

The
Operating
System
of Capture

Ascent Capture 7.5 Improving the Speed, Cost Efficiency, and Reliability of Capture

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Introduction

Since its inception, image capture has evolved beyond the simple archival process. Today, instead of just electronically storing business data at the end of a process, companies now capture documents at the point of origin. The captured documents are used to automate the collection of business critical data.

As part of Kofax's effort to meet the image processing needs of our customers we have enhanced the speed, cost effectiveness, and reliability of Ascent Capture with the release of version 7.5.

In tandem with the release of Ascent Capture 7.5, is the availability of Ascent Capture 7.5 Enterprise. Ascent Capture Enterprise includes all the functionality of Ascent Capture along with a variety of additional features oriented towards enterprise operations.

Speed

Historically, imaging was used to archive documents after the primary business process was complete. As such, speed was not important as long as the scan application could keep up with the scanner. Today organizations realize additional benefits by capturing data during the business process rather than at the end. This capture includes such items as email, word processor files, and faxes, as well as paper-based information.

Since data capture is often the first step of a business process, processing speed is critical. It can have significant impact on business efficiency and revenue flow.

Kofax's Ascent Capture is already efficient, but with Ascent Capture 7.5 it has evolved to further improve operational speed. These improvements include:

- Single Document Processing
- Single Document Routing
- Turnkey Reports

Single Document Processing

In order to maximize processing efficiency, documents are frequently organized in to batches, either manually or automatically. These batches flow through the capture processes as an indivisible whole. This batch-processing model can cause roadblocks. If there is an issue with a single document, the whole batch can be delayed.

For example, if a batch is scanned, downstream operators may have to wait until the batch is completed before gaining access to individual documents. However, if operators can access a batched document as soon it is scanned, there is no delay in processing.

Ascent Capture 7.5 eliminates batch delay by implementing the Single Document Processing feature.

With Single Document Processing each document can be handled independently. There is no need to wait for the entire batch to be completed before sending the first document of the batch to the next operation in the workflow. Each document is processed in real-time.

With single document processing, even though documents may be processed independently, they still retain their original batch identity. This makes it easy to locate a document by batch reference so additional processing, such as rescanning, can be easily accomplished.

Ultimately, at the end of the workflow, single documents can be released to the content management system while retaining their original batch relationship. This relationship is preserved via batch fields which are shared across all documents in the batch.

Single Document Routing

In an earlier version of Ascent Capture, Kofax introduced the ability to build custom, dynamic batch routing with Workflow Agents. A Workflow Agent can examine and modify batch data, as well as change the batch routing and status.

Another familiar feature of Ascent Capture is ACI Server. Originally ACI Server supported remote operations limited to creating batches and validating documents. In Ascent Capture 7.0, ACI Server was extended to support multi-directional workflows. Remote workstations could perform a variety of steps and the batches could be routed to workstations as needed.

Historically, Workflow Agents and ACI Server acted on an entire batch. However, with the introduction of Single Document Processing, it is now possible to utilize these two technologies on an individual document, thus creating the Single Document Routing feature.

While Single Document Routing has a variety of uses, one of the most beneficial is the leverage of specialized labor. It is now possible to scan mixed batches (centrally or at a variety of remote locations), identify documents, and route the documents, independently, to specific people or groups of people.

Sending the right documents to the right people at the right location improves processing speeds and reduces errors. It also increases document security because only the appropriate personnel have access to the documents.

A typical use-case for Single Document Routing might be the Insurance industry. See Figure 1.

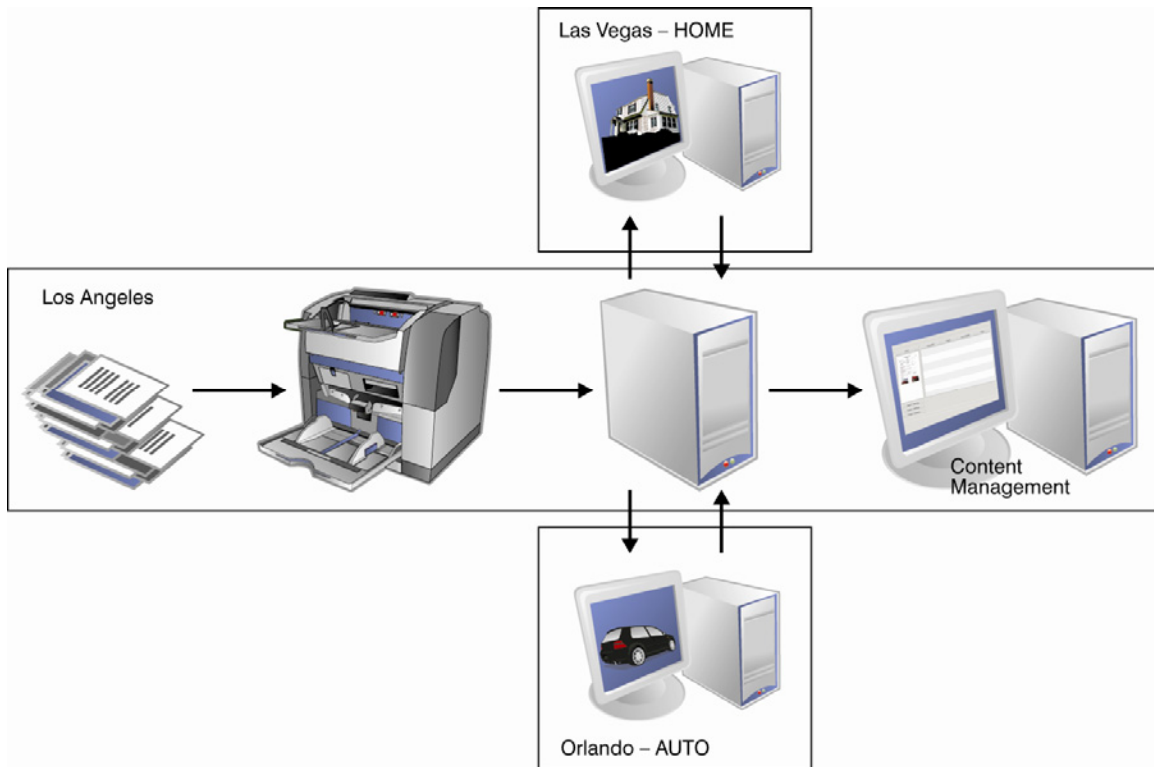


Figure 1 – Single Document Routing

In this scenario, insurance forms are received in Los Angeles. Single Document Processing is enabled to split the documents from their original batches as soon as the documents are detected.

In the next step, the Recognition Server is employed to identify the document as a homeowner or automobile insurance policy.

After the document is identified, a workflow agent routes the form to Las Vegas or Orlando for validation. Las Vegas employees specialize in homeowner policies. Orlando employees specialize in automobile policies. ACI Server is used to transport the documents. Lastly, the documents are returned to Los Angeles and released to a content management system for storage and any subsequent processing.

Single Document Routing provides the ability to route individual documents to allow more optimal use of specialized labor.

Turnkey Reports

In order to optimize processing speed, it is necessary to understand system performance and bottlenecks. Answers to the following questions may provide an administrator with insights to these areas.

- What is the average time taken to process a document in the system, and how does the time vary with changes?
- What are the most frequently used batch classes (and thus the best targets for optimization)?
- Which modules require the most processing time (and thus are the best targets for adding more workstations or servers)?
- How productive are my operators?

Turnkey Reports allow an administrator to answer the above questions.

Historically, Ascent Capture provided reporting statistics that administrators could use to determine system performance. However, Turnkey Reports make answering performance questions even easier.

The new Turnkey Reports feature allows administrators to generate, view, print, and export reports without having to learn a query language. Reports are quickly available so an administrator can improve efficiency by tracking and managing business metrics or performance goals.

Turnkey Reports can be easily extended with Crystal Reports, a separately available package.

Costs

Reduction of operational costs is always a business goal. Typically, business costs are impacted by system deployment and maintenance.

With Ascent Capture 7.5 several new features make deployment and maintenance even easier, as well as improve system efficiency.

These new features include:

- Ascent Deployment Utility
- Faster User and Group Selection
- RSA as a Window Service

In addition to the new features in Ascent Capture 7.5, the following features are available in Ascent Capture 7.5 Enterprise:

- Multiple Instance Support
- Terminal Services and Citrix Support
- WebSphere Support

Ascent Deployment Utility

Deploying a system used to require technical staff, usually from IT, to visit each customer location to install the hardware and software, and fully test the system before turning it over to a customer. This mechanism works well for small, centralized installations, but when multiple, geographically dispersed stations are required, this method is costly.

Ascent Capture has long supported a silent, configurable installation to push software out to the clients. While this method reduced costs, testing each system was still required to ensure all installed components functioned properly.

Ascent Capture 7.5, with its Ascent Deployment Utility, has now simplified deployment to a new level. With this utility, time and labor needed to deploy multiple, geographically dispersed systems is significantly reduced.

With the Ascent Deployment Utility a five step process is used to deploy systems. See Figure 2.

1. **Build Original Machine** – All necessary software applications and drivers are installed on a single machine. The machine and any required scanning hardware are tested for proper operation.
2. **Create Binary Backup** – A binary backup image of this machine is created and saved.
3. **Create Production Machines** – The backup image is restored on subsequent machines to be deployed to customer sites.
4. **Configure Production Machines** –The Ascent Deployment Utility automatically tunes each machine giving it the unique parameters needed for operation. This tuning includes actions such as updating the host name, and setting application specific parameters.
5. **Ship Machines** – All machines are shipped directly to their final destination and installed as “plug & play”, without the need of technical onsite staff.

The Ascent Capture Utility reduces staff time and ensures the customer receives a system that is easy to install and ready to begin the image capture process.

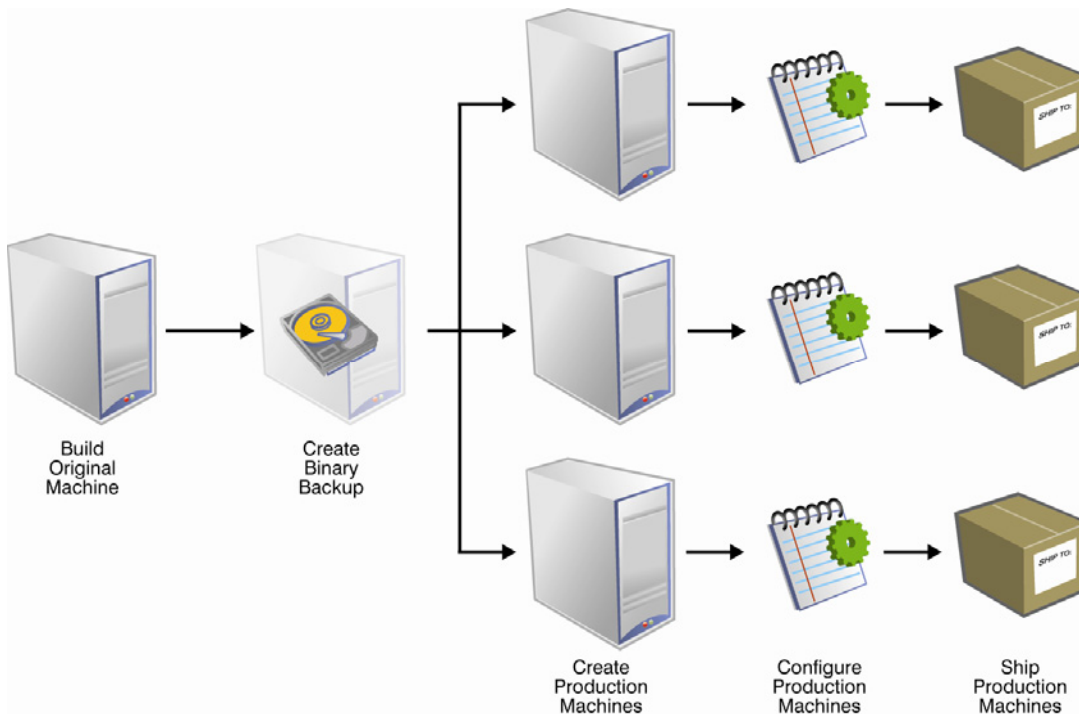


Figure 2 – Ascent Deployment Utility

Faster User and Group Selection

Prior releases of Ascent Capture utilized users and groups from Active Directory to identify user privileges.

With Ascent Capture 7.5, the process of selecting user and groups from Active Directory has been optimized with an improved interface. The Windows Active Directory search dialog is utilized to directly identify user names, group names, or other search criteria; thus, making for faster user and group selections.

RSA as a Window Service

As mentioned previously, ACI Server allows multiple, geographically dispersed sites to perform different functions in the workflow.

The client-side component of ACI Server is the Remote Synchronization Agent (RSA).

In Ascent Capture 7.5, the RSA is optionally run as a Windows Service. This allows for improved reliability, and therefore reduces administrative costs, since RSA is initiated when the machine is booted.

Multiple Instance Support

The amount of hardware required to support a system may be a significant cost factor. If less hardware can do the job, companies save money on equipment and maintenance costs. Less equipment also equates to improved reliability.

One way to reduce hardware costs is to run software that effectively emulates multiple servers on one piece of hardware; thus, creating several virtual servers. VMWARE is a third-party software package that creates virtual servers on a single hardware platform. Ascent Capture 7.5 is certified by Kofax for VMWARE ESX and GSX operations.

However, Ascent Capture 7.5 Enterprise also has a feature called Multiple Instance Support that is a strong alternative to virtual server emulation software. Ascent Capture Enterprise's Multiple Instance Support provides the benefits of instancing without the overhead of virtual server solutions.

The Multiple Instance Support feature allows installation of multiple instances of any Ascent Capture service. This plays into the capabilities of multi-CPU computers, so they can take full advantage of their potential processing throughput.

In contrast to the virtual server approach, Ascent Capture and the operating system run natively on the hardware thereby maximizing system performance.

An additional benefit of Multiple Instance Support is that each server requires only one copy of the operating system and Ascent Capture Enterprise application. This reduces licensing and maintenance costs.

Reliability is also maximized since each instance is running in a separate worker process. If one instance fails, other instances are unaffected.

Terminal Services and Citrix Support

Citrix Terminal Services and Windows Terminal Services are both supported by Ascent Capture 7.5 Enterprise. These services add functionality that improves manageability, scalability, security, and flexibility.

Ascent Capture 7.5 Enterprise is certified for Terminal Services on Windows 2003 Server, as well as on Citrix MetaFrame Presentation Server 4.0, Standard Edition.

Specific capabilities of Terminal Services and Citrix Support include:

- Secure transmission of data across the Internet

- Access to applications and information from virtually any client platform
- Management of disparate groups of servers from a central location
- A common interface for accessing applications and information

The following is an example of how Ascent Capture's support of Terminal Services can reduce the cost of remote operations.

Assume a company needs to archive historical documents. However, the documents must be manually validated because they are of poor quality and too irregular for OCR/ICR processing.

The company wants to reduce expenses, so a data entry center is established in another country with low labor costs. However, establishing workstations in another country raises the IT department's concerns about maintenance costs of remote workstations.

The IT department addresses maintenance costs and still meets the company's requirement for remote data entry by using Terminal Services as follows:

1. Machines are configured with no applications other than the OS
2. Ascent Validation is configured on a bank of centralized Citrix servers
3. Remote users connect to Citrix
4. Remote users run Validation remotely with no local Ascent installation
5. Overhead associated with remote machines is minimized

WebSphere (ACI Server)

ACI Server is typically deployed in conjunction with Microsoft's IIS web server at a central site. IIS is included with Windows Server operating systems, and is an excellent choice for small to medium businesses.

For Enterprise systems, one of the leading web and application servers is IBM's WebSphere.

WebSphere is certified on Solaris, as well as Windows. If a company has implemented WebSphere, then deploying ACI Server can further reduce the cost of ownership by sharing corporate hardware and software resources, leveraging existing IT competencies, and improving adherence to corporate security practices.

Reliability

System reliability is often critical to business operations and costs. For all businesses, minimizing failures is a major goal. Ascent Capture 7.5 Enterprise offers features that improve reliability and ensure maximum system availability.

High Availability Bundle

Ascent Capture has consistently improved its reliability with each new version. Ascent Capture 7.5 Enterprise has an even more robust set of High Availability features.

There are three key components of Ascent Capture's implementation of High Availability. They are:

1. **Data Retention** – The main purpose of any High Availability system is to prevent the loss of data in case of a failure. Ascent Capture 7.5 Enterprise works seamlessly with SQL Server and Cluster Server to maintain data integrity. These technologies ensure production continues with no data loss, even if a server fails.
2. **Transparency** – While data retention is the ultimate goal of High Availability, maintaining operator productivity is also important during a failure. Ascent Capture 7.5 Enterprise

has been designed to protect the operator from error messages, and other distractions, so their work continues without interruption.

3. **Leverage Standards** – Ascent Capture 7.5 Enterprise is built upon such industry standard products such as SQL Server, Cluster Server, and Network Load Balancing. This allows a business to leverage existing IT staff expertise.

Ascent Capture 7.5 Enterprise High Availability Bundle brings data retention, transparency and industry standards to Enterprise scale businesses.

Disaster Recovery

Despite all the best precautions, on rare occasions it may be necessary to recover from an unanticipated disaster. An essential part of a good disaster recovery plan is backing up critical data in a timely manner.

The task of backing up business critical data should be routinely performed with minimal effort by IT staff. To ensure ease of use and maximum reliability, Ascent Capture uses the backup capabilities built into the industry standard SQL Server and MSDE databases. By using these built-in capabilities IT staff can perform backups using known and trusted processes.

Further more, with Ascent Capture 7.5 Enterprise, if a central site should become inoperative, remote sites can continue processing batches for up to five days with no interruption in service. When the central site is restored, remote sites will synchronize, and batch processing continues as if nothing happened.

Backup Licensing

Ascent Capture 7.5 Enterprise now includes backup licensing. This ensures operations can continue via a backup license server in the event the primary license server fails.

Conclusion

Ascent Capture 7.5 and Ascent Capture 7.5 Enterprise are faster, more cost effective, and more reliable than their predecessors. The array of enhancements in this release brings benefits to small, medium, and Enterprise size businesses.

Contact your Ascent Certified Solution Provider to see what Ascent Capture 7.5 can do for your business, or contact Kofax directly.

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