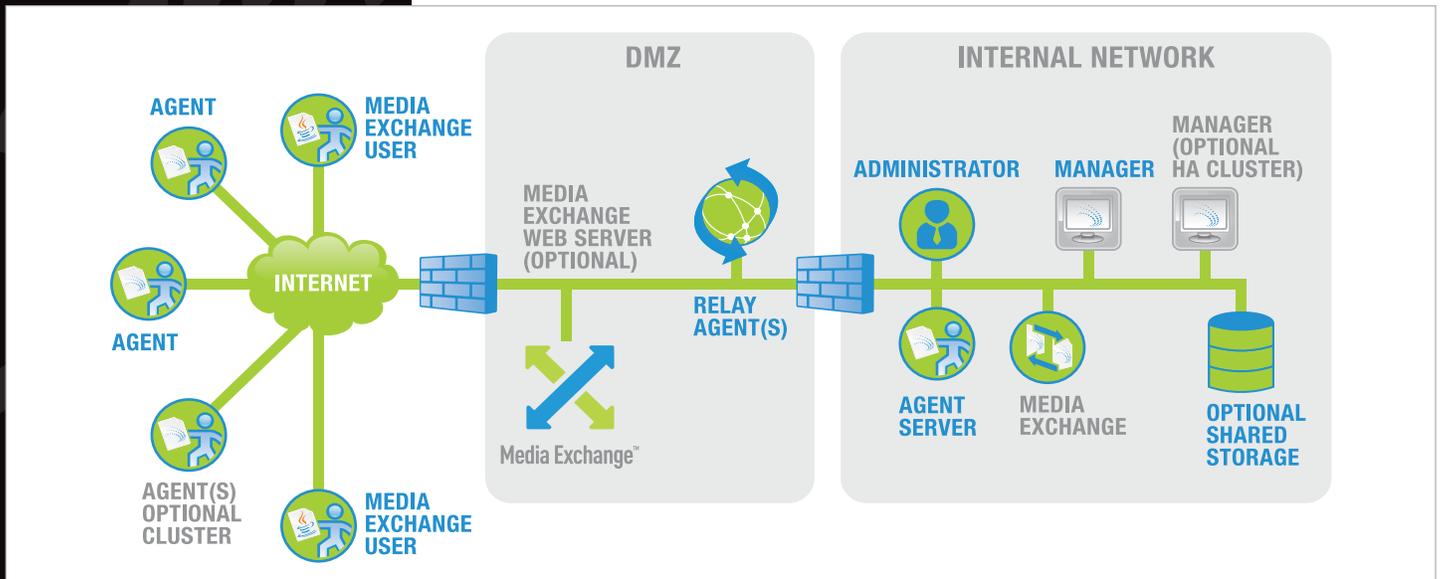
Managed File Movement at Your Fingertips

Signiant's Manager software features an intuitive Web-based interface for system configuration, task automation and reporting. The system includes a range of pre-configured file transfer solutions, including:

Media Mover for file transfers between a single source location and one or more destination locations based on a time of day or upon changes to the source directory

Media Aggregator for retrieving files from multiple Agents to a single target Agent

Media Distributor to schedule a simple push distribution to multiple Agents simultaneously.



Core Components

Manager: Manager software performs all administration, control and reporting of system activity as well as orchestrating the execution of jobs. Users interact with the Manager through a Web-based interface for administration, system configuration, establishing jobs and automating tasks, managing current system activity and reporting.

Agents: Installed on remote servers, Agent software executes file movement, notifications and interoperability with third-party software and systems. File movement occurs from Agent to Agent, and can be deployed as a single node or load-balanced cluster.

Media Exchange: High-performance file delivery software for content exchange between users and content publishing to groups. Expandable for higher performance or geographical redundancy.

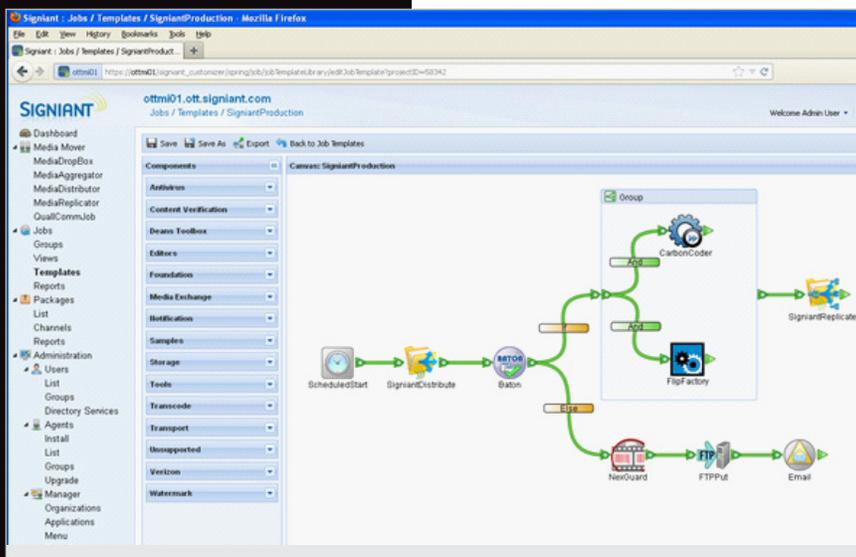
Relay Agents: Enables firewall traversal and isolation of content from external networks. (Content is not stored on Relay Agents).

Automation Engine automates file-based media aggregation, creation and distribution processes via templates created in Workflow Designer, and interfaces seamlessly with third-party products and systems to ensure maximum workflow efficiency.

Optional Features and Modules

Automation Engine: Automation Engine facilitates the creation of flexible workflow templates that automate the processing of content. A template may be as simple as moving a file from one Agent to another, or as sophisticated as directing a package for transcoding and watermarking before publishing.

Signiant's powerful Workflow Modeling Engine allows manual tasks to be represented in the Manager along with the appropriate business rules. Workflow templates are built and stored in the workflow library for reuse. The Manager uses the templates to execute file transfers based on the inputs supplied from various systems including the Signiant Manager, third-party BPM software using Signiant APIs or from Media Exchange users.



Workflow Designer™

Manager Peering: Manager peering enables Signiant Managers to view and control Agents and jobs on other Signiant Managers to facilitate content sharing. Connecting Managers and Agents is established by exchanging security certificates. Agents are trusted by importing their certificates into a 'foreign' Manager, driving Agent and job control from more than one Manager.

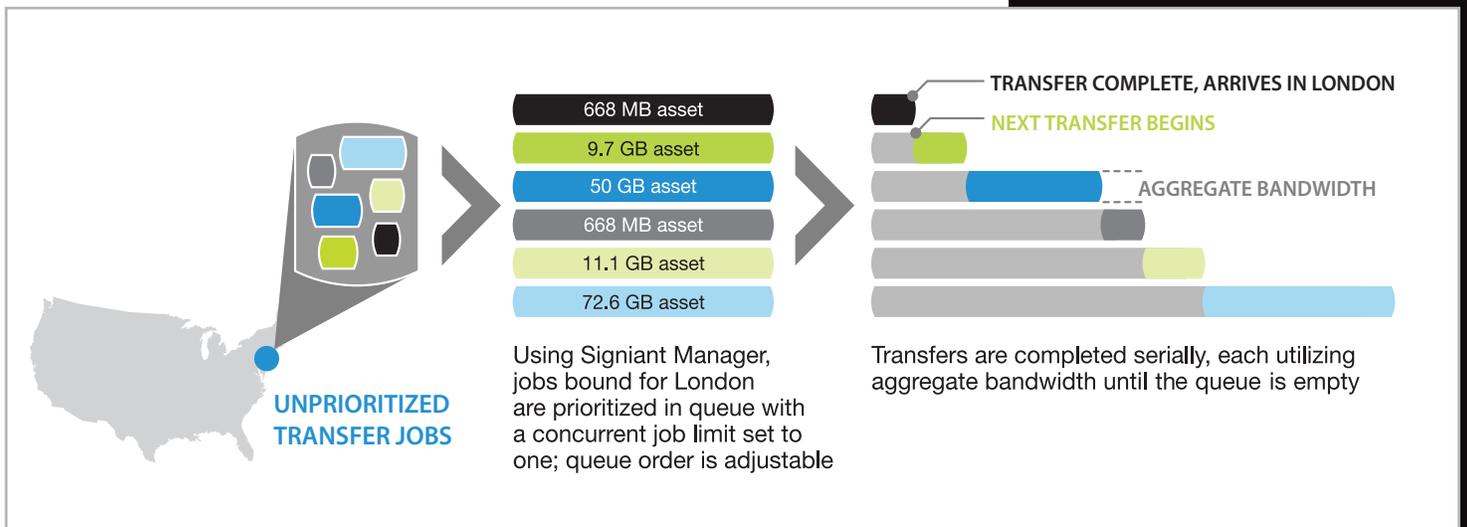
High Availability: Signiant's Linux High Availability option provides redundancy to protect against a Manager failure at a given site. This option is architected for minimal downtime during automatic Signiant Manager failovers.

Resource Management: Signiant's Resource Management module is ideal for organizations seeking more sophisticated control of file-based assets, network bandwidth and server resources. Resource Management allows administrators to prioritize delivery of assets between sites based on business needs and content delivery windows. As content priorities change, the queue can be adjusted by moving more critical jobs to the top, while jobs with less stringent timelines remain lower in the queue.

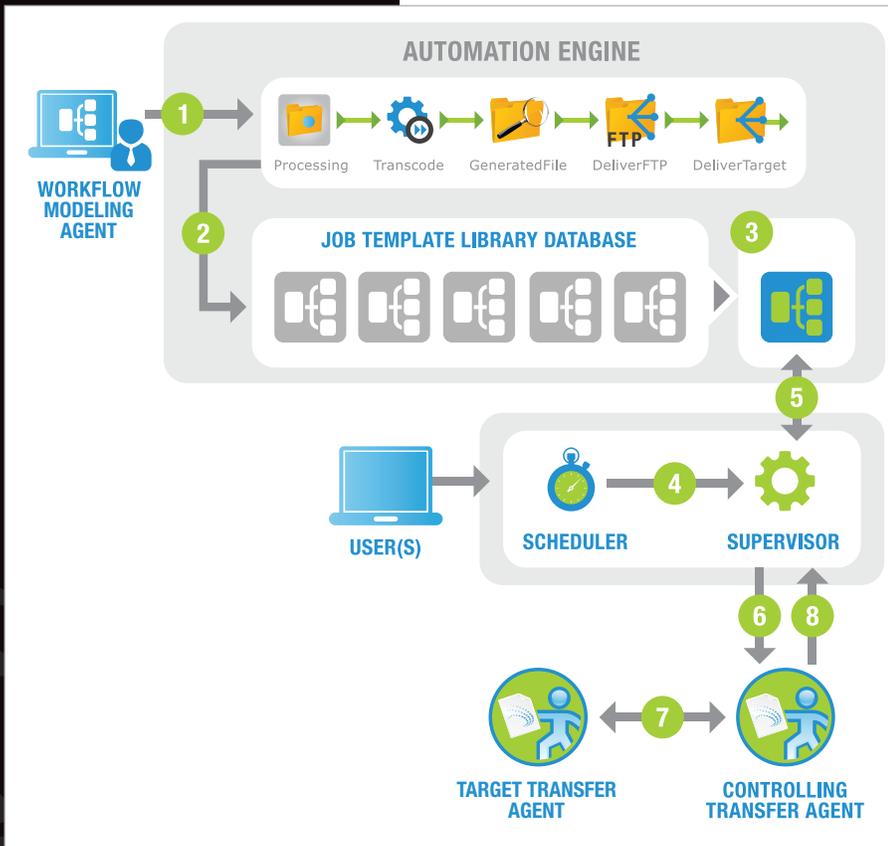
Controlled by a single Signiant Manager or multiple Managers operating in an enterprise environment, Resource Management can be used to control bandwidth usage to specific locations or servers to ensure systems or networks are not overloaded.

“ With hundreds of highlights and more than a thousand hours of coverage, we needed an efficient workflow to bring the Games to Olympic fans. Signiant has been a critical partner in making this process fast and error-free ”

Perkins Miller
SVP of Digital Media
NBC Sports & Olympics



Bandwidth and Server Efficiency: Resource Management allows administrators to prioritize file movement jobs for more sophisticated control over network bandwidth and server resources.



How Automation Works

- 1 With the Workflow Modeling Engine, a user creates or modifies a job template, laying out components in a sequence and mapping inputs to outputs.
- 2 The job template is saved in the job template library database.
- 3 A job is created from a template by an operator supplying job parameters and a schedule through the administrative interface or an external trigger.
- 4 The Scheduler monitors the system for jobs to run and alerts the Supervisor to initiate the job using a specific template and job parameters.
- 5 The Supervisor requests and receives the job template from the template library and runs the job using the job parameters.
- 6 The Supervisor passes the relevant job template components and job state information to Agents for execution.

- 7 In the case of a file transfer components, the Supervisor contacts the controlling Agent which connects with one or more Target Agents to perform the file transfer.
- 8 Agents report the execution status of each component back to the Manager.

Product Extensions

Signiant Media Exchange™: Media Exchange is a secure, fast and reliable way for individuals to transfer files to other individuals or organize content in a shared workspace for authorized users to browse and download. Media Exchange can operate as a stand-alone solution or integrated with Managers+Agents.

The software features a range of convenient user access interfaces including Web, desktop and mobile, and employs Signiant's patented acceleration and security protocols. Used together with Managers+Agents and Resource Management, Media Exchange provides capacity expansion and additional support for geographically dispersed teams.

Signiant Media Gateway™: Signiant's Media Gateway allows Media Exchange and Agents to work together. Using Media Gateway, Media Exchange users can move content into automated workflows running on the Agents. For instance, a Media Exchange user could upload content into a workflow that performs a virus scan and a transcode prior to making it available for use. Media Gateway can also be used to deliver files from Signiant Managers+Agents to Media Exchange users in an automated fashion.

“ Signiant’s Media Manager software not only speeds delivery of our films, but it also gives us unmatched automation features and the security we need to prevent piracy. ”

Ron Horwitz

VP and General Manager
Deluxe Digital Studios

Signiant Media Shuttle™: Media Shuttle is a hybrid SaaS file sharing solution that can be deployed in a scalable enterprise configuration or as a stand-alone server for smaller collaborative project teams. It utilizes the same security and file acceleration technology of Signiant's Managers+Agents, but provides a customer-branded user interface delivered from the cloud, requires little IT support and delegates user administration to media operations personnel. There are no file size limits, reporting and auditing is centralized, and all content is stored on the internal network for maximum security.

Signiant CloudSpeX™: CloudSpeX is a patent-pending software application that helps broadcasters and production professionals save significant time and resources by easily validating media file delivery formats prior to transfer. CloudSpeX matches file types and metadata against a cloud-based directory of published specifications to ensure that assets comply with customer-defined delivery format requirements. In moving validation out of the client and into the cloud, CloudSpeX provides a uniform mechanism for automatically checking files against a chosen specification across the entire content ecosystem.

Managers+Agents Licensing and Deployment

BASE SYSTEM	Signiant Manager	<ul style="list-style-type: none"> • Central Manager to manage Transfer Agents • Content transfer configuration, monitoring and reporting • Fifteen (15) node transfer capacity
	Managers+Agents Bundle	Manager bundled with optional Manager modules
	Manager Capacity Expansion	Five (5) transfer node capacity
OPTIONAL MODULES	Automation Engine	Construct workflows and customize automated file movement processes. Includes reusable integration components.
	Resource Management	Manages bandwidth and network efficiency
	Manager High Availability	Manager cluster (Linux only)
	Disaster Recovery	Remote backup and restore
	Media Gateway	Interconnects Managers+Agents with Media Exchange
	Media Exchange Web Server	User capacity expansion and added support for geographically dispersed teams
AGENTS	Agent	Server-to-server transfers and other automated file movement processes
	Relay Agent	Firewall traversal
	Media Exchange Server	Provides file acceleration to Media Exchange clients

Technical Specifications

Scaling	300 Agents/Manager
Job Starts	Windows and Linux: 300/minute
Concurrent Jobs (Peak)	300 concurrent jobs for Linux, 100 for Windows
Supported Transfer Protocols	UDP and TCP – configurable
Supported Storage	SAN, NAS (NFS or CIFS – UNC Paths)

System Requirements

For system requirements, please visit www.signiant.com/products.

Signiant Software at-a-glance



Product	Managers+Agents™	Media Exchange™	Media Shuttle™
Server to Server File Transfers (scheduled/automated)	●		
User to User File Transfers (interactive)		●	●
Licensed Software	●	●	
Subscription Software (Hybrid SaaS)			●
Central Management			
Email Notification	●	●	●
User Group Management	●	●	●
User Bandwidth Controls	●	●	Enterprise version
Email Notification	●	●	●
Resource Management (Bandwidth, Server & Storage)	●	●	Enterprise version
Web Services APIs		SOAP/REST	REST
Manager Peering	●		
High Availability Managers	●		
Remote Standby	●		
Security			
Encrypted Browser Sessions & File Transfers	●	●	●
Public Key Infrastructure	●	●	●
Enterprise Directory Services Integration (LDAP/AD)	●	●	
Certified Delivery	●		
Workflow Automation			
Automated Hot Folder File Movement	●		
3rd Party Software Integration Framework	●		
FIMS Compliant Adapters (Capture, Transform and Transfer)	●		
Custom Workflow Framework	●		
CloudSpeX Delivery Format Validation Application	●		●
File Movement			
Checkpoint File Restart	●	●	●
UDP File Transfers	●	●	●
TCP File Transfers	●	●	●
HTTP File Transfers		●	●
FTP Delivery Options	●		
User Interface			
Browser-based System Administration	●	●	●
Browser-based End-User Interface		●	●
Mobile Application		●	
Desktop Client for Unattended Delivery		●	
Browser-based Operations Interface			●
Outlook Integration			●
File System Browsing and Sharing			●
Custom Web Portal Branding			●
Platform			
Windows server support Agents/Media Exchange/Media Shuttle	●	●	●
Linux server support Agents/Media Exchange/Media Shuttle	●	●	Enterprise version
Mac server support Agents/Media Exchange/Media Shuttle	●	●	Enterprise version



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About Signiant

Used by the world's top content creators and distributors, Signiant is the market leader in intelligent file movement software for the media and entertainment industry. The company's powerful software suite optimizes existing enterprise network infrastructure and media technologies to ensure secure digital media exchanges, workflow efficiency and superior user experiences.