

Working with JDF/JMF Sample

This Advanced Tutorial describes the different ways you can create jobs by inputting a variety of JDF files. Some JDF files contain job content (MIME), while others simply point to the location of the job content using a relative or external reference. Also some JDF files specify the imposition template to be used.

Duration: You will need approximately 3 hours to complete the lessons in this Advanced Tutorial.

▶ Advanced Tutorial Objectives	2
▶ Before You Begin	2
▶ Contact Us	4
▶ Lesson 1: An Introduction to JDF and JMF	5
▶ Lesson 2: Extracting a Job Name from a JDF File	13
▶ Lesson 3: Creating a Job with No Processing Settings or Job Content	20
▶ Lesson 4: Creating a Job with Job Content and Limited Settings	26
▶ Lesson 5: Creating a Job from JDF with Content References	34
▶ Lesson 6: Creating a Job from MJD with Plan	37
▶ Lesson 7: Using JDF to dynamically create a Production Plan	39
▶ Lesson 8: Checking that the JMF WebServer is Running	54
▶ Lesson 9: Retrieving :APOGEE Prepress Information	57
▶ Lesson 10: Creating a Template for JDF Jobs without Plans	61
▶ Lesson 11: Setting Up the JDF Update Policy	64



This tutorial is only a preview of the full advanced tutorial.

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http://www.agfagraphics.com/global/en/mainings/about_us/worldwide/index.jsp

Advanced Tutorial Objectives

This Advanced Tutorial focuses on JDF files as input for :APOGEE Prepress Commercial jobs. The Tutorial is divided into a series of lessons. In these lessons, you will learn how to:

- Use JDF and JMF files to input jobs to the :APOGEE Prepress System.
- Input a JDF which only initiates a job, but contains no job content or processing information.
- Input a JDF which initiates a job and sets up some processing information, but contains no job content. You will also learn how to map spot colors in a JDF workflow.
- Input a JDF which only initiates the job, and although it contains no job content, it points to the location of the content. This may be either an external or a relative location reference.
- Initiate a job by inputting an MJD (MIME) file. A MIME file is a package that contains both JDF and PDF documents.
- Configure the JDF Server to dynamically build a Production Plan. You will then create and submit a Hot Ticket using the JDF Import component, and initiate a variety of jobs by inputting a series of JDF files with different settings.
- Configure your JDF Server so that :APOGEE Prepress automatically extracts the job order number and job name from the incoming JDF file.
- Check whether or not your JMF WebServer is running.
- Use a JMF file to query the :APOGEE Prepress System for information on output devices and Task Processors.
- Create a ticket template that will be used by the JDF Server to create jobs based on planless JDF submissions.
- Use the JDF Update Policy

Before You Begin

Before you start the lessons in this Advanced Tutorial, make sure that you are logged on to the :APOGEE Prepress System with Administrator access level.

You will also need the following sample files and tickets which are bundled together with this Advanced Tutorial PDF file:

- ApogeePrepress 16pages.PDF
- Brochure_5.pdf
- CIP4Sample_Cover__100000_W1_B.pdf
- CIP4Sample_Cover__100000_W1_F.pdf
- JobnameExtract_Multipart.xml
- Sample.xml
- Sample_Admin_MIS.xml
- Sample_BrochureLayout.xml
- Sample_Graybox.xml
- Sample_Graybox_2.xml
- Sample_Graybox_3.xml
- Sample_Graybox_4.xml
- Sample_Graybox_6.xml
- Sample_MultiPart_MIS.xml
- Sample_Simple_MIS.xml
- Sample_Simple_MIS2.xml
- Sample_Simple_MIS3.xml
- status.xml
- studentname-BrochureLayout.aht
- studentname-Extracting JobName.aht
- studentname-JDFUpdating.xml
- studentname-MIS JDF Input.aht

- Studentname-JDF main flow.aht
- Studentname-JDF Imposition proof.aht
- Studentname-Submit_JDF_via_JMF.xml
- Studentname-test_mime_Prepress job.mjd
- Sublima_Eng.PDF
- Sublima_Fr.PDF
- test_KnownDevices_Full.xml
- XMLSender.hta

These files are provided in a single ZIP file, which is available for downloading from the Graphics Portal - Services Library website.

NOTE: While working through the lessons in this Advanced Tutorial, do not forget to replace **studentname** with your own name in the Administration tab.

Contact Us

Agfa welcomes your suggestions, questions or comments about this documentation. You can send e-mail feedback to: Apogee@agfa.com

LESSON 1: An Introduction to JDF and JMF (Fully included)

This lesson introduces JDF and JMF files, and explains how they can be used to input jobs to the :APOGEE Prepress System.

What is JDF?

JDF (Job Description Format) is a comprehensive industry-standard XML-based file format, based on Adobe's Portable Job Ticket Format (PJTF), which is designed for end-to-end job ticket specifications. JDF streamlines information exchange between different applications and systems, allowing the integration of heterogeneous products from diverse vendors into a seamless workflow solution.

Commercial JDF can be created by a variety of third party applications (according to the JDF 1.0 - 1.3 specification).

These applications include:

- Management Information System (MIS) applications: Usually create JDF files which supply very limited or no prepress processing information. The main goal of an MIS application is to initiate a job, but not to supply any job content.
- Project Management applications (such as :APOGEE Portal): Create JDF files which initiate jobs, and which may also supply prepress information and job content.
- Imposition layout applications (such as Dynastrip): Generate JDF files which define the imposition template that needs to be used. The application may also supply the job content.
- Other graphic workflow applications: Use the JDF format to share jobs with other graphic workflow applications, and provide as many job details as possible (e.g. :APOGEE Prepress, ApogeeX, Apogee Series3).

The Structure of a JDF File

The XML content of a JDF file is arranged in a tree structure. These tree elements are referred to as **JDF Nodes**. A node is a JDF element type which describes the resources and process specification needed to produce a final or intermediate product or resource.

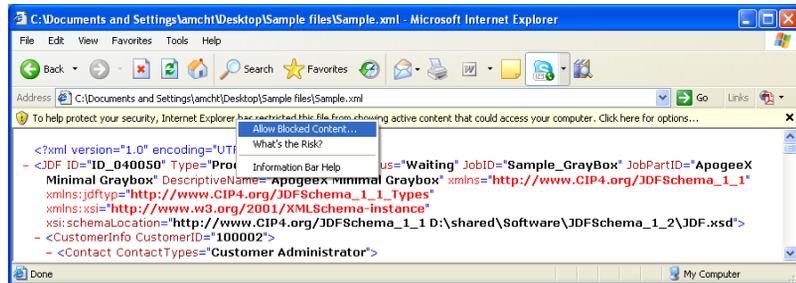
There are 3 JDF node types:

- Product nodes (order and jobname description)

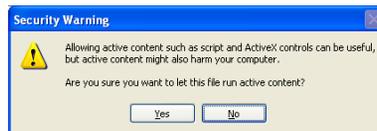
- ProcessGroup nodes (a grouping of process nodes, for example Prepress, conventional printing, cutting, etc.).
- Process nodes (for example Normalize, Preflight, etc.) or combined process nodes.

▷ To view a single JobPart JDF file

- 1 Locate the **Sample.xml** sample file.
- 2 Context-click Sample.xml, and select **Open With > Internet Explorer**.
- 3 If you get a security alert in the Information Bar in Internet Explorer, click it and choose **Allow Blocked Content**.



- 4 If you get a security warning to allow active content, click **Yes** to run active content.



- 5 Look at the different JDF nodes:

The **<JDF ID>** node on top is always a Product node (Type="Product").

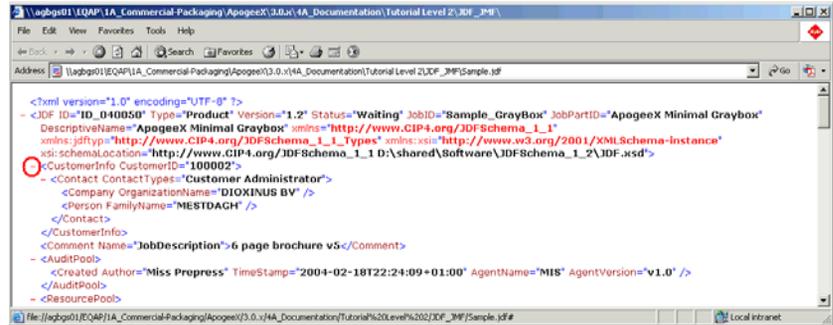


Beneath the top node, you can see a few more subnodes such as:

- **<CustomerInfo>**
- **<AuditPool>**

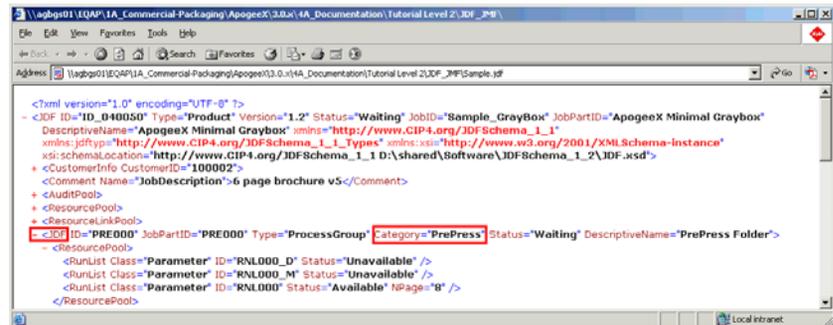
- <ResourcePool>
- <ResourceLinkPool>

NOTE: You can collapse a node by clicking the “-” symbol in front of the node.



- 6 Collapse CustomerInfo, AuditPool, ResourcePool and ResourceLinkPool.

The next JDF subnode you can see in the example is a ProcessGroup node called **PrePress**. This Prepress node describes the processing of the job.



In this example, the JDF contains only one JobPart. You can see this because the **PrePress** node immediately follows the top **Product** node. In JDFs with multiple JobParts, the top Product node contains a series of Product subnodes.

This JDF will result in :APOGEE Prepress producing a single job.

- 7 Close Internet Explorer.

▷ To view a multi-JobPart JDF file

- 1 Locate the **Sample_MultiPart_MIS.xml** sample file.

- 2 Context-click **Sample_MultiPart_MIS.xml**, and select Open With > Internet Explorer.
- 3 Collapse **AuditPool**, **ResourcePool** and **ResourceLinkPool**.
- 4 Collapse the **JDF node** with `Type="Product"` and `DescriptiveName="Cover"`.

The **<JDF ID>** node on top (`Type="Product"`) has 2 **Product** subnodes. This means the JDF has 2 JobParts, namely:

- DescriptiveName: Cover
- DescriptiveName: Body

```

<?xml version="1.0" encoding="utf-8" ?>
- <JDF ID="JDF00Sample_MultiPart_MISMultiPart_MIS" Type="Product" JobID="Sample_MultiPart_MIS"
  JobPartID="Sample_MultiPart_MIS" xmlns="http://www.CIP4.org/JDFSchema_1_1" Status="Ready" Version="1.3"
  MaxVersion="1.3" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" Activation="Active" ICSVersions="Base_L2-
  1.3 JMF_L1-1.3 JMF_L2-1.3 MIS_L2-1.3" xmlns:agfa="http://www.agfa.com/w3c/gs/jdf/agfaextensions.xsd"
  DescriptiveName="MultiPart_MIS">
+ <AuditPool>
+ <ResourcePool>
+ <ResourceLinkPool>
+ <JDF ID=IDPRODUCTNODE.Cover Type=Product Status=Waiting JobPartID=Cover DescriptiveName=Cover>
- <JDF ID=IDPRODUCTNODE.Body Type=Product Status=Waiting JobPartID=Body DescriptiveName=Body>
+ <ResourcePool>
+ <ResourceLinkPool>
+ <JDF ID=IDPREPRESSNODE.Body Type=ProcessGroup Status=Waiting Category=PrePress
  JobPartID=JOBPARTIDPREPRESSNODE.Body DescriptiveName=DESCRIPTIVENAME_PREPRESSNODEBody>
</JDF>
  
```

This will result in :APOGEE Prepress producing 1 job with two parts: a cover and a body.

- 5 Close Internet Explorer.

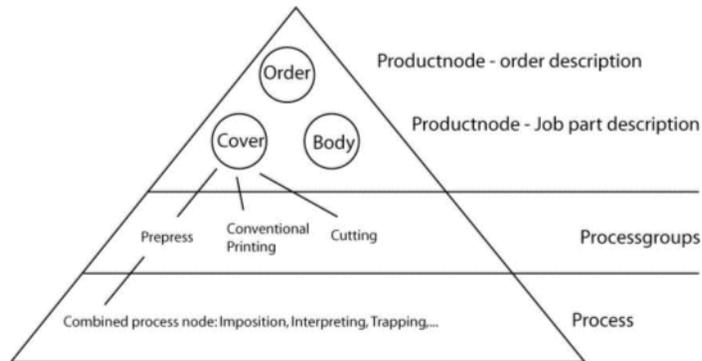
What are Gray Boxes and Processes?

In the context of this document, a **Process** is an individual step in a JDF workflow (e.g. Normalize or Preflight). In most cases, these processes are grouped and we then call them “combined processes” or “gray boxes”.

Combined processes

When multiple processes are grouped into a single process node, we talk about a combined process node. A combined process is a subnode of the “prepress” process group. The combined process node describes in detail which processes need to be executed by Prepress (for example Trapping, Interpreting,...).

You can recognize a combined process inside the JDF by its **Type** attribute: it will be set to **Combined**.

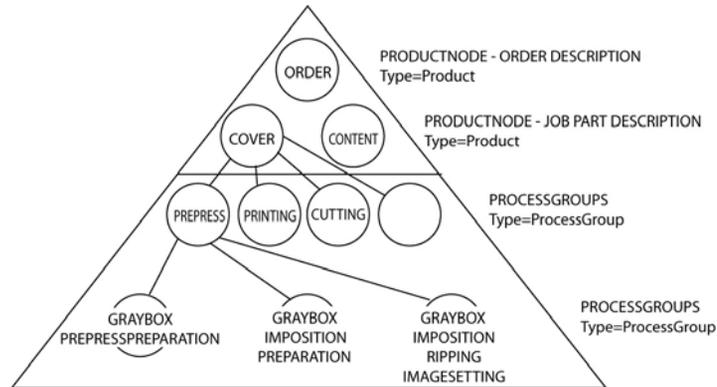


```
<?xml version="1.0" encoding="UTF-8" ?>
- <JDF ID="Agfa20040105120012" Status="Waiting" Type="Product" Version="1.1" xmlns="http://www.CIP4.org/JDFSchema_1_1"
  xmlns:cip="http://www.w3.org/2001/XMLSchema-instance" JobID="Studentname-JDF-0010" JobPartID="From ticket template" DescriptiveName="From
  ticket template">
+ <AuditPool>
+ <Comment Name="JobDescription">ApogeeX 3.0 Simple MIS Job</Comment>
+ <CustomerInfo>
+ <ResourcePool>
+ <!-- Category Prepress helps ASD, ... 4100 ... --> prepress nodes
+ <JDF ID="Link0012" Status="Waiting" Type="Combined" types="Interpreting Separation Rendering ImageSetting" Category="PrePress">
+ </JDF>
```

Gray boxes

As well as working with combined processes, you can also work with gray boxes. A gray box is also a subnode of the Prepress process group. Unlike process groups (Normalize, Preflight,...), a gray box does not contain a description of all processes in detail. A gray box contains a general description of the processes which need to be executed by Prepress. e.g. Prepress Preparation, Imposition Preparation, Imposition Ripping ImageSetting.

You can recognize a gray box process inside the JDF by its **Type** attribute: it will be set to **ProcessGroup**.



In the example above, the gray boxes are:

- PrePressPreparation
- ImpositionPreparation
- Imposition Ripping Imagesetting

What is JMF?

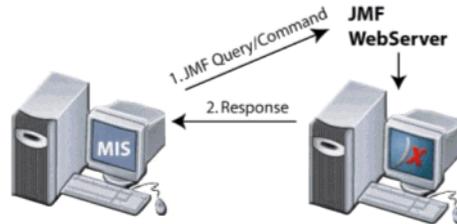
JMF (Job Messaging Format) is a HTTP based protocol, used for retrieving system information and submitting, managing and tracking jobs.

What is the JMF WebServer?

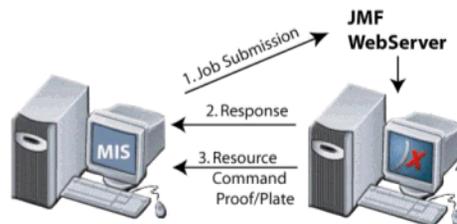
JMF communication with :APOGEE Prepress needs to be done over http. The JMF WebServer uses a HTTP-based protocol to receive JMF messages via http and forward them to :APOGEE Prepress. You need a JMF WebServer if you want to exchange JMF messages with the :APOGEE Prepress System. This is installed with the installation of the :APOGEE Prepress server.

What can JMF do?

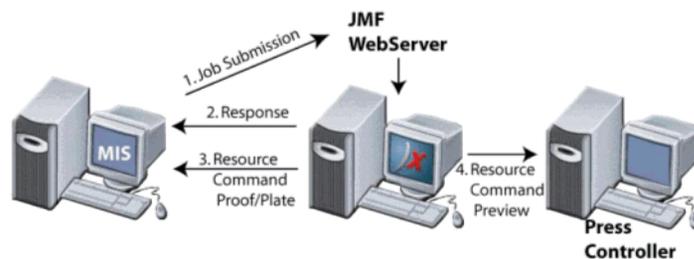
- Dynamic system setup: An MIS system can request Task Processor information via JMF. This JMF is sent to the JMF Webserver, the JMF Webserver forwards the JMF to :APOGEE Prepress, and :APOGEE Prepress returns the response via JMF with the requested info to the MIS system. The Response may contain information about parameter sets, resolution, etc.



- Job submission, job updates, put job in hold, delete job: For each JMF command sent by MIS to :APOGEE Prepress, :APOGEE Prepress returns a response indicating whether or not the command succeeded.
- Job & device tracking.
- Dynamic resource updates: When :APOGEE Prepress outputs a film/plate/proof, :APOGEE Prepress sends a JMF (Resource Command) to notify the MIS system.



- Sending resources to the Press controller (Plate ready info and CIP3 files locations to Press Controller).



NOTE: In some cases, :APOGEE Prepress sends the JMFs for the Press controller to the MIS system and MIS forwards them to the Press controller.

LESSON 2: Extracting a Job Name from a JDF File

This lesson explains how to configure your JDF Server so that :APOGEE Prepress automatically extracts the job order number, job name and descriptive name from the incoming JDF file.

You can configure the JDF Server to extract this data in one of four ways:

- *PrePressNode.DescriptiveName*: The job name is taken from the PrePress node>DescriptiveName used in the incoming JDF file. This is probably the best choice for files created by older applications which don't create multipart jobs and that provide a job name in the PrePressNode>DescriptiveName.
- *ProductNode.DescriptiveName* or *Generic MIS and Intent Jobs*: The job name is taken from the ProductNode>DescriptiveName used in the incoming JDF file. This option is recommended for files created by older applications which don't create multipart jobs and that provide a job name in the ProductNode>DescriptiveName.
- *Generic LayCrImp Jobs*: The job name is taken from the JDFRoot node>DescriptiveName. This option is recommended for Administrative JDF jobs.
- *Generic Multipart MIS and Intent Jobs*: The job name is taken from the ROOTNode>DescriptiveName used in the incoming JDF file. This option is recommended for MIS jobs.



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- 3 In the **Administration** tab, replace studentname with your own name.
- 4 Submit the Ticket.