

1. GENERATING PDF FILES

To generate a PDF document in a Grape application, we use [Apache FOP](#). The generation process works as follows:

1. A database function returning XML text is defined
2. An XSL file is created (in `app.config.xsl_directory`) that transforms the output XML of the database function into XSL-FO
3. An API handler for the specific document type is defined, for example `/download/policy_document/:policy_id`
4. The API handler calls `app.get('pdfgenerator').generate_and_stream_xml` to generate and stream the PDF

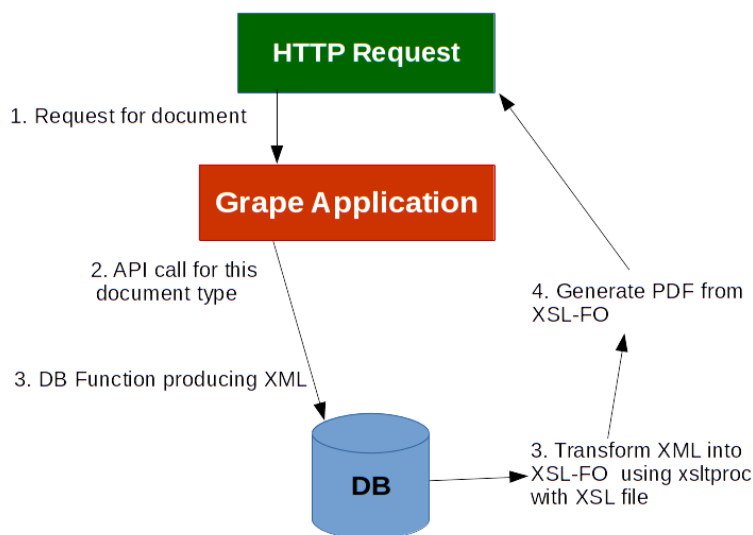


Fig. 1: PDF Generation Process

1.1 XML-producing SQL function

A function returning TEXT containing XML.

1.2 XSL file

1.3 API handler

The API handler will usually make a call to `app.get('pdfgenerator').generate_and_stream_xml(options);`. The options are:

```

{
  res: res, // The HTTP response object
  funcName: 'sql_function', // The SQL function name
  funcParams: [params], // Array of parameters passed to the function
  documentType: 'document_type', // An identifier for this document type. Files will be
    //created in subdirectories with this name
  baseFileName: 'filename', // A filename without any extension, describing this
    //document being created
  xslName: 'xsl_filename', // The XSL file to use for transformation
}
```

Notes:

- The XSL file must be located in the application's [xsl_directory](#). If a [site_name](#) is configured, an overriding file can be stored in a subdirectory with the same name (as the sitename)
- The function `funcName` must return an XML document